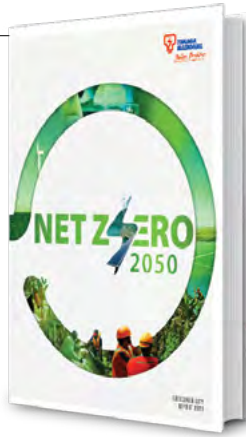




NET ZERO 2050

COVER
RATIONALE

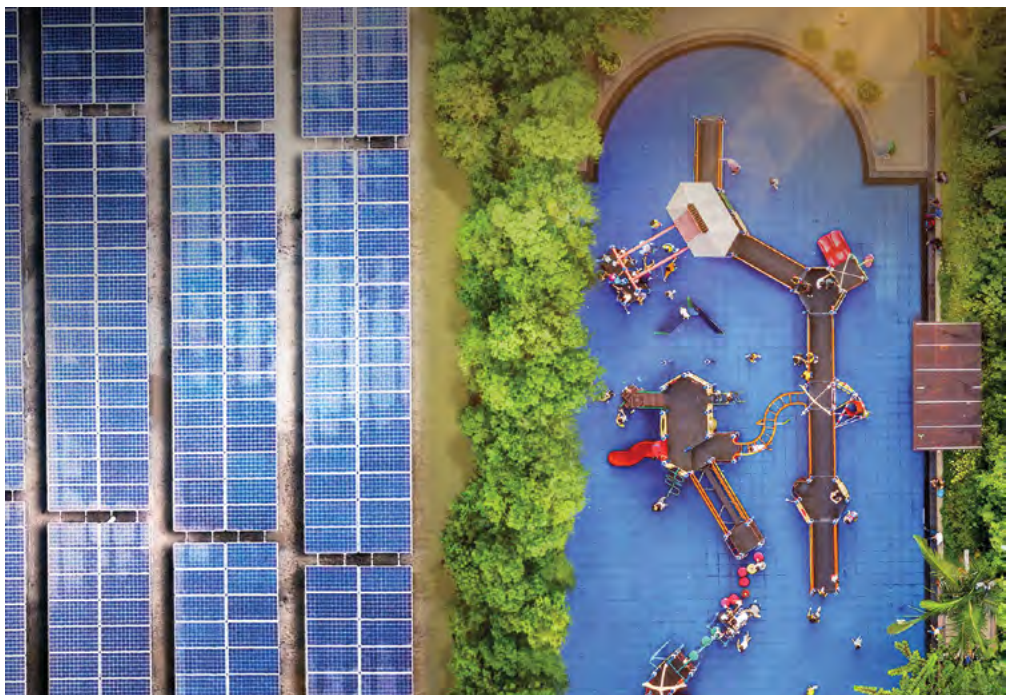


NET ZERO 2050

The cover for TNB's Sustainability Report 2021 is a bold statement of our aspiration to become a net zero company by 2050. Our commitment to this journey is non-negotiable, and we will reach our destination without compromising on our promise to build a better world and brighten lives. Our cover for this year's report features a stylised relief that represents our pathway towards net zero. As the underlying image shows, we believe we will secure a greener, more sustainable world at our journey's end. This is a restatement of our commitment to sustainability and a reaffirmation of our belief that a greener future is a better future for one and all. Our journey to net zero starts today and ends with a brighter tomorrow.



Scan this QR code to
find out more about
TNB from our website.



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NAVIGATION ICONS

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



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

ABOUT THIS REPORT

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FY2021 has been an unprecedented year for the nation - as Malaysia continued its battle against the COVID-19 pandemic by ramping up on vaccination rates and trying to adapt to the new normal, we were hit by one of our worst floods since 2015. During this period, we remained steadfast in our commitment to support the community in the immediate term whilst tackling the challenges of energy transition to drive sustainable growth that will create value for all stakeholders in the mid-to long-term. The path towards sustainability is an important and exciting journey which seeks to power a brighter future for all. With the launch of our Sustainability Pathway in realising our bold aspiration to achieve net zero by 2050, we stepped up our efforts by establishing numerous sustainability targets and developing a roadmap which is reinforced through our group-wide discipline, creative stewardship that will transform how TNB will deliver higher efficiency and greater reliability whilst strategising approaches to decarbonise our operation.

NET ZERO 2050

As one of the utilities in the ASEAN region to commit to net zero by 2050, we now see our efforts in electrification, digitalisation, and decarbonisation driving measurable value across our sustainability pillars –Environmental, Social and Governance & Economic (ESG). In this Sustainability Report (“Report”), we share our sustainability performance for the financial year ended 31st December 2021 (FY2021), including our strategies and targets moving forward. This report should be read together with our FY2021 Integrated Annual Report (“IAR2020”) that contains a comprehensive account of our business and operations. Our key sustainability highlights are disclosed in the Sustainability Statement section of the IAR2021.

Framework and Guidelines

Our reporting continues to integrate the elements of Bursa Malaysia’s Main Market Listing Requirements (MMLR) and other local and global frameworks and benchmarks in our disclosure:




Bursa Malaysia
Sustainability Reporting
Guide (2nd 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)



International Business
Council (IBC) of the World
Economic Forum (WEF),
'Measuring Stakeholder
Capitalism: Towards
Common Metrics and
Consistent Reporting of
Sustainable Value Creation



ABOUT THIS REPORT

This report has been prepared in accordance with the GRI Standards: Core option. The report content has been defined by applying the Reporting Principles of GRI:

<p>Stakeholder Inclusiveness Using insights gained from key stakeholders to inform sustainability expectations and the review of material matters.</p>	<p>Materiality Focusing on issues that reflect TNB's sustainability impacts and are of utmost importance to our stakeholders in light of COVID-19, changing market context and our corporate strategy - Reimagining TNB 2025.</p>	<p>Sustainability Context Showcasing our performance in the wider context of sustainability, including impact of COVID-19.</p>	<p>Completeness Including coverage of material topics and boundaries that have significant ESG impact to enable stakeholders to assess TNB's performance in the current reporting period.</p>
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Reporting Scope and Period

The scope and boundary of sustainability disclosure cover our core and non-core business operations in Peninsular Malaysia under the purview of TNB divisions ("TNB Company"). We have expanded our monitoring and reporting to include relevant subsidiaries' data, where available ("TNB Group") but exclude joint ventures and supplier activities. Wherever possible, we have disclosed four (4) years of historical quantitative data for meaningful comparison purposes of the selected indicators.

Independent Assurance





External assurance was not sought for this Report. Nevertheless, we aspire to continue our journey in adopting best practices by seeking external assurance on our future sustainability disclosures.

Feedback

We value the feedback of our esteemed stakeholder to inform and to continuously enhance our reporting and sustainability practices. Feedback on this report and any aspect of our sustainability practices and performance is most welcomed. Kindly address any comments or queries to the Head of Sustainability at sustainabilityhq@tnb.com.my.

Report Content

We continue to enhance our Report to better illustrate our sustainability performance and initiatives against our commitments and targets. The key enhancements for each section in this Statement are as follows:

Section in this Statement	Key enhancements
<p>SUSTAINABILITY AT TNB</p>	<ul style="list-style-type: none"> Established TNB's Sustainability Pathway 2050 (SP2050) outlining a clear roadmap with decadal targets and key ESG metrics to guide our sustainability journey for the next 30 years. Expanded our UN SDGs contributions from four (4) to eight (8). Disclosed our ESG ratings performance. Enhanced governance structure across the Board and Executive level to spearhead TNB's sustainability strategy across the Group. Enhanced our indices mapping with WEF index to provide better comparability and consistency to our reporting of ESG metrics and disclosures. <p> Pages 15-17, 28-30, 34, 115-118 for more information.</p>
<p>ENVIRONMENTAL SUSTAINABILITY</p>	<ul style="list-style-type: none"> Conducted strategic engagements with key internal and external stakeholders to address concerns and obtain buy-ins on new targets and aspirations. Enhanced our TCFD disclosure in line with our efforts in developing SP2050. <p> Pages 20-22, 55-64 for more information.</p>
<p>EMPOWERING OUR PEOPLE AND NURTURING TALENT</p>	<ul style="list-style-type: none"> Highlighted our newly introduced TNB's Ways of Working Sustainably (WoWS) as part of our shift towards a more sustainable work culture. <p> Page 71 for more information.</p>
<p>BRIGHTER COMMUNITY</p>	<ul style="list-style-type: none"> Highlighted TNB's engagement and efforts towards the indigenous community, critically balancing sustainable growth and socioeconomic benefits. <p> Page 90 for more information.</p>

SUSTAINABILITY PERFORMANCE HIGHLIGHTS FOR FY2021

Economic



Total Revenue

RM52.63 Billion



Profit After Tax (PAT)

RM3.86 Billion



Equivalent Availability Factor (EAF)

82.89%

Performance for wholly and majority owned power plants in Peninsular Malaysia



SAIDI

45.25 minutes/
customer/year

For TNB operations in Peninsular Malaysia



System Availability

99.79%

For TNB operations in Peninsular Malaysia



Customer Satisfaction Index

87%

For TNB operations in Peninsular Malaysia



Procurement spent of local suppliers

98%

For TNB operations in Peninsular Malaysia

Environmental



Total renewable energy capacity

3,441.62 MW

For domestic (including Sabah) and international



Total Scope 1 and 2 GHG Emission

39.99 million tCO₂e

For TNB operations in Peninsular Malaysia



GHG Emissions Mitigated

7.96 million tCO₂e

For TNB operations in Peninsular Malaysia



GHG Emissions Intensity

0.55 tCO₂e/MWh

For TNB operations in Peninsular Malaysia



Water withdrawal

7,771 megalitres

For TNB operations in Peninsular Malaysia



Waste Generation

47,829 tonnes

For TNB operations in Peninsular Malaysia

Social



Total contribution to community development programmes

RM39.57 million*

*The above figure excludes investments in employee training and development



Lost Time Injury Frequency (LTIF) rate

1.03



Fatalities*

8

*2 TNB employees and 6 TNB contractors.



Learning and Development Investment

RM65.53 million



Employee Engagement Score (EES)

85%



Women in senior management role

23.1%

A BETTER, BRIGHTER FUTURE RUNS ON GOOD ENERGY.

On our path to Net Zero 2050, we're choosing cleaner and greener energy sources as we take steps to reduce 35% of greenhouse gas (GHG) emission intensity and 50% of our coal capacity by 2035 – creating a sustainable future for generations to come.

Together, let's welcome a brighter tomorrow for all.

NET ZERO 2050



Scan to watch
our journey to
a brighter world.



THE SPARKS OF TODAY, POWER BRIGHTER TOMORROWS.



Tenaga Nasional Berhad 199001009294 (200866-W)

CEO STATEMENT

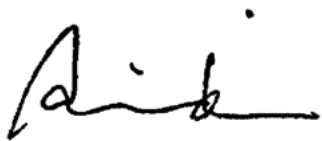
102-14

CREATING VALUE IN A SUSTAINABLE MANNER THROUGH OUR STRATEGY

Dear Shareholders,

As Malaysia transitions to the endemic phase of COVID-19, investors have shifted their focus towards sustainable investments.

We look back on FY2021 as the year TNB catapulted itself forward in the sustainability landscape. I am delighted to present the fifth edition of TNB's Sustainability Report, which sets forth our progress and milestones achieved in FY2021. We, at TNB, take pride in being a responsible provider of reliable and affordable energy that powers the nation while prioritising our role as a sustainable organisation both domestically and internationally. We took a bold step in setting our net zero aspiration by 2050 through our Sustainability Pathway 2050 (SP2050), aiming to stay ahead in the energy transition. SP2050 does not replace Reimagining TNB as our corporate strategy but rather reinforces it by setting out our sustainability direction and plans for the next 30 years.



DATUK IR. BAHARIN BIN DIN
President/Chief Executive Officer





REINFORCING OUR FOUNDATION

As the sustainability landscape advances, we too are enhancing our governance practices in realising our ambitions and aligning to the Malaysian Code on Corporate Governance (MCCG). We have refreshed our TNB Group Governance Platform by reforming the Group's Sustainability Development Committee as the Sustainability Development Council (SDC). It has been a great privilege for me to chair the SDC since early 2021 providing strategic direction, encouraging healthy debate among our members as well as monitoring the progress of our sustainability agenda on a bimonthly basis. In efforts to drive group-wide sustainability accountability, commencing FY2022, we have linked ESG performance measures to senior management's annual performance review which includes among others, TNB's ESG rating score, Integrity Health Index (IHI) score, zero fatalities, Lost Time Incident Frequency (LTIF) rate below one (1) and installed renewable energy (RE) capacity.

Under the SP2050, we also emphasise social aspects where we have committed to 1% profit-after-tax (PAT) allocation towards environmental and community-related programmes as well as to achieve zero fatalities and LTIF rate of below one. These targets support our commitment to an additional four (4) UN SDGs which are – Goal 3 (Good Health and Well-being), Goal 4 (Quality Education), Goal 9 (Industry, Innovation, and Infrastructure) and Goal 10 (Reduced Inequalities).

Our sustainability reporting frameworks have also evolved for better transparency for the benefit of our stakeholders especially in relation to the TCFD disclosures this year. We look forward to future advancements and streamlining in the various global reporting frameworks against which we will strengthen our sustainability reporting.

CHARTING OUR SUSTAINABILITY PATHWAY

The pandemic notwithstanding, the pace of climate action has accelerated around the world. Malaysia has announced its target to achieve carbon neutrality by 2050 through the 12th Malaysia Plan. This commitment was timely considering the catastrophic floods in December 2021 which resulted in losses of RM6.1 billion of losses which impacted large swathes of the economy. Needless to say, our country urgently needs to accelerate climate action and move towards a low-carbon future.

TNB remains supportive of the Government's green agenda and has augmented the nation's energy transition plan through TNB's SP2050. We aim to reduce 35% of our GHG emissions intensity and 50% of our coal generation capacity by 2035. All existing coal plants will be phased out upon expiry of their respective power purchase agreements (PPAs). We have accordingly turned towards innovation and technology in search of low-emission and efficient power generation. In early FY2022, TNB unveiled the Sultan Ibrahim Power Plant that utilises the latest high efficiency gas turbine technology which contributes to a lower carbon footprint.

In realising SP2050, we are focusing on making our core business sustainable through investing in low emission and green technologies, evolving the grid and growing our renewables, and at the same time building new sustainable businesses by unlocking new energy revenue streams.

While we have been exploring low and green emissions technologies over the years, we continue to invest in research and development (R&D) in this space in recognition that these emerging technologies will be the game changer for the industry. R&D projects in the pipeline include the exploration of co-firing ammonia with coal and using low-carbon hydrogen to shape our initiatives in reducing emissions from our generation fleet. Moving forward, TNB's R&D investments will be governed and driven by our newly established Technology Council to ensure alignment with SP2050.

We are grateful to have received the authorities' approval for the development of the Nenggiri Hydroelectric Power Plant with a capacity of 300MW, which is expected to be commissioned in 2027. This project will significantly expand TNB's domestic RE capacity and potentially mitigate 244,000tCO₂ of emission annually from power generation activities while contributing to the Government's ambition to achieve 40% RE generation share in 2035.

We are dedicated to the expansion of RE holdings locally and internationally to achieve our 8,300MW RE target by 2025. In FY2021, we restructured our International Asset Group into New Energy Division (NED) to drive TNB's RE growth and establish strategic partnerships with leading global RE players. NED oversees both Vantage RE Ltd and TNB Renewables Sdn. Bhd (TRe) in leading our RE growth. TRe is focused on the domestic and Southeast Asian markets. As the regional RE market rapidly grows, TRe is pursuing opportunities in Vietnam, Thailand and the Philippines, and also enhancing the ASEAN Power Grid.

TNB's international RE growth is being further driven by our platform, Vantage RE Ltd in the UK and Europe. In 2021, the portfolio's capacity was increased by 42MW. One of the acquisition was the purchase of 49% stake in an offshore wind company, Blyth Offshore Demonstrator Limited (BODL) from EDF Renewables with total installed capacity of 41.5MW as well as development rights for a 58.4MW floating offshore wind project. This signifies TNB's foray into the international offshore wind market and facilitates knowledge sharing with EDF Renewables.

In facilitating national RE growth, the national grid needs to be ready to manage the intermittency and enable dynamic two-directional energy flow, while maintaining grid stability. Through Grid of the Future (GoTF), we are progressing up the Smart Grid Index (SGI) from a score of 62.5% in FY2020 to 67.9% in FY2021, with a target to achieve a score of 85% by 2025. Beyond our domestic grid, we also believe that regional interconnections are critical to further unlock access to RE across ASEAN. We are looking to strengthen our ties with our fellow ASEAN members to achieve this.

At TNB, we believe that every individual can play a critical role in the country's energy transition. We empower our customers to take on the role of prosumers and transition to cleaner sources of energy via RE supply and trading platforms. The mGATS and myGreen+ schemes which have been in operation since FY2019 have been replaced with the Green Electricity Tariff (GET) programme, which allows corporations and households to purchase green electricity from renewable energy sources, and consequently reduce their carbon footprint. To date, the annual GET quota has been fully subscribed at 4,500,000MWh.

As part of our approach under SP2050, we signed Memorandums of Understanding (MoUs) with prominent partners as part of our effort to accelerate the growth of the electric vehicle (EV) industry in Malaysia.

CEO STATEMENT



Rebuilding the Nation

TNB has sought to assist the government in its efforts to overcome the devastating effects of COVID-19. Since the first nationwide lockdown in March 2020, TNB has contributed over RM33 million towards COVID-19 relief efforts including ensuring power supply reliability to hospitals, vaccine storage and vaccination centres as well as temporary security posts manned by the police and military personnel. We continued to extend our cooperation towards the exit strategy under the National Recovery Plan through saving lives; protecting the vulnerable; keeping the lights on; and driving economic recovery.

Our relief efforts are directed towards the most impacted economic sectors and the most vulnerable communities. TNB's Easy Payment Plan was extended from FY2020 till the end of FY2021, benefiting almost seven (7) million customers. In addition, the 10% discount to six (6) selected sectors under the PERMAI 2021, PEMERKASA, PEMERKASA+ and PEMULIH packages assisted over 11,500 customers. Our TNB employees extended further assistance through a Tabung Warga Prihatin TNB (TWTP), a voluntary salary deduction programme by disbursing more than RM5.41 million to citizens affected by the COVID-19 pandemic and flash floods.

We are continuously integrating digital solutions throughout the value chain to improve the quality of our services. The move towards digitalisation was reflected in the increase of digital customer interactions from 87% in FY2020 to 89.9% in FY2021. We also saw downloads of the myTNB mobile application increase by 1.8 million the past year.



Our People – The Driving Force

The achievements of the Group thus far are attributed to our key pillar of growth – our employees. We genuinely appreciate the dedication and contribution of each of our employees towards the company. We embrace diversity and inclusivity as a reflection of our “Collaborative” TNB culture. During the year, there was a 5% increase of women in senior management roles and we registered ourselves as a member of the “30% Club” – which advocates for at least 30% representation of women on all boards and top management globally.

I am proud to announce that TNB placed third in LinkedIn's 2021 Top Companies list in Malaysia to grow careers. At TNB, we continuously strive to provide ample opportunities and support our people in their personal and professional growth. In FY2021, we conducted flagship training programmes for our division academies and digital skills by ILSAS, with 29,430 TNB employees trained.

The COVID-19 pandemic has changed our ways of working considerably. In FY2021, we developed a new TNB Way of Working (TWOW) framework supported by three (3) key drivers – people, process, and technology. The TWOW enables our employees to adopt hybrid work arrangements that are suitable to the nature of their jobs. We also prioritised our people's wellbeing and safety by striving to uphold strong health and safety standards across the Group, which is also extended to our subcontractors and workers. Our commitment to high health and safety standards resulted in a recorded improvement in our LTIF of 1.03 in FY2021 from 1.29 in FY2020. Despite our efforts, regrettably we recorded eight fatalities in FY2021. Our deepest sympathies go out to the affected families as we resolve to constantly reinforce our safety measures to avoid any further loss of life.



Uplifting Our Local Communities

We embrace our social responsibility to contribute back to society and the environment through various initiatives and programmes which are focused on education, socioeconomic, and environmental conservation.

At TNB, we believe that educational opportunities unlocks the potential of human capital which in turn will contribute to the development of the country. This year, our *Program Ceria ke Sekolah* involving 30,000 students was held in various states with a total donation of RM3 million. We also supported students in adapting to e-learning by contributing electronic devices worth RM5 million through the *Tabung Cerdik* Programme, and funded virtual learning and motivational programmes worth RM315,000 through the PINTAR School Adoption Programme.

Our educational institutions such as *Universiti Tenaga Nasional* (UNITEN), ILSAS, and *Yayasan Tenaga Nasional* (YTN) play a vital role in shaping the new generation of industry leaders. This year, UNITEN and YTN provided financial aid amounting to RM6.81 million and RM119.2 million respectively. Additionally, we successfully hosted the 5th ILSAS International Conference on Learning and Development (ICLAD), organised by ILSAS which received commendable feedback from participants. For individuals, our training centre ILSAS aims to provide training for up to 17,500 individuals through the TNB Reskilling Malaysia Programme by 2024 to support the nation's energy transition journey. To date, 3,018 individuals have been trained and 5,202 individuals have secured employment opportunities.

In ensuring equal access to electricity, the Rural Electrification programme and Village Street Lighting projects improved connectivity of around 30 villages and brightened Malaysia through the installation of almost 30,000 new streetlights in FY2021. We have also invested RM2 million in National Food Basket Programme which is dedicated to providing additional relief to the less fortunate. As part of our environmental conservation, we invested a total of RM232,207 towards the Mangrove Planting Programme and the Fireflies Conservation Project throughout the year.

Outlook

We are extremely grateful for the unwavering support from our stakeholders as we embraced new opportunities in the past year. As one of the largest power utility companies in Southeast Asia, ranked 25th in the world by the World Energy Council, we have demonstrated incredible agility in navigating the energy shifts experienced the world over.

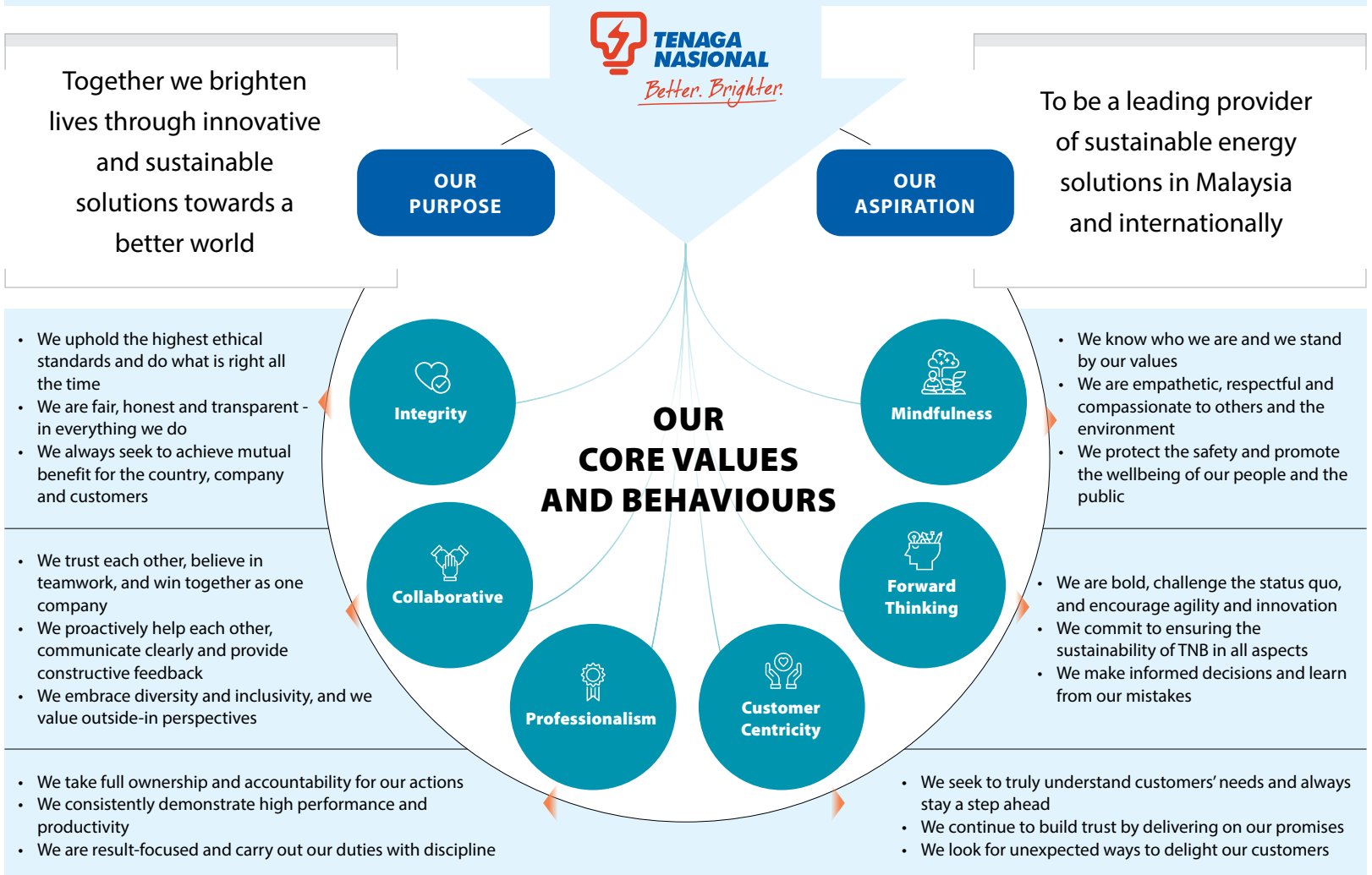
Moving forward, we will focus on upskilling and reskilling our talent pool to adapt with emerging technologies in line with the aspirations of Reimagining TNB (RT) and SP2050. We will continue to further refine our SP2050 goals and work together with our stakeholders to build a greener and more sustainable future for all. In line with the SDG 17 agenda, cross-sector partnerships among the public and private entities will be a key enabler in achieving our SP2050 target. We look forward to continuing our engagements with various stakeholders towards a successful energy transition for the nation.



ABOUT TNB

102-1 | 102-2 | 102-3 | 102-4 | 102-6

We pride ourselves as Malaysia’s leading electricity utility company headquartered in Kuala Lumpur that provides affordable and reliable services to our wide customer base throughout Peninsular Malaysia, Sabah, and Labuan. We have also expanded our business operations and brought our brand to the international stage with presence in the United Kingdom (UK), Kuwait, Turkey, Saudi Arabia, India, and Indonesia. We are committed to upscaling our efforts and to continue to integrate sustainability into our business strategy to achieve societal and environmental benefits.



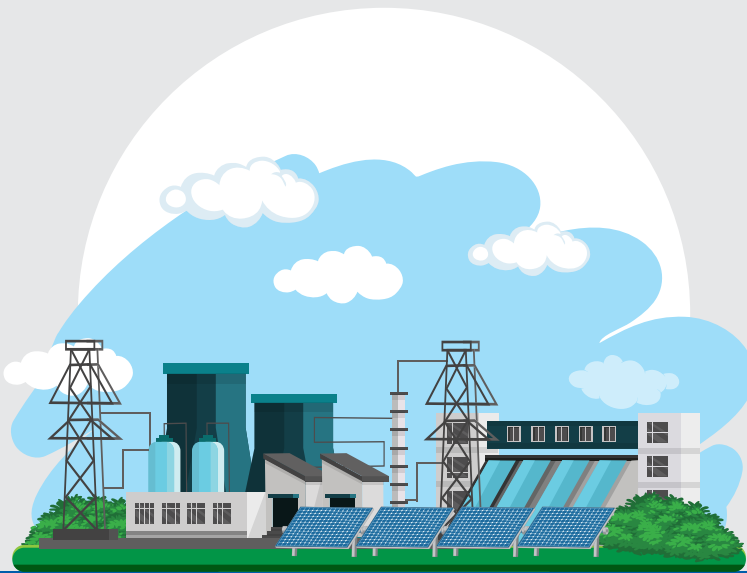
TNB identity comprising of our Purpose, Aspiration, Culture and Behaviours align with Reimagining TNB (RT) goal and aspiration to drive our business transformation.

OUR VALUE CHAIN

EU1 | EU3 | EU4

Our value chain represents our core business which comprises an end-to-end electricity supply chain including generation, grid, distribution, and retail. We place emphasis on reducing our environmental impact throughout our value chain and assets and continue to engage our key stakeholders.

GENERATION



TNB Power Generation Sdn. Bhd. Genco operates and maintains TNB's portfolio of power generating assets, comprising thermal generation facilities and large hydro-generation schemes in Peninsular Malaysia.

TOTAL DOMESTIC GENERATION CAPACITY

14,034.66 MW

GAS
5,052.16 MW

COAL
6,366.40 MW

LARGE HYDRO
2,536.10 MW

LARGE-SCALE SOLAR
80.00 MW

* For wholly-owned and majority-owned (equity basis) generating assets in Peninsular Malaysia

GRID



The Grid Division manages and operates the 132kV, 275kV and 500kV transmission network (National Grid) in Peninsular Malaysia.

MAXIMUM DEMAND

18,585 MW

IN PENINSULAR MALAYSIA

LENGTH OF DOMESTIC TRANSMISSION NETWORK*

25,185

CIRCUIT-KM

DOMESTIC TRANSMISSION SUBSTATIONS*

472

UNITS

NUMBER OF TRANSMISSION TRANSFORMERS OPERATED*

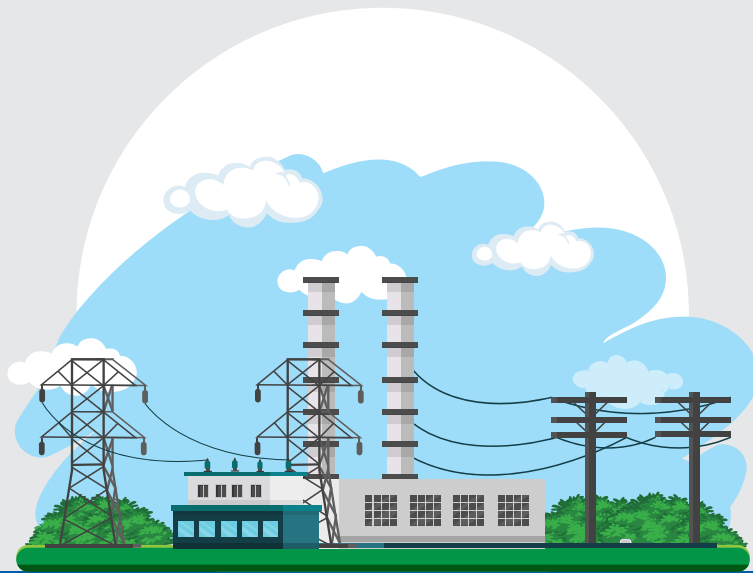
1,349

UNITS

* For wholly-owned transmission network in Peninsular Malaysia



DISTRIBUTION NETWORK



The Distribution Network Division is responsible for the asset lifecycle of the Nation's 33kV, 22kV, 11kV, 6.6kV, 0.415kV and 0.24kV distribution network to end users ensuring reliable electricity supply to businesses and homes.

LENGTH OF DOMESTIC DISTRIBUTION NETWORK*

723,134
KILOMETERS

DOMESTIC DISTRIBUTION SUBSTATIONS*

86,468
UNITS

NUMBER OF DISTRIBUTION TRANSFORMERS OPERATED*

93,991
UNITS

* For wholly-owned distribution network in Peninsular Malaysia

RETAIL



The Retail Division operates a network of state and area offices to provide products and services to customers. We strive to win our customers by building long-term and meaningful relationships through continuous ongoing customer centric approaches.

UNITS SOLD

111.858.01 GWh
IN PENINSULAR MALAYSIA

TOTAL NUMBER OF CUSTOMERS IN PENINSULAR MALAYSIA

9,663,429

Domestic: 7,916,379

Comprises most of Malaysia's population, who drive us to deliver excellence in our products and services.

Commercial: 1,618,366

Carries out the full range of business and commercial activities that support the country's economic growth.

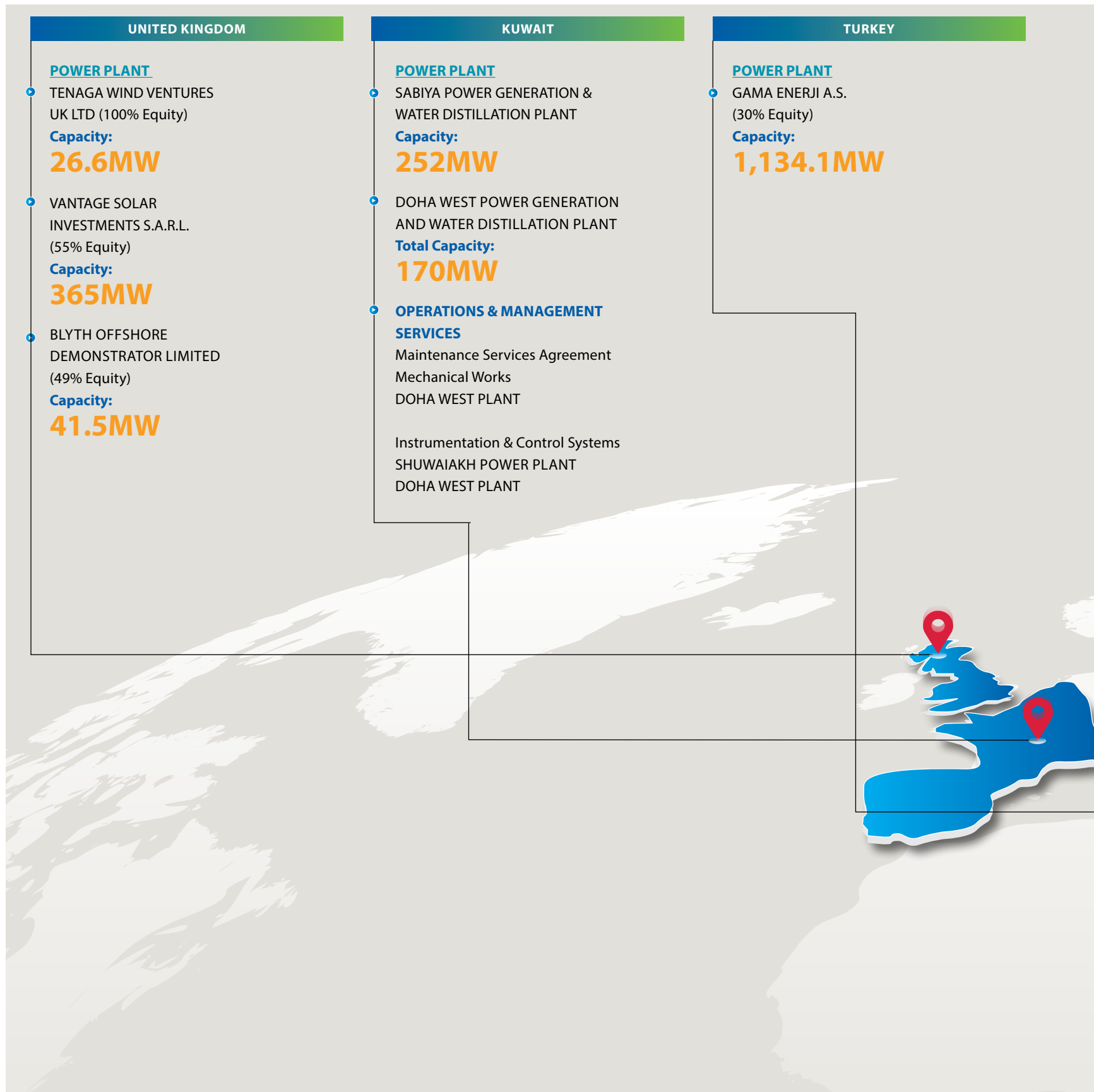
Industrial: 32,846

Manufacturers of various goods and services. Though relatively small, they account for most of our electricity sales.

Others: 95,838

Comprises mining, street lighting, agriculture and RE (Renewable Energy) generators

OUR INTERNATIONAL FOOTPRINT



ENERGY SOURCE:




TOTAL CAPACITY: 433.1MW




TOTAL CAPACITY: 422MW





TOTAL CAPACITY: 1,134.1MW



Legend:



Wind



Solar



Natural Gas



Distillate



Hydro



Fuel Oil



Coal

SAUDI ARABIA

POWER PLANT

- SHUAIBAH INDEPENDENT WATER & POWER PROJECT (IWPP) (6% Equity)

Capacity: **1,190MW**

- WATER DESALINATION ASSETS

Total Capacity: **1,039,000 m³/day**

INDIA

POWER PLANT

- GMR ENERGY LTD (30% Equity)

Capacity: **2,064MW**

PAKISTAN

POWER PLANT

- LIBERTY POWER LTD (Wholly-owned)

Capacity: **235MW**

(Divested as at 30th November 2021)

OPERATIONS & MANAGEMENT SERVICES

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

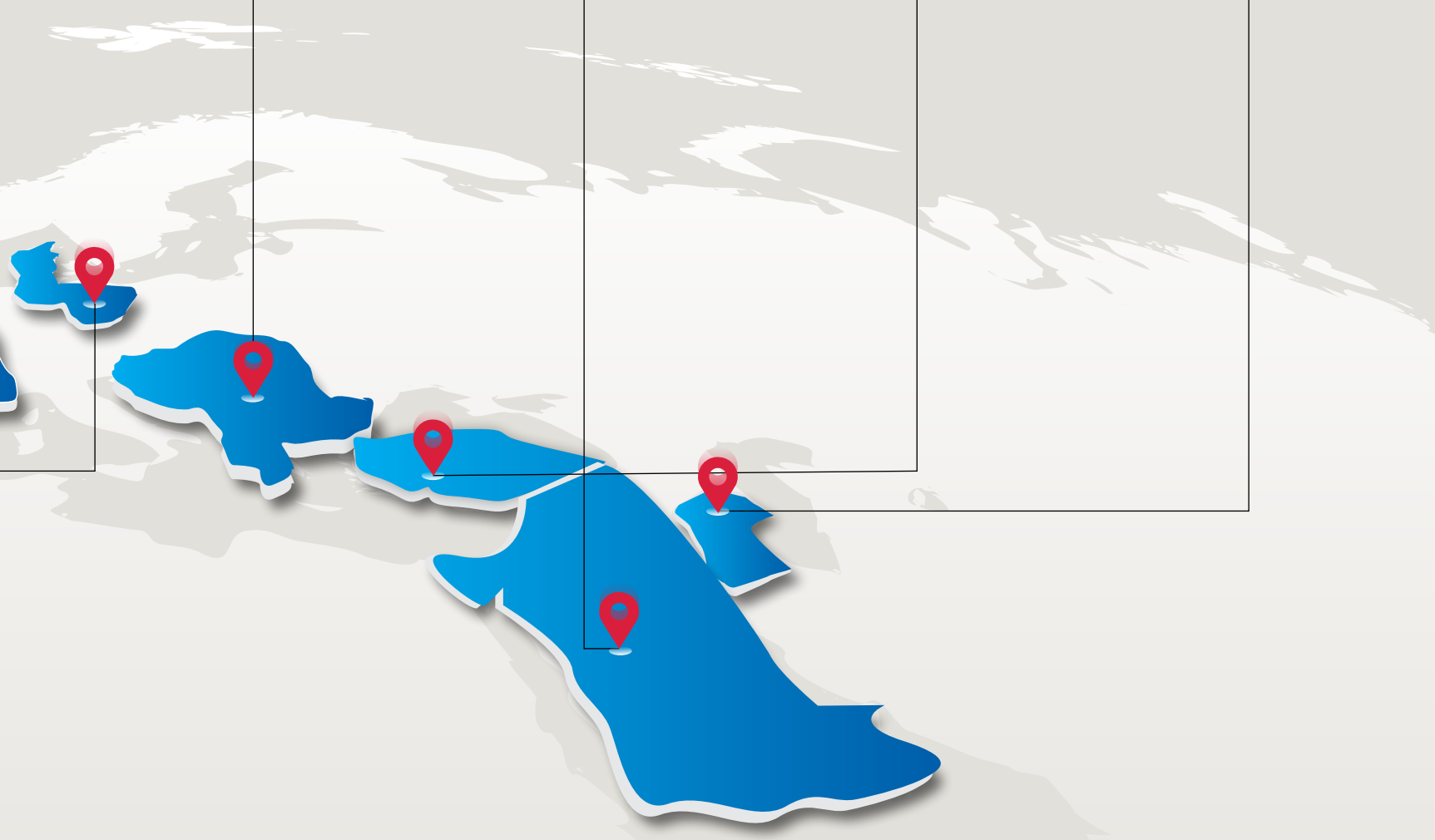
Capacity: **1,223MW**

CAMBODIA

Capacity:

400MW

MANN & Wartsila Engines
Technical Advisory for EDC HFO Plant



TOTAL CAPACITY: **1,190MW**



TOTAL CAPACITY: **2,064MW**

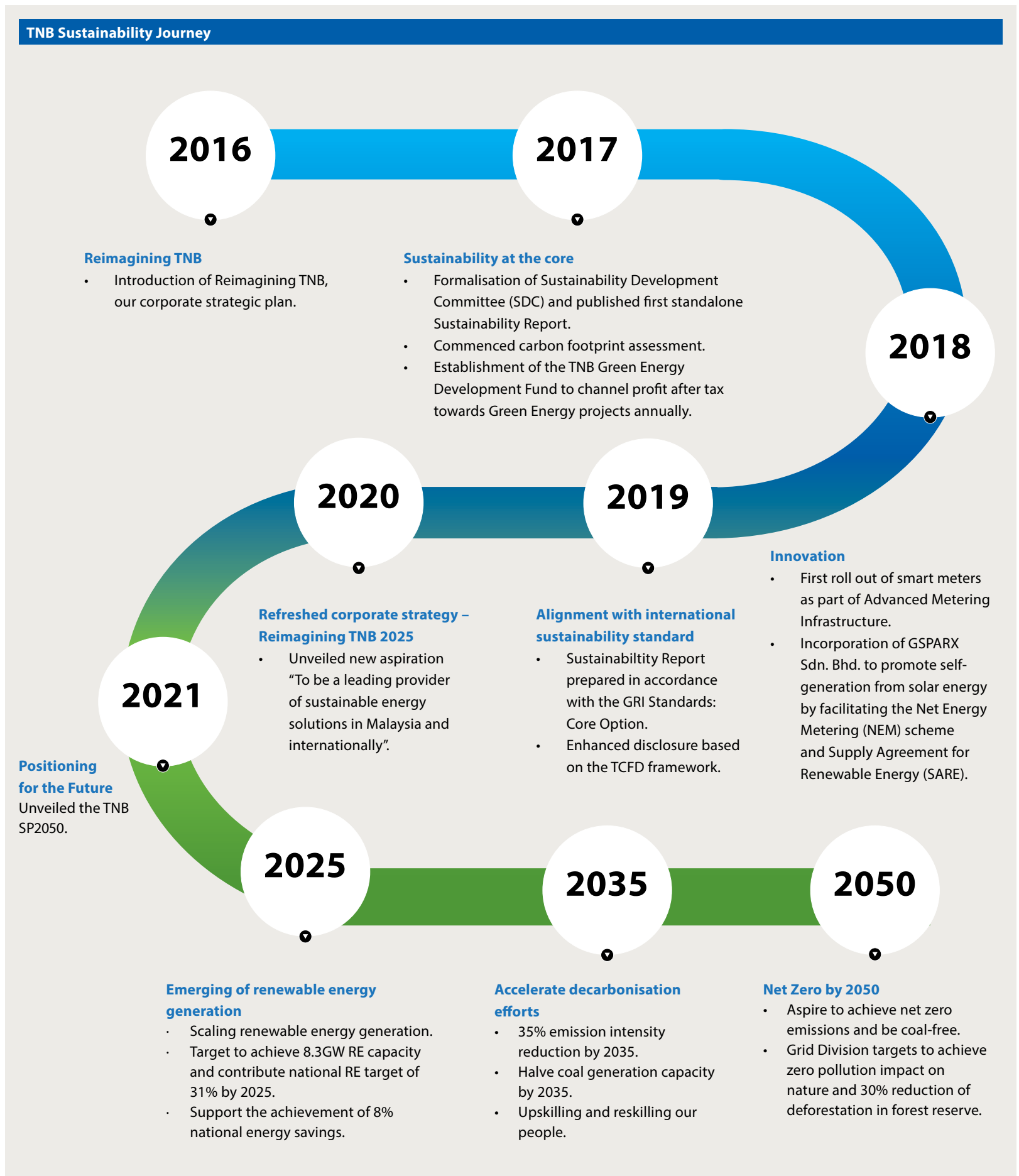


TOTAL CAPACITY: **1,458MW**



TOTAL CAPACITY: **400MW**

SUSTAINABILITY AT TNB





TNB's Sustainability Strategy

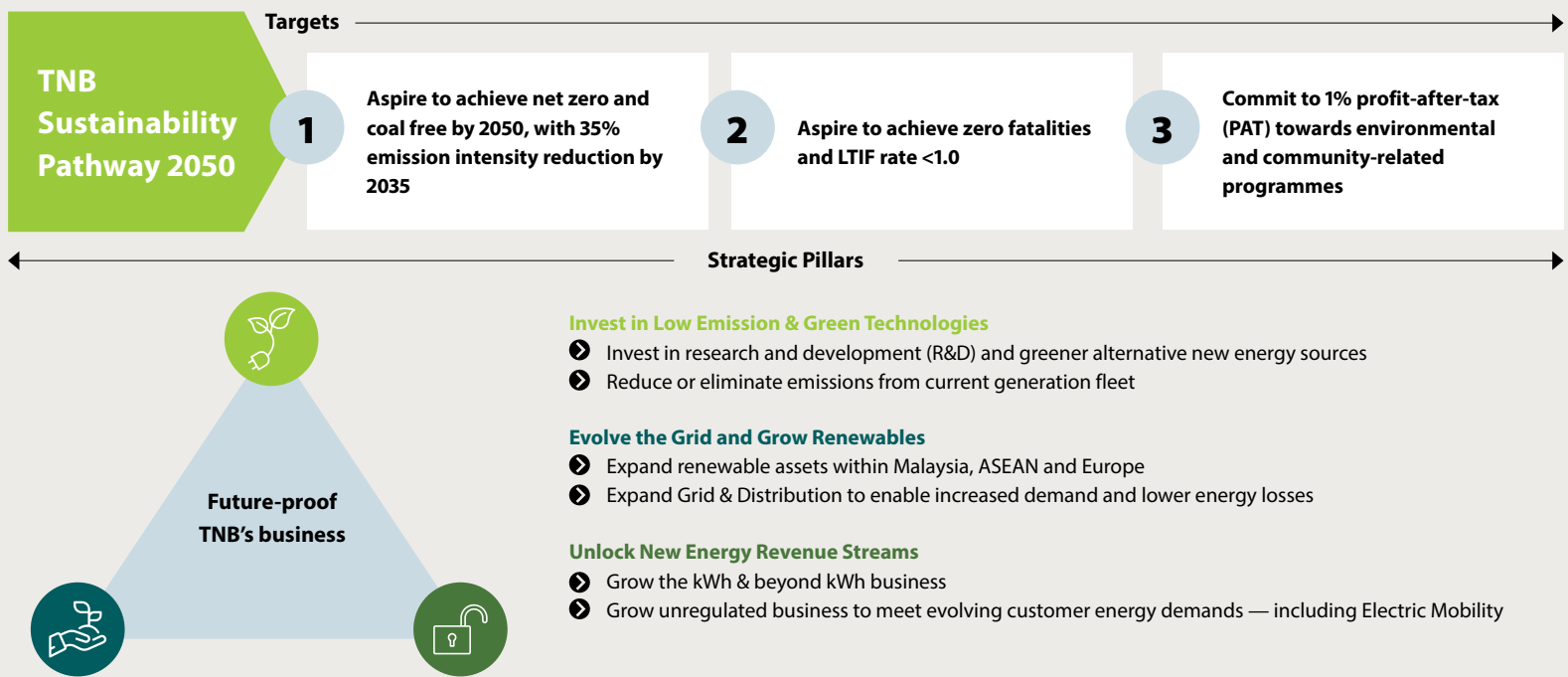
Our sustainability strategy is rooted to our Sustainability Pillars, as well as our corporate strategy, Reimagining TNB 2025 (RT). We hope the alignment of our strategic priorities will enable us to expand the value we create for our stakeholders and the nation.

For more information on our SDG, refer to pages 28-30.



For more information on our corporate strategy, please refer to Our Value Creation Model section of our IAR 2021, pages 34-43.

In enhancing our corporate strategy, RT, we launched our SP2050 which further outlines our bold aspiration to achieve net zero emissions and be coal free by 2050.



SUSTAINABILITY AT TNB

Strong Leadership and Governing Responsibly

102-18

Governance Structure

A strong sustainability governance and leadership structure is vital to spearhead our sustainability agenda and provide us with clear and definitive guidance to achieve our ambitious Net Zero aspiration. Our sustainability governance is an expansion of TNB's Governance Model that is aligned to the principles of the Malaysian Code on Corporate Governance (MCCG).

In FY2021, the TNB Group Governance Platform, which is the framework of TNB management committees and sub-committees, was revised to delineate clear roles and responsibilities at each level of leadership, enabling seamless decision making and implementation of sustainability across the organisation. The previously known Sustainability Development Committee is now reformed to be the Sustainability Development Council (SDC) with the following objectives:

- Serve as a strategic platform to deliberate the Group's sustainability direction, which includes sustainability aspiration, plans, commitments and targets covering ESG.

- Become a platform to monitor and discuss progress of sustainability plans, including the development and implementation of TNB's sustainability agenda.

- Become a strategic platform to discuss on engagement, communication and knowledge-sharing initiatives that can enhance sustainability development and awareness.

The SDC which is chaired by TNB's Chief Executive Officer (CEO) and comprises TNB's senior management team had convened twice in FY2021. Commencing in FY2022, the SDC will convene every two (2) months to discuss relevant sustainability matters. The SDC will escalate the group strategic direction for sustainability to other relevant committees and/ or the Board of Directors for approval when necessary.

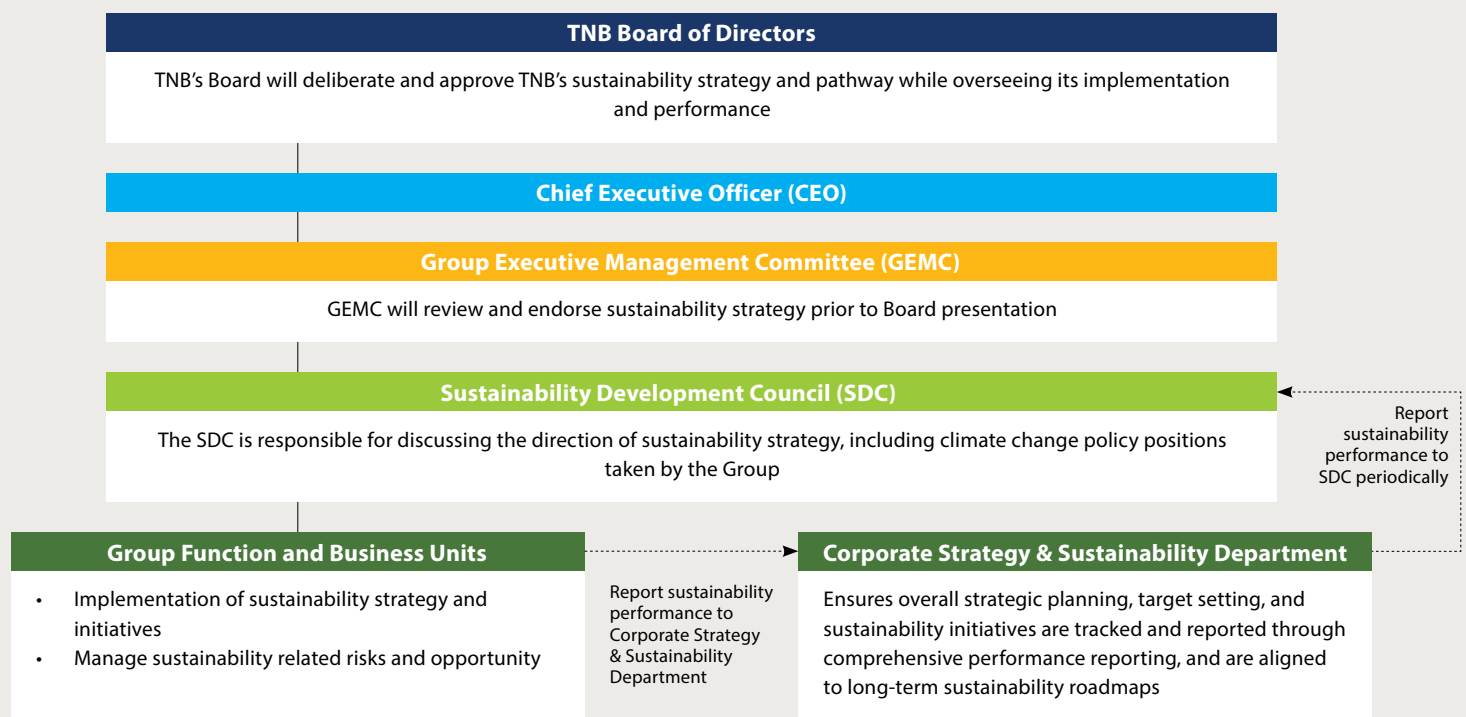
In FY2021, the SDC had discussed on the following:

- SP2050 that comprises our net zero emission aspiration, commitment towards health and safety, and serving the *rakyat* for a Better Brighter Future.

- Review of relevance of TNB's material matters and materiality matrix.

- Addressing the interests and concerns of external and internal stakeholders.

Our Sustainability Governance Structure





Strong Leadership and Governing Responsibly

Corporate Policies and Guidelines

TNB corporate policies act as the guiding principles for our business conduct to ensure relevant stakeholders across our value chain support the company's commitment to sustainability. TNB's key policies include:

- Code of Ethics
- Anti-Bribery Policy
- Ethics & Integrity Policy
- Risk Management Policy
- Confidentiality Policy
- Asset Management Policy
- Limits of Authority
- Procurement and Supply Chain Policy and Procedures
- Group Financial Policies and Procedures
- ICT Security Policy and ICT Codes of Practice
- Personal Data Protection Policy
- Gifts, Hospitality and Related Benefits Policy
- Conflicts of Interest Policy
- Whistleblowing Policy
- Integrity Pact and Committee Integrity Pledges Policy
- External Auditors Policy
- Dividend Policy
- Environmental Policy
- Energy Policy
- Communication Policy
- Safety & Health Policy
- Disciplinary Procedures
- Group Human Resource circulars and guidelines

Remuneration policies

The Board, with the assistance of the Board Nomination and Remuneration Committee (BNRC), reviews the overall remuneration policy of the Non-Executive Directors, Executive Director and top management. The remuneration policy aims to attract, retain and motivate Directors and top management who will create sustainable value and generate returns for the Company. Their remuneration packages are structured to link rewards to corporate and individual performance to reflect the contributions towards the Group's achievements for the year.

In FY2021, TNB embarked on a phased approach to link remuneration to key sustainability KPIs to ensure accountability from the different levels of management and steer the Group's sustainability performance. Moving into FY2022, we will cascade the following ESG KPIs to the senior management team:

- TNB ESG rating score.
- Zero fatalities and LTIF rate <1.0.
- Installed RE capacity.

For more information on remuneration policies, please refer to Board Leadership & Effectiveness section of our IAR 2021, page 95

Risk Management

Approved by the Board Risk Committee (BRC) in FY2019, our Risk Management Framework was developed in line with the 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 its relevance to the Group. The Board and Management will also review and approve policies, codes and procedures to consistently enhance risk mitigation.

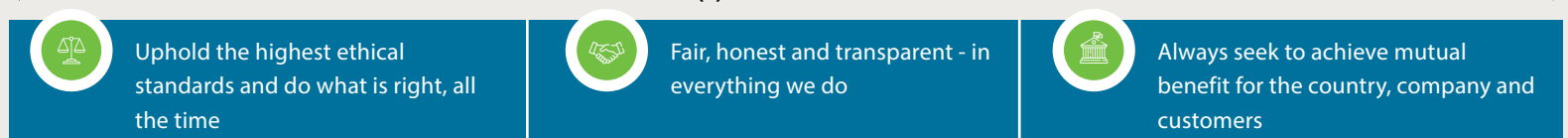
For more information on risk management, please refer to Risk Management and Internal Control section of our IAR 2021, pages 118 to 124

Upholding a Strong Sense of Integrity

We uphold high standards of integrity across the Group. In 2017, we embarked 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. We launched the TCIMS Handbook in 2018 which covers five (5) TCIMS policies, namely Anti-Bribery Policy, Gifts, Hospitality and Related Benefits Policy; Conflicts of Interest Policy; Whistleblowing Policy; and Integrity Pact and Committee Integrity Pledges Policy.

Our efforts go beyond compliance to create a culture of excellence and integrity which has been embedded as a Core Value under TNB Reimagining Culture:

Three (3) Core value behaviors



For more information, please refer Ethics, Integrity & Trust section of our IAR 2021, pages 98-99.

SUSTAINABILITY AT TNB

Key highlights and initiatives for FY2021:

Key Initiatives	Our Performance in FY2021
Zero-tolerance rule	<ul style="list-style-type: none"> The zero-tolerance rule towards bribery and corruption continued to be observed and enforced. The avenue to report suspicious and unethical conduct is outlined in our Whistleblowing Procedure.
TNB Corporate Integrity Management System (TCIMS) and Anti Bribery Management System (ABMS) Implementation (ISO 37001 Certified)	<ul style="list-style-type: none"> We conducted six (6) Fraud & Bribery Management Workshops. We facilitated three (3) ABMS implementation consultation sessions. We held two (2) ABMS Internal Auditor Refresher courses. In FY2021, 16,920 and 3,532 employees have attended TCIMS training on ethics and anti corruption respectively. Audits conducted on the ABMS include: <ul style="list-style-type: none"> Procurement & Supply Chain Division (Surveillance Audit): SIRIM audit on procurement processes for Generation, Transmission, Distribution, Retail and other Corporate Services related to supply of electricity. Retail Division (Recertification Audit): SIRIM audit on supply of electricity covering billing and collection management for Northern Zone (Kedah & Perlis). ABMS internal audit conducted by Integrity Department on 16 TNB business units and divisions. The audit findings were presented to the Integrity Council and Board Integrity Committee.
Annual Integrity Pledge and Integrity E-Learning Module	<ul style="list-style-type: none"> All employees are required to sign the annual Integrity Pledge, declare any conflict of interest, and complete the Integrity E-Learning Module. In FY2021, The Integrity E-learning module was also rolled out to all active vendors and was completed by 1,579 vendors.
Collaboration with the Malaysian Anti-Corruption Commission (MACC)	<ul style="list-style-type: none"> We engaged <i>Bahagian Pendidikan Masyarakat</i> (PenMas) from the Malaysian Anti-Corruption Commission (MACC) to strengthen bilateral cooperation between MACC and TNB by conducting awareness training on bribery and corporate liability for TNB employees. The training intends to inculcate and institutionalise integrity in the company.
Integrity Engagement Programme (IEP)	<ul style="list-style-type: none"> This programme was aimed to disseminate information and updates on the <i>Prosedur Tata tertib Edisi Ketujuh</i>, create awareness amongst staff on the important of complying Section 17A of the MACC Act 2009, and spread awareness on financial management. In FY2021, we conducted: <ul style="list-style-type: none"> Two (2) sessions of TNB Integrity Coordinator's Workshop. One (1) session of Mediation Process Training. One (1) session of <i>Taklimat Integriti & Seksyen 17A Akta Suruhanjaya Pencegahan Rasuah Malaysia (SPRM)</i> attended by 127 vendors. Two (2) awareness videos for our vendors and for <i>Perubahan dalam Prosedur Tata tertib Edisi Ketujuh, 2021</i>. 33 sessions of Integrity roadshows on the <i>Prosedur Tata tertib TNB Edisi Ketujuh, Pengurusan Kewangan & Liabiliti Korporat</i>.

We introduced the Integrity Health Index (IHI) Dashboard group-wide in FY2021 and achieved an overall score of 79.74%. The results from 15,884 respondents marks a slight increase from the IHI score in FY2020.

IHI CRITERIA

- Integrity infrastructure
- Integrity learning and development
- Corporate culture and ethical conduct
- Communication mechanism

IHI OVERALL SCORE



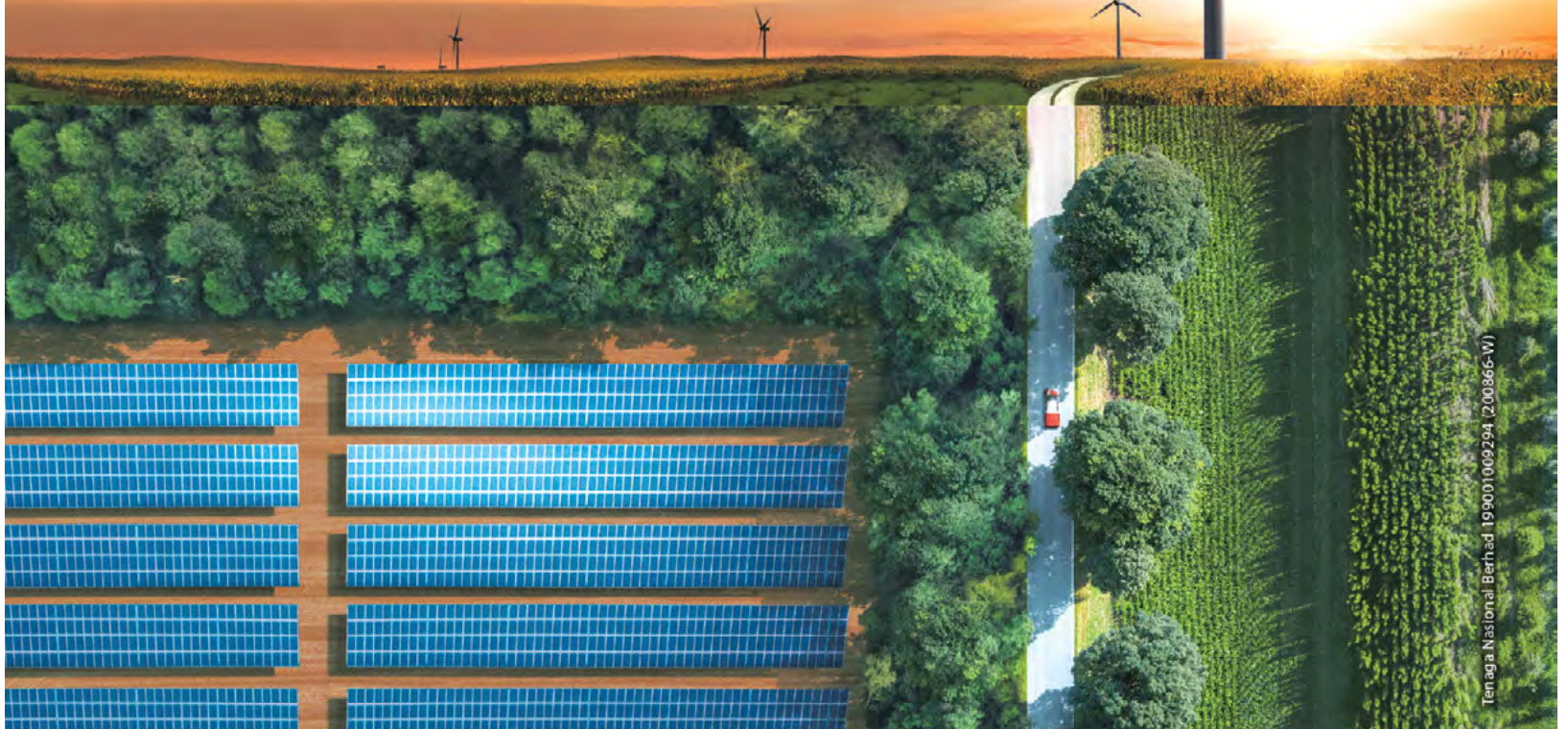
Moving forward

We intend to review our Code of Ethics and develop an 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 the top management's KPIs in FY2022. The objective of IHI is to measure and capture relevant information on different attributes and dimensions of the health of the company's integrity system.

WE'RE ON THE PATH TO BUILD BETTER, BRIGHTER TOMORROWS.

No matter how far or hard the path will be, we're committed to discovering cleaner and greener solutions that lead to a sustainable future for the world and generations to come.

After all, it's about making lives brighter, and the world better.



Tenaga Nasional Berhad 199001009294 (200866-W)



SUSTAINABILITY AT TNB

TNB's Stakeholder Engagement

102-40 | 102-42 | 102-43 | 102-44

We build meaningful relationships with our stakeholders and appreciate that each of them play a vital role in charting our long-term sustainability direction and success. Our interactions seek to obtain feedback and understand emerging interest and concerns of our stakeholders which translates into an action plan for TNB, thus making them an integral part of our business model.

Frequency of engagement:

A Annually **AT** All the time **Q** Quarterly **AN** As needed **O** Ongoing **BA** Bi-annually **D** Daily

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, Small & Medium Enterprises (SMEs).

Engagement Platform	Frequency	Areas of Interest or Concern	Our Response
Customer service outlets	O	<ul style="list-style-type: none"> New technologies (e.g. smart meter offerings, smart solutions, solar solutions, platform solutions) Customer experience and service delivery 	<ul style="list-style-type: none"> Sustainable Infrastructure and Ecosystem, pages 39-40 Customer Centricity – Customer Engagement, page 46 Our Support in Facing COVID-19, pages 36-38
Call centre	O		
myTNB mobile application and online portal	O		
Customer surveys	A		
Social media	AT		
Roadshows	O		
Campaigns	O		

Value Created for Stakeholders

- Providing reliable and affordable electricity
- Providing innovative services - Efficiency, agility, and performance
- Fostering customers' trust and enhancing customer experience
- Driving continuous awareness on Energy Literacy
- Continuous and effective communication

Government
The Malaysian Federal and State Governments, parliamentarians, municipal councils and regulators.

Engagement Platform	Frequency	Areas of Interest or Concern	Our Response
Meetings and briefings	O	<ul style="list-style-type: none"> Regulatory and operational compliance Changes in the regulatory framework and electricity supply industry Disaster and cyber security management Nation-building initiatives, including community and capability development Security and reliability of electricity Affordable tariffs Environmental management Giving back to Nation and <i>Rakyat</i> Local <i>Bumiputera</i> vendor development 	<ul style="list-style-type: none"> Strong Leadership and Governing Responsibly – Governance Structure, page 16 Our Support in Facing COVID-19, pages 36-38 Sustainable Infrastructure and Ecosystem, pages 39-40 Minimising our Environmental Impact – Governing Environmental Matters, page 66 Contributing to Community Development – Economic and Social Transformation, pages 84-85
Site visits	AN		
Round table sessions	AN		
One-to-one engagements	O		
Outreach programmes	O		
Summits/conferences	A		

Value Created for Stakeholders

- Continue as delivery partner for Government & regulatory initiatives
- Contributing to fiscal revenue through tax payments
- Contributing to sustainable development, integrating economic, environmental and social considerations
- Continuous and effective communication
- Ensuring Stable and Continuous Supply of Electricity to the nation



Investors

Institutional and retail investors, analysts and potential investors with interest.

Engagement Platform	Areas of Interest or Concern	Our Response	
Financial results announcements	<ul style="list-style-type: none"> International investments plans ESG topics and KPIs Financial sustainability and returns Other non-regulated business plans Impact of energy crisis to TNB with regards to increase in price and availability of supply Updates on Regulatory Period 3 (RP3), regulated business and MESI 2.0 TNB GenCo performance 	<ul style="list-style-type: none"> Our Support in Facing COVID-19, pages 36-38 Sustainable Infrastructure and Ecosystem, pages 39-40 Customer Centricity, pages 45-48 Minimising our Environmental Impact, pages 66-69 Our Response to Climate Change, pages 55-65 Employment Management and Growth, pages 74-77 Emphasis on Health, Safety, and Well-being, pages 78-81 	
Integrated Annual Report and Sustainability Report			Q
Investor relations conferences and roadshows			A
One-to-one and group engagements			O
Annual General Meeting (AGM)			A

Value Created for Stakeholders

- Delivering sustainable returns to shareholders in honouring our dividend policy
- Effectively managing our business and executing our strategies for future business growth
- Providing greater transparency in disclosures which will instill confidence for investment community



Employees

Our 34,938 full-time employees throughout TNB Group excluding contractors.

Engagement Platform	Areas of Interest or Concern	Our Response	
One-to-one engagements	<ul style="list-style-type: none"> Health and safety of employees Employee well-being and workplace culture Talent and skills development Employee satisfaction Employee engagement on TNB's strategies, policies, and directions TNB's strategies and initiatives 	<ul style="list-style-type: none"> Our Support in Facing COVID-19, pages 36-38 Employment Management and Growth, pages 74-77 Emphasis on Health, Safety, and Well-being, pages 78-81 Contributing to Community Development, pages 83-89 	
Townhalls			O
Online portal (intranet), newsletters, emails and TV TNB			O
Employee surveys			A
Social media			AN
Corporate Social Responsibility (CSR) events			AN
Turun padang, brown-bag sessions and other outreach programmes			AN
Webinars			AT

Value Created for Stakeholders

- A healthy and safe work environment
- A positive, high performing work culture amongst all employees
- Career enhancement & talent development



Non-Governmental Organisations (NGOs) and Associations

Consumer associations, think tank groups, environmental groups, chamber 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	Our Response	Our Response	
One-to-one engagements	<ul style="list-style-type: none"> Affordable tariffs Innovation in technology and RE Quality of service Supply reliability Current and planned ESG efforts Energy literacy Environment & occupational safety/health Full compliance with the legal and regulatory requirements 	<ul style="list-style-type: none"> Sustainable Infrastructure and Ecosystem, pages 39-40 Minimising our Environmental Impact, pages 66-69 Our Support in Facing COVID-19, pages 36-38 	
Outreach programmes			AN
Seminars and knowledge sharing sessions			AN
Collaboration sessions			AN
Social media			AN
Meetings - BIANUALLY			AN

Value Created for Stakeholders

- Collaboration with NGOs to drive and support government initiatives and create awareness on energy literacy

SUSTAINABILITY AT TNB



Trade Unions

Two (2) registered unions and three (3) workers associations that cover all categories of employees.

Engagement Platform		Areas of Interest or Concern	Our Response
Joint Consultative Council (JCC)	AN	<ul style="list-style-type: none"> Mitigation and resolution of issues Employee well-being Employee engagement regarding strategies and initiatives Impact of new policies revision to employees CA Compliance 	<ul style="list-style-type: none"> Our Support in Facing COVID-19, pages 36-38 Employment Management and Growth, pages 74-77
Negotiations for Collective Agreements (CA)	AN		
Discussion on issues	AN		
Syndication & engagements	AN		

Value Created for Stakeholders	
	<ul style="list-style-type: none"> Fostering open communication and strong relationship with employees Safeguarding employees' interest and needs Maintain Good Industrial Harmony between Union and Management (e.g. via supporting EBIT UPLIFT)



Vendors

3,238 contractors and suppliers.

Engagement Platform		Areas of Interest or Concern	Our Response
Engagement sessions with key suppliers	AN	<ul style="list-style-type: none"> Industry support for business growth through technology and solutions Training and capability development Potential health and safety impact Procurement processes Fraud and bribery awareness New business opportunities and future development 	<ul style="list-style-type: none"> Our Support in Facing COVID-19, pages 36-38 Sustainable Infrastructure and Ecosystem, pages 39-40 Emphasis on Health, Safety, and Well-being, pages 78-81
Training and workshops	AN		
TNB Vendor Day	AN		
TNB Vendor Portal	AN		
Outreach programmes	AN		

Value Created for Stakeholders	
	<ul style="list-style-type: none"> Supporting the development of local supplier ecosystem Providing capability development opportunities for suppliers Fair and transparent procurement processes



Communities

Local communities in or near areas where we operate, including those affected by our operations.

Engagement Platform		Areas of Interest or Concern	Our Response
Outreach programmes	A AN	<ul style="list-style-type: none"> Potential public facilities and basic infrastructure Full compliance with the legal and regulatory requirements Coordination of drill, ERP, crisis Energy literacy Accessible and reliable supply of electricity Efficiency of services 	<ul style="list-style-type: none"> Our Support in Facing COVID-19, pages 36-38 Minimising our Environmental Impact, pages 66-69 Contributing to Community Development, pages 83-89
CSR events	AN		
Townhalls	AN		
Dialogue sessions	AN		
Sporting events	AN		

Value Created for Stakeholders	
	<ul style="list-style-type: none"> Contributing to the upliftment of community/society through business and CSR activities Connecting under-developed areas Protecting the safety of communities in where we operate Inform, educate, and engage communities to increase literacy on energy efficient and smart lifestyle Proactive social listening to address potential/future concerns



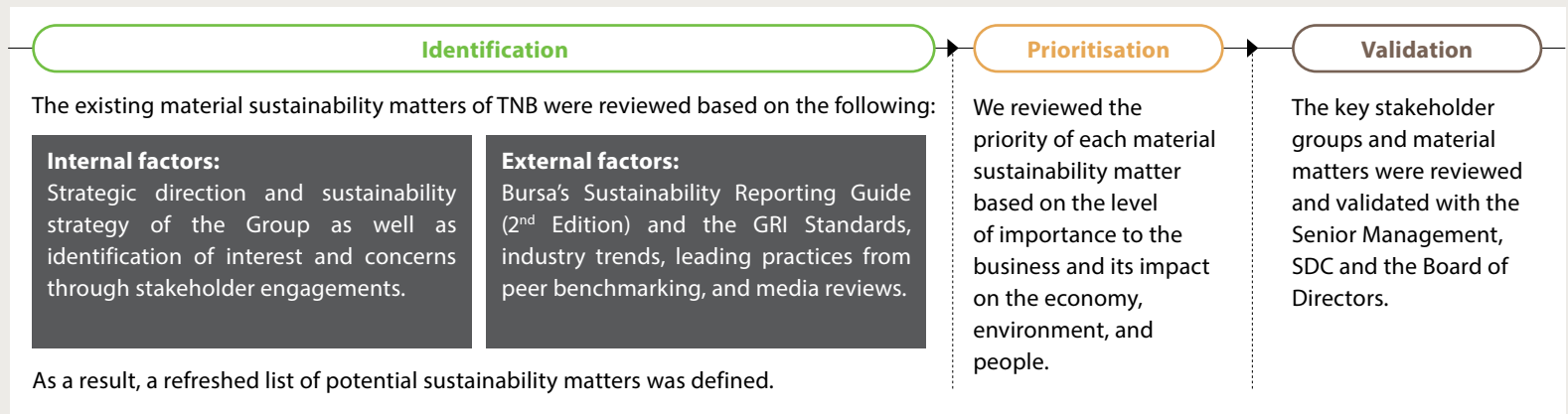
What Matters Most

102-47 | 103-2

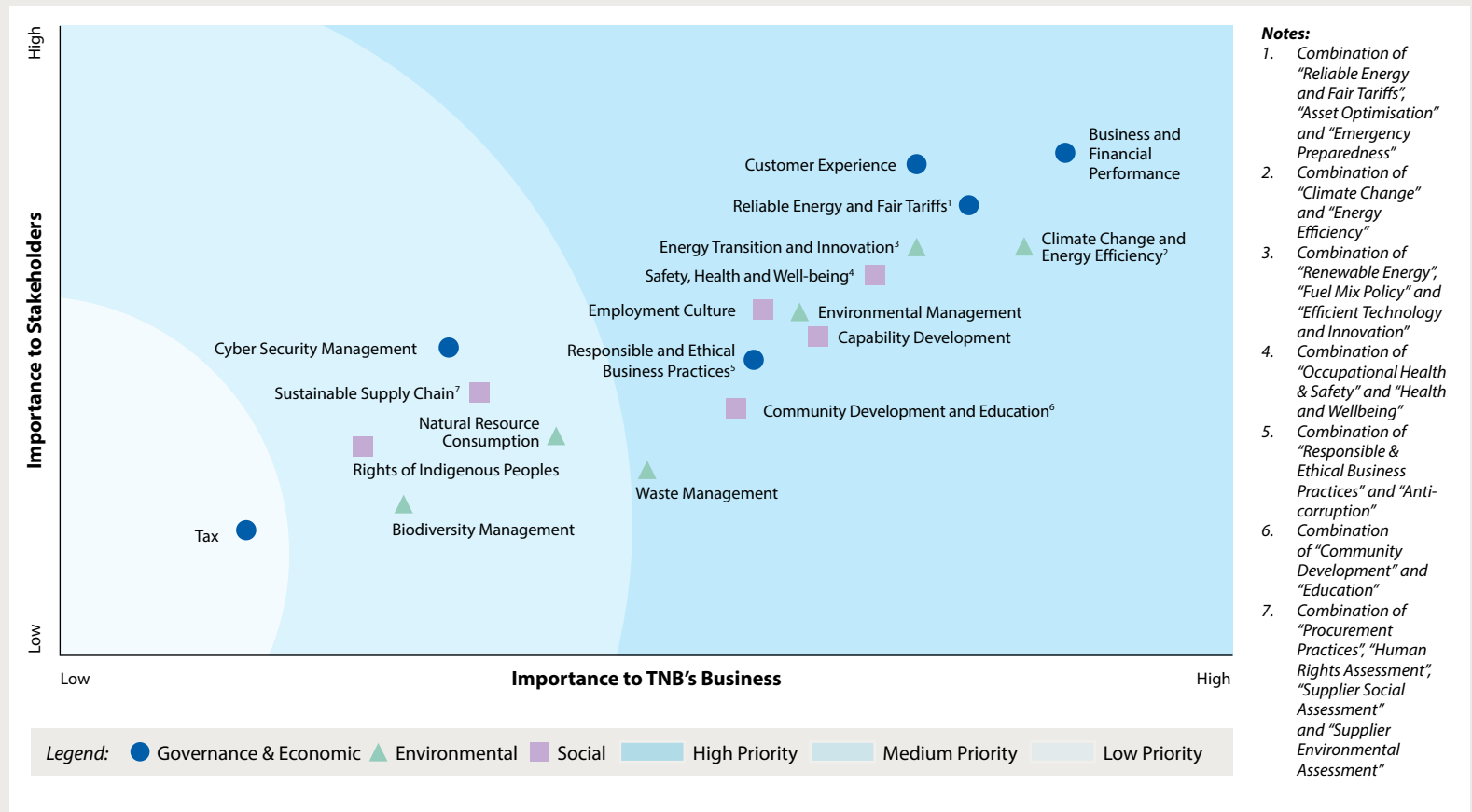
TNB's material sustainability matters reflect key topics that represents our most significant impact on the economy, environment, and people, including human rights. With an in-depth understanding of our material matters, we can better define our strategies and resource allocation plans, thereby positioning TNB to implement meaningful actions and anticipate sustainability challenges.

A comprehensive materiality assessment was conducted in FY2020 involving key internal stakeholder inputs and syndication with external stakeholders to develop our materiality matrix. The key stakeholder groups were identified and re-prioritised to ensure their interests and concerns are reflected in the relevant material matters. This year, we reviewed our materiality matrix with our top management to ensure continuous relevance and alignment to TNB's strategies, industry developments, emerging risks and opportunities, and stakeholder concerns.

The materiality review was conducted through the following process:



For FY2021, we retained the position and priority of the 17 out of 18 material matters identified in the previous year. The key change during the year was the repositioning of one material matter - "Rights of Indigenous People" which was shifted from low priority to medium priority to reflect our increased engagement with the indigenous communities.



SUSTAINABILITY AT TNB

We have linked 18 prioritised material matters for FY2021 to our corporate strategy and SDGs.

Sustainability Pillar	Material Matter	Link to RT Refresh	Link to UN SDGs
Governance			
Strong Leadership and Governing Responsibly <ul style="list-style-type: none"> Reinforce ethical and safe business culture 	Responsible and Ethical Business Practices Ensuring robust corporate governance in TNB.		
Economic			
Building the Nation <ul style="list-style-type: none"> Provide reliable and efficient energy for customers Supply electricity domestically and internationally 	Business and Financial Performance Measures taken to achieve business and financial growth.		
	Reliable Energy and Fair Tariffs Ensuring the availability, affordability and reliability of electricity in the short, medium and long-term, including in the event of emergencies and crises.		
	Customer Experience Providing exceptional customer experience by exceeding their expectations and empowering them to become prosumers, while ensuring data security.		
	Cyber Security Management Safeguarding digital systems from cyber security risks, threats and attacks.		
	Sustainable Supply Chain Engaging in sustainable supply chain practices and strengthening the local energy ecosystem.		
	Tax Contributing to government revenue through transparent tax practices.		

RT Pillars
RT Enabler

Legend:

Future Generation Sources

Grid of the Future

Winning the Customer

Future proof Regulations



Sustainability Pillar	Material Matter	Link to RT	Link to UN SDGs
Environment			
Environmental Sustainability <ul style="list-style-type: none"> Support transition to a low-carbon economy Minimise environmental impact 	Energy Transition and Innovation Contributing to the national RE target and driving innovation to anticipate changing trends and build business resilience.		
	Environmental Management Ensuring compliance and effective management of environmental impacts.		
	Climate Change & Energy Efficiency Efforts to address climate change impacts and manage greenhouse gas (GHG) emissions.		
	Natural Resource Consumption Responsible consumption of natural resources including fuel and water.		
	Waste Management Effective management of waste from business operations.		
	Biodiversity Management Pursuing environmental conservation efforts and safeguarding biodiversity in our areas of operation.		

Legend:

- Capital Allocation and Value Creation
- Corporate and Organisation Structure
- Digital and Data Analytics
- Culture, Capabilities and performance management

SUSTAINABILITY AT TNB

Sustainability Pillar	Material Matter	Link to RT	Link to UN SDGs
Social			
<p>Empowering our People and Nurturing Talent</p> <ul style="list-style-type: none"> Foster a favourable working environment that boosts employee morale and development Protect safety, health and well-being of our employees <p>Brighter Community</p> <ul style="list-style-type: none"> Enrich the lives of communities by driving socioeconomic upliftment 	<p>Safety, Health and Well-being</p> <p>Promoting a working culture that upholds high standards of occupational health and safety, and protects employee welfare.</p>		
	<p>Capability Development</p> <p>Development of technical and leadership skills for a future ready workforce.</p>		
	<p>Employment Culture</p> <p>Creating a diverse and inclusive culture while closely engaging with our employees.</p>		
	<p>Community Development and Education</p> <p>Channeling investments to community and educational programmes to advance positive socioeconomic impacts.</p>		
	<p>Rights of Indigenous People</p> <p>Engaging with indigenous peoples and respecting their rights.</p>		

Legend:

- RT Pillars (Blue square)
- RT Enabler (Orange square)
- Capital Allocation and Value Creation (Icon: Hand holding dollar sign)
- Corporate and Organisation Structure (Icon: Building hierarchy)
- Digital and Data Analytics (Icon: Gear with data points)
- Culture, Capabilities and performance management (Icon: People with gear)
- Future Generation Sources (Icon: Sun and water)
- Grid of the Future (Icon: Power lines)
- Winning the Customer (Icon: Handshake)
- Future proof Regulations (Icon: Document with checkmark)



In 2021, the 11 TNB Strategic Risks identified and approved by the BRC were mapped to the material matters.

ESG related risks were assessed in accordance with the TNB Risk Management Framework and guided by the TNB Risk Assessment Process Guide whereby accountability and responsibility are assigned to the relevant parties.

Strategic Risk										
External	Sustainability	Market		Customer	Financial/Strategy	Capabilities		Regulatory		
Catastrophic disruptions from external factors	Inability to keep pace with global ESG frameworks	Drop in electricity demand	Unable to be competitive & sustainable in non-regulated businesses (international & domestic)	Inability to be the electricity provider of choice	Ineffective capital allocation to maximise value creation	Gaps in workforce capabilities to deliver Reimagining TNB strategy	Failure to ingrain TNB culture in employees behaviour in supporting RT strategy	Unfavourable energy transition and climate change policies and regulations	Unfavourable Incentive Based Regulation (IBR) regime implementation & outcome	Regulatory Uncertainty

Materiality Matters	Governance & Economic											
	Business and Financial Performance	●	●	●	●	●	●			●	●	●
	Customer Experience	●		●	●	●			●		●	
	Reliable Energy and Fair Tariffs	●	●	●		●	●			●	●	
	Responsible and Ethical Business Practices		●				●		●	●	●	●
	Cyber Security Management	●				●						
	Tax						●		●	●	●	
	Sustainable Supply Chain	●		●	●	●						
	Environmental											
	Climate Change & Energy Efficiency		●	●		●				●		
Energy Transition and Innovation		●	●	●	●	●			●	●		
Environmental Management		●							●	●	●	
Natural Resource Consumption	●	●							●	●		
Waste Management	●	●							●	●		
Biodiversity Management		●								●		
Social												
Safety, Health and Well-being	●	●			●			●	●		●	
Capability Development				●				●	●	●		
Employment Culture						●		●	●			
Community Development and Education	●	●	●		●						●	
Rights of Indigenous People		●									●	

SUSTAINABILITY AT TNB





Linking Performance to the Global Agenda

The UN SDGs call on companies to advance sustainable development through investments, solutions and business practices. In doing so, we remain committed to achieve the objectives of the SDGs in protecting the planet and ensuring peace and prosperity by directly contributing to the goals outlined. This year, we have expanded our SDG contributions with the inclusion of four (4) additional SDGs, which are SDG3-Good Health and Well-being, SDG4-Quality Education, SDG9-Industry, Innovation and Infrastructure, and SDG10-Reduced Inequalities.









We align our metrics, targets and key initiatives for each material matter with the global agenda. The table below showcases our performance thus far and defines our future focus areas for our long-term sustainability commitment.

	Metrics and Targets	FY2021 Result	Focus beyond FY2021
 <p>UN SDG 3 Good Health and Well-being</p> <p>We promote healthy living and well-being of our people</p>	<ul style="list-style-type: none"> • Zero fatalities • LTIF < 1.0 	<ul style="list-style-type: none"> • Fatalities: 8 (2 employees, 6 contractors) • LTIF: 1.03 	<ul style="list-style-type: none"> • Continue to enhance our Health and Safety procedures, and measures to reduce fatalities and cases
 <p>UN SDG 4 Quality Education</p> <p>We provide quality education and financial support to the community</p>	<ul style="list-style-type: none"> • Number of students and trainees in TNB education and learning centres • Expenditure on scholarships and convertible loans 	<ul style="list-style-type: none"> • Number of students enrolled in UNITEN: 6,681 students • Number of individuals and TNB employees trained by ILSAS: 36,807 trainees • Number of scholarship and convertible loans recipients: 10,039 students • Spent on scholarships and convertible loans: RM126.01 million 	<ul style="list-style-type: none"> • To improve our education framework, facilities, and funding in supporting quality education for all • Enhancing digitalisation in education for better experience and access
 <p>UN SDG 7 Affordable and Clean Energy</p> <p>We prioritise energy efficiency, clean energy technology and related infrastructure</p>	<ul style="list-style-type: none"> • Increase RE capacity to 8.3GW by 2025, (including large hydro) • Maintain System Average Interruption Duration Index (SAIDI) under 50 minutes/customer/year through SAIDI 50 initiative 	<ul style="list-style-type: none"> • Total renewable energy generation capacity: 3,441.62MW • SAIDI in Peninsular Malaysia at 45.25 minutes/customer/year • System Availability: 99.79% • Equivalent Availability Factor (EAF): 82.89% performance for wholly and majority owned power plants in Peninsular Malaysia • Transmission system minutes: 0.086 minutes 	<ul style="list-style-type: none"> • Growing RE assets, both domestically and internationally • Expanding Large Scale Solar (LSS) and solar photovoltaics (PV) rooftop installations to boost the solar manufacturing sector • Optimising assets to enhance system and supply reliability which contributes to affordability • Enhance GOTF to ensure grid stability and security to support variable RE
 <p>UN SDG 8 Decent Work and Economic Growth</p> <p>We promote sustainable business performance and create employment opportunities</p>	<ul style="list-style-type: none"> • Tax and <i>zakat</i> contributions • Install 9 million smart meters across Peninsular Malaysia in phases under Advance Metering Infrastructure (AMI) initiative by 2026 	<ul style="list-style-type: none"> • Group Revenue for FY2021: RM52,629.50 million • Group Tax and <i>zakat</i> for FY2021: RM1,036.10 million (excluding deferred taxation) • Smart meters installed in FY2021: 1,836,919 	<ul style="list-style-type: none"> • Sustain strong revenue growth that subsequently leads to high tax and <i>zakat</i> contributions • Reskilling employees to be well equipped for greater digitalisation and automation • Enhancing digital connectivity to promote inclusive development

SUSTAINABILITY AT TNB

	Metrics and Targets	FY2021 Result	Focus beyond FY2021
 <p>UN SDG 9 Industry, Innovation and Infrastructure</p> <p>We build infrastructure and innovate to accommodate socio-economic growth and drive the low-carbon transition of the nation</p>	<ul style="list-style-type: none"> Allocate 3.5% of our PAT for our research and development (R&D) activities 	<ul style="list-style-type: none"> Percentage of PAT for R&D investment: 2.41% 	<ul style="list-style-type: none"> Formation of a centralised Technology Council at the end of FY2021 to manage R&D more effectively Develop electric vehicle (EV) charging infrastructure nationwide Expanding the R&D and innovation for clean and green energy
 <p>UN SDG 10 Reduced Inequalities</p> <p>We combat inequality regardless of gender, race, religious beliefs or economic status within our organisation</p>	<ul style="list-style-type: none"> Increase the percentage of women in senior management role 	<ul style="list-style-type: none"> Women in senior management role: 23.1% 	<ul style="list-style-type: none"> Continues to empower women employability and presence in management level through talent and training programmes
 <p>UN SDG 13 Climate Action</p> <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"> 35% emission intensity reduction by 2035, from base year FY2020 Halve coal generation capacity by 2035 Net zero emissions & coal free by 2050 	<ul style="list-style-type: none"> Total GHG emissions mitigated: 7.96 million tCO₂e Total GHG emissions (Scope 1 and 2): 39.99 million tCO₂e Energy savings from 12 TNB buildings: 8,092.20MWh GHG emissions intensity: 0.55 tCO₂e/MWh 	<ul style="list-style-type: none"> Promote energy efficiency Assessment of Scope 3 GHG emissions
 <p>UN SDG 17 Partnerships for the Goals</p> <p>We continue to form partnerships with key stakeholders with the objectives to meet future industry demands and contribute positively to the environment and the community</p>	<ul style="list-style-type: none"> Commit 1% of our PAT for community programmes Total expenditure on community development programmes Establish a wide range of partnerships to promote accessible and clean energy as well as uplift the communities 	<ul style="list-style-type: none"> Percentage of PAT spent for community programmes: 1.02% Total contribution to community development programmes: RM39.57 million Partnership with Ministry of Rural Development to provide electricity infrastructure in rural areas 	<ul style="list-style-type: none"> Strengthening partnerships and collaborations for community development and environmental management



Membership of Associations

102-13

We believe that the future lies in green and efficient energy. Hence, we advocate for the nation's energy transition through participation in associations as well as collaboration with local and international leaders in the industry.

Organisation

Heads of ASEAN Power Utilities/ Authorities (HAPUA)	The Association of the Electricity Supply Industry of East Asia and the Western Pacific (AESIEAP)	International Council on Large Electric Systems (CIGRE)	International Conference on Electricity Distribution (CIRED)	CEO Action Network (CAN), Malaysia	Malaysian Industry-Government Group for High Technology (MIGHT)
<p>HAPUA is an international electricity organisation in Southeast Asia which promotes cooperation among its members to strengthen regional energy security and enhance quality & reliability of electricity supply systems.</p>	<p>AESIEAP focuses on the exchange of expertise and technology between organisations in the electricity supply system including generation, transmission and distribution providers to develop solutions and advance the power industry.</p>	<p>CIGRE's global community is made up of thousands of power system professionals collaboratively sharing their knowledge and experiences for the greater good of the power and electrical industry.</p>	<p>CIRED is a global electricity distribution community where developments and best practices in technology and management of electricity distribution are presented and reported.</p>	<p>The CEO Action Network, also known as 'CAN', is established as a closed-door peer-to-peer network, governed and driven by private sector leaders for policy influence and action to accelerate sustainable development and sustainable business in Malaysia and beyond.</p>	<p>MIGHT offers a platform for collaboration between the public and private sectors in driving the nation's high technology industry for members to capitalise on through synergistic partnerships.</p>

TNB's contributions and engagement

<p>TNB is a member of HAPUA and has participated in several programmes including the ASEAN Power Grid meeting and research development to enhance ASEAN electricity supply system.</p>	<p>TNB hosted a prestigious event namely the Conference of the Electricity Power Supply Industry (CEPSI) back in 2018. In 2021, a total of 291 Technical Presenters has represented TNB during CEPSI 2021 hosted by the Philippines.</p>	<p>As a member, TNB participated in presentation of technical papers covering new technology, best practices, lessons learnt and asset management in the power and electrical industry.</p>	<p>CIRED Malaysia has been operating since 1998 and was established by TNB Distribution leaders/ with the participation from other industries related to electricity distribution.</p>	<p>TNB participated in a series of engagement sessions and collaborated with leading corporations and agencies sending a strong signal to the market of CAN members' traction and commitment towards sustainability.</p>	<p>TNB has participated in programmes and projects by contributing inputs to formulate national strategic plans for high technology industry sectors.</p>
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SUSTAINABILITY AT TNB

Membership of Associations

102-13

Organisation

<p>Malaysia National Committee on Large Dams (MYCOLD)</p>	<p>30% Club Malaysia Chapter</p>	<p>Malaysian Photovoltaic Industry Association (MPIA)</p>	<p>The World Wide Fund for Nature (WWF)</p>	<p>Zero Emission Vehicle Association (ZEVA)</p>
<p>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.</p>	<p>The 30% Club Malaysia advocates for at least 30% representation of women on the Board of Directors and in senior management.</p>	<p>MPIA is a non-profit organisation representing the Malaysian solar industry to promote solar energy from the local solar supply chain. MPIA has been working with the government to ensure the efficient, ethical and professional growth of the solar industry.</p>	<p>WWF-Malaysia and BCG collaborated in a study which explored potential climate mitigation pathways for Malaysia to achieve Net Zero emissions along various time horizons, and the social and economic impact of these pathways.</p>	<p>ZEVA provides a platform to promote the use of Battery Electric Vehicle (BEV) to the relevant stakeholders.</p>

TNB's contributions and engagement

<p>TNB is a primary supporter, providing technical input in the formulation and review of Malaysia's Dam Safety Guidelines.</p>	<p>In FY2021, TNB participated in programmes to advocate for women empowerment.</p>	<p>Through MPIA, TNBX and GSPARX promote solar solutions such as SARE and outright purchase to the members of MPIA.</p>	<p>TNB co-funded the WWF Net-Zero pathway study to chart Malaysia's path towards a sustainable and clean future.</p>	<p>TNB provided funding and participated in the programmes which contributed to the development of BEV in Malaysia.</p>
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Awards and Recognition

TNB has also received awards and recognition over the years for its sustainability reporting and performance. TNB's FY2021 recognitions include:



World Branding Award

Brand of the Year 2021 in the 14th edition of the prestigious World Branding Awards by London-based World Branding Forum (WBF).

TNB began receiving Brand of the Year recognition for the "Energy-Power" category in 2014 and received the same award consecutively in 2018, 2019, 2020 and 2021.



National Annual Corporate Report Awards (NACRA)

Gold award at the 2020 National Annual Corporate Report Awards (NACRA), which was jointly organised by Bursa Malaysia Berhad (Bursa), Malaysian Institute of Accountants (MIA) and the Malaysian Institute of Certified Public Accountants (MICPA).



Australasian Reporting Awards (ARA)

Won a gold, silver, and special award at the Australasian Reporting Awards (ARA) 2021.

- Gold awards for our Integrated Annual Report 2020. Previously, TNB was awarded gold in the year 2017 and 2018, and bronze in 2016.
- Silver award in Sustainability Reporting.
- Special award for Health and Safety Reporting.



Annual Reports Competition (ARC) International Awards

Two gold and a silver award in the 34th Annual Report Competition (ARC) International Awards, organised by New York-based MerComm Inc.

- Gold awards in the Non-Traditional Annual Report Electric Power Company and Interior Design: Electric Power Company categories.
- Silver award for Cover Photo/Design: Electric Power Company category.

We continue to ensure sustainable electricity supply for the nation through low-carbon power generation which runs at higher efficiency, leading to a cleaner energy. This initiative has been recognised through the following awards:



POWER's Plant of the Year 2021

Equipped with the first commercial GE 9HA.02 gas turbines—one of the world's largest and most efficient power-generating models, SPG won POWER's 2021 Plant of the Year Award by POWER Magazine, USA.



Tenaga Nasional Berhad's (TNB) power station, Jimah East Power (JEP) was triumphant in the ASEAN Energy Awards 2021 organised by the ASEAN Centre of Energy by winning the Clean Coal Technology Utilisation for Large Power Generation category.

SUSTAINABILITY AT TNB

Awards and Recognition

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



Employee Experience Awards 2021

TNB received Bronze in the 2021 Employee Experience Awards under Best Organisational Upskilling & Reskilling category. Honouring HR's commitment to workplace transformation, the Employee Experience Awards is deeply rooted in three pillars that are cornerstones for a positive employee experience which are leadership, learning and employee engagement.



LinkedIn Top Companies in Malaysia 2021

Out of 15 companies, TNB secured third place in LinkedIn's 2021 list of Top Companies in Malaysia to grow careers. This award recognises companies that invests in employees to help them build a professional foundation that sets them up for success both at the company and beyond. TNB was analysed for seven key criteria: ability to advance, skills growth, company stability, external opportunity, company affinity, gender diversity, and educational background.



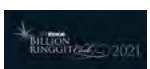
LinkedIn Finalist Talents Award 2021

TNB was announced as the winner of the Best Employer Brand on LinkedIn – above 1,000 employees.



Sustainability & CSR Malaysia Awards 2021

TNB was a proud winner at the Sustainability & CSR Malaysia Awards 2021, winning the Company of the Year award (Energy) and Overall Excellence in Social, Education, & Sustainability Initiatives.



The Edge Billion Ringgit Club 2021

TNB took the top spot for The Edge Billion Ringgit Club's Best CR Initiatives, under the Super Big Cap, Above RM40 billion Market Capitalisation category. We seek to leave a long-lasting positive impact on people and communities and protect the environment with our various CSR programmes.

ESG Ratings

We recognise that sustainability is an ongoing journey to which continuous efforts are needed to support the global efforts in mitigating climate change and achieving the SDG Goals. Various international rating agencies and analysts monitor and rate TNB's sustainability performance based on different sets of methodologies. These ESG ratings informs and influences the investor community as well as other interested stakeholders of TNB's key sustainability risks and opportunities as well as current performance. This year, for the first time, we have disclosed our key sustainability ratings in our disclosures, so as to improve transparency and credibility among our stakeholders. We at TNB aspire and are committed to strengthen these ratings in the near future.



MSCI ESG Rating

The MSCI ESG Rating is designed to measure a company's resilience to long-term industry material ESG risks as well as how well they manage those risks relative to peers.

TNB's MSCI ESG rating Score FY2021 **BBB**



FTSE4Good ESG Rating

This rating allows investors to assess a company's exposure to and management of ESG issues in multiple dimensions.

TNB's FTSE Russell ESG Rating Score for FY2021 **3.0**



CDP

CDP, formerly known as the Carbon Disclosure Project, runs a global disclosure system to support companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation.

TNB's CDP Climate Change Score for FY2021 **D**

BUILDING THE NATION



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BUILDING THE NATION



Related Material Matters

- Business and Financial Performance
- Reliable Energy and Fair Tariffs
- Customer Experience
- Responsible and Ethical Business Practices
- Cyber Security Management
- Tax

Feature Story Supporting the Economic Recovery

Our Support in Facing COVID-19

Over the past two (2) years, the COVID-19 pandemic has caused a health, socioeconomic and humanitarian crisis of unprecedented scale and impact. The imposition of Movement Control Orders (MCO) disrupted the local economy with a domino effect that negatively impacted livelihoods, disrupted supply chains and upended businesses, while exacerbating inequalities, poverty and hardships – especially amongst the most vulnerable groups. Nonetheless, we have begun to see the situation improving due to effective vaccination programmes, government support and policies, and the unity of Malaysians. As the nation traverses through these difficult times, we at TNB are honoured to play our part to work hand-in-hand with our stakeholders in accelerating the nation towards strong socioeconomic recovery.

Our Response to COVID-19

1 Supporting Customers and Communities

2 Stimulating the Economy

3 Safeguarding Our Employees

Supporting the Customers and Communities

G4-DMA (Former EU23)

TNB has provided various forms of support to our customers and communities facing the adverse effects of the COVID-19 pandemic. In FY2020, we collaborated with the Government of Malaysia to introduce relief packages such as *Pakej Rangsangan Ekonomi 2020 (PRE2020)*, *Pakej Rangsangan Ekonomi Prihatin (PRIHATIN)*, Easy Payment Plan, and *Bantuan Prihatin Elektrik (BPE)*. This year, collaborated again with the Government of Malaysia to deliver relief packages such as *Pakej Bantuan Perlindungan Ekonomi dan Rakyat Malaysia (Pakej Bantuan PERMAI 2021)*, *Program Strategik Memperkasa Rakyat dan Ekonomi (PEMERKASA)*, *Program Strategik Memperkasa Rakyat dan Ekonomi Tambahan (PEMERKASA Plus)* and *Pakej Perlindungan Rakyat dan Pemulihan Ekonomi (PEMULIH)*. During the MCO, we also implemented:

- i. Easy Payment Plan (EPP) for eligible residential customers until 31st December 2021
- ii. No electricity supply disconnection
 - During the Movement Control Order (MCO) 3 Phase 1 for all TNB customers
 - Until 30th September 2021 for eligible Residential customers with arrears not exceeding six (6) months



Due to the challenges arising from the COVID-19 pandemic, together with the Government, TNB continued to proactively provide various forms of support to our customers and communities.



Feature Story **Supporting the Economic Recovery**

Details of our FY2021 initiatives in supporting National Recovery Plan (NRP):

Period	Initiatives	Description																				
1 st January – 31 st December 2021	Easy Payment Plan (EPP) Extended Relief Package	Between 1 st January 2021 to 31 st December 2021, residential customers (Tariff A) were given the flexibility to pay bills at 70% of the current charge amount. The remaining 30% of the charge will be divided equally to be paid over a period from January 2022 to December 2022.																				
1 st January – 31 st March 2021	<i>Pakej Bantuan Perlindungan Ekonomi dan Rakyat Malaysia (Pakej Bantuan PERMAI 2021)</i>	<p>The Government of Malaysia introduced <i>Pakej Bantuan Perlindungan Ekonomi & Rakyat Malaysia (Pakej Bantuan PERMAI 2021)</i>. Under this package, six (6) selected commercial sectors that have been severely affected by the COVID-19 pandemic received a 10% discount on their electricity bills from 1st January until 31st March 2021. The six (6) business sectors are: hotel operators, theme parks, convention centers, shopping malls, local airline offices and tour and travel agencies.</p> <p>The electricity bill support initiative, which was first announced under the PERMAI package has now been extended under the PEMERKASA and PEMULIH packages.</p>																				
1 st April – 30 th June 2021	<i>Program Strategik Memperkasa Rakyat dan Ekonomi (PEMERKASA)</i>	PEMERKASA is an extension of <i>Pakej Bantuan PERMAI 2021</i> , whereby the electricity bill discount of 10% for hotel operators, theme parks, convention centres, shopping malls, local airline offices and tour and travel agencies was extended for an additional 3 months until 30 th June 2021.																				
1 st July – 30 th September 2021	<i>Program Strategik Memperkasa Rakyat dan Ekonomi Tambahan (PEMERKASA Plus)</i>	PEMERKASA Plus provides an additional 3 months extension from the PEMERKASA package until 30 th September 2021. Types of tariffs eligible for the discount are Tariff B, C1, C2 and Special Agreements that have been approved by the Government.																				
1 st July – 31 st December 2021	<i>Pakej Perlindungan Rakyat dan Pemulihan Ekonomi (PEMULIH)</i>	<p>The electricity bill discount under the PEMULIH Package is given for a period of three (3) months for electricity consumption from 1st July 2021 to 30th September 2021 for residential users (Tariff A) up to 900kWh per month and low voltage small and medium enterprises (SMEs). PEMULIH offered targeted discounts to 9.1 million residential and non-residential users.</p> <ul style="list-style-type: none"> 7.4 million residential customers enjoyed discounts between 5% to 40% for a span of three (3) months. The rate of PEMULIH Electricity Discount for residential costumers (Tariff A) in Peninsular Malaysia as detailed below: <table border="1"> <thead> <tr> <th>Electricity usage (kWh)</th> <th>Electricity usage (RM)</th> <th>Total Residential Customers</th> <th>PEMULIH Electricity Discount</th> </tr> </thead> <tbody> <tr> <td>1kWh - 200kWh</td> <td>RM43.60 and below</td> <td>2.9 million</td> <td>40%</td> </tr> <tr> <td>201kWh - 300kWh</td> <td>RM43.93 - RM77.00</td> <td>1.4 million</td> <td>15%</td> </tr> <tr> <td>301kWh - 600kWh</td> <td>RM77.52 - RM231.80</td> <td>2.4 million</td> <td>10%</td> </tr> <tr> <td>601kWh - 900kWh</td> <td>RM232.35 - RM395.60</td> <td>0.7 million</td> <td>5%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> 1.6 million SME customers in the low voltage commercial, industrial, and specific agricultural categories received a 5% discount. <p>Commercial consumers from the six (6) selected business sectors continued to receive 10% electricity discount from 1st October 2021 to 31st December 2021 under the PEMULIH Package.</p>	Electricity usage (kWh)	Electricity usage (RM)	Total Residential Customers	PEMULIH Electricity Discount	1kWh - 200kWh	RM43.60 and below	2.9 million	40%	201kWh - 300kWh	RM43.93 - RM77.00	1.4 million	15%	301kWh - 600kWh	RM77.52 - RM231.80	2.4 million	10%	601kWh - 900kWh	RM232.35 - RM395.60	0.7 million	5%
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Feature Story **Supporting the Economic Recovery**

Stimulating the Economy

The six (6) game-changers introduced in FY2020 lays out the key focal areas in which TNB can influence and drive socio-economic revival.

- Catalysing the economy through Grid of the Future
- Building a Global Solar Manufacturing Hub
- Raising National Competitiveness through Energy Efficiency
- Making Malaysia the Electric Vehicle Hub for ASEAN
- Electrifying Mobility for Malaysia Advancing Connectivity for Our Digital Economy
- Reskilling Malaysia by Embracing the Future of Work

Collectively, these game-changers are expected to deliver a significant economic impact between 2021 to 2030, by contributing an estimated RM120 billion to Gross Domestic Product (GDP), and providing up to 4.5 million skilled employment opportunities.

Safeguarding Our Employees

As the major electricity provider of the nation with an approximately 35,000-strong workforce, we are dedicated to ensuring that the occupational health and safety of our people is of utmost priority and not jeopardised in 'keeping the lights on', even in the midst of a pandemic. Consequently, the following measures and controls have been implemented:

Initiative	Our Approach	Our Performance in FY2021
<p>TNB COVID-19 Vaccine Management Task Force (CVTF)</p>	<ul style="list-style-type: none"> • Promote, campaign & create awareness amongst employees to register for vaccination, and address concerns raised by employees related to vaccination. • Plan, implement and monitor the vaccination enrollment for TNB Employees. • Coordinate with existing <i>Pusat Pemberian Vaksin (PPVs)</i> and closely monitor the vaccination availability and progress of TNB employees. • Work closely with relevant agencies to coordinate the purchase of vaccines for TNB employees. • Periodically report on vaccination progress in TNB to senior management. 	<p>99% of <i>warga</i> TNB are fully vaccinated.</p>
<p>Business Continuity Management - Crisis Response Team (BCM-CRT)</p>	<p>Strategic Actions</p> <ul style="list-style-type: none"> • Protocols were implemented to monitor employees who tested positive for COVID-19, while contact-tracing procedures were deployed. • PPE has been made available to all TNB employees, with priority given to our frontliners which include personnel in <i>kedai tenaga</i>, meter readers, and security officers at our premises. • Work-from-home initiative was implemented, where applicable, to continue operations safely and remotely. <p>Communicating with Our People</p> <ul style="list-style-type: none"> • Frequent communication to all employees on COVID-19 information and safety measures. • Access to counselling services for employees who face mental health challenges and personal struggles during this period. • Webinars focused towards on maintaining mental and physical well-being while working from home. <p>Standard Operating Procedures (SOPs)</p> <ul style="list-style-type: none"> • TNB has established and launched the Employee Self Health Declaration (ESHDD) portal, a daily health check-in platform to monitor our people's well-being. • Clear SOPs to promote good personal hygiene and social distancing are consistently communicated and made accessible to all employees. 	<p>We have invested more than RM21.4 million to managing COVID-19 covering key initiatives including:</p> <ul style="list-style-type: none"> • Special Ex-Gratia for 14,554 TNB employees during MCO: RM7.27 million. • Masks, face shields, hand sanitisers (84,635 boxes of facemask and 95,726 bottles of hand sanitiser distributed to divisions). • Building disinfection and preparatory measures: RM570,400. • COVID-19 self-test kits for our employees: RM2.59 million. • Food and general supplies to 1,847 TNB employees due to COVID-19 quarantine.

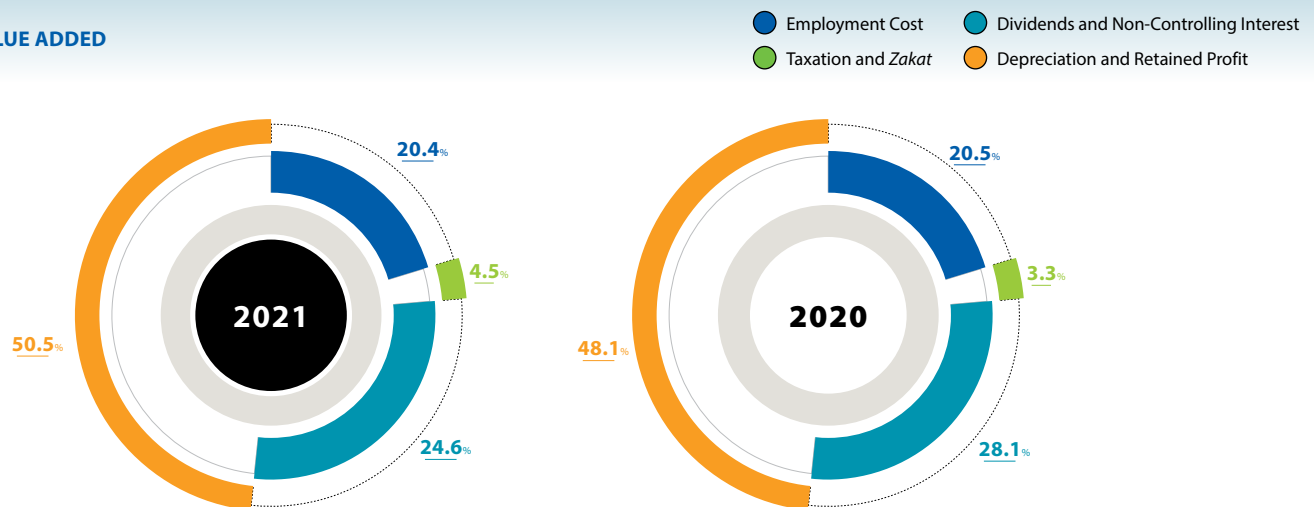


Sustainable Infrastructure and Ecosystem

102-7 | 201-1 | 103-2 | 103-3

The ASEAN region is gearing towards the energy transition through efficient equipment and digitalisation of the electricity sector. In tandem, TNB is seeking to digitalise electricity infrastructure to improve power security and adopt cleaner energy generation sources in future.

DISTRIBUTION OF VALUE ADDED



Economic Performance and Value Generated & Distributed

This year, our revenue reported increased by 19.7% to RM52.63 billion from RM43.98 billion in FY2020, mainly attribute by higher sales of electricity. The higher electricity sales included the Imbalance Cost Pass Through (ICPT) which was in an under-recovery position of RM4.51 billion compared to an over-recovery position of RM3.03 billion in the last corresponding year, mainly due to higher fuel price. We will continue to maintain robust value distribution to our key stakeholders while maintaining affordable and reliable electricity supply.

Reliable Energy and Affordable Tariffs

TNB continues to proactively engage with relevant stakeholders to smoothly implement the IBR framework and ICPT mechanism. The performance of the regulated business is meticulously monitored through 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 Government maintained the ICPT rebate of 2.00 sen/kWh throughout 2021 in view of the overall reduction in actual power generation cost leading up to December 2021 for all customers, including residential customers with monthly consumption of less than 300kWh.

Generation Fuel Mix

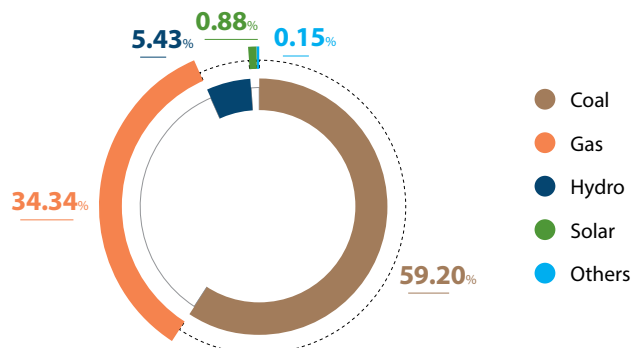
TNB's generation fuel mix is dependent on the Peninsular Malaysia Generation Development Plan determined by the Planning and Implementation Committee for Electricity Supply and Tariff (JPPPET), which is chaired by the Ministry of Energy and Natural Resources (KeTSA). This plan is developed based on the underlying principle of balancing the security of electricity supply, affordability, and environmental sustainability.

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) of less than 0.5. This would ensure optimum power security by providing adequate diversification of fuel and resources.

The Malaysian Government, ahead of COP26, pledged in its 12th Malaysia Plan to be a carbon neutral country by as early as 2050 and has made a number of commitments to reach that goal, including a commitment to stop building new coal-fired power plants. Hence, the coal generation mix is expected to reduce significantly in the years to come.

BUILDING THE NATION

PENINSULAR MALAYSIA GENERATION FUEL MIX FY2021



In line with the nation's aspiration to expand renewable energy (RE) capacity and reduce power sector carbon emission intensity of GDP by 45% and 60% in 2030 and 2035 respectively, we have projected an increase in low-carbon fuel and RE by 2035.

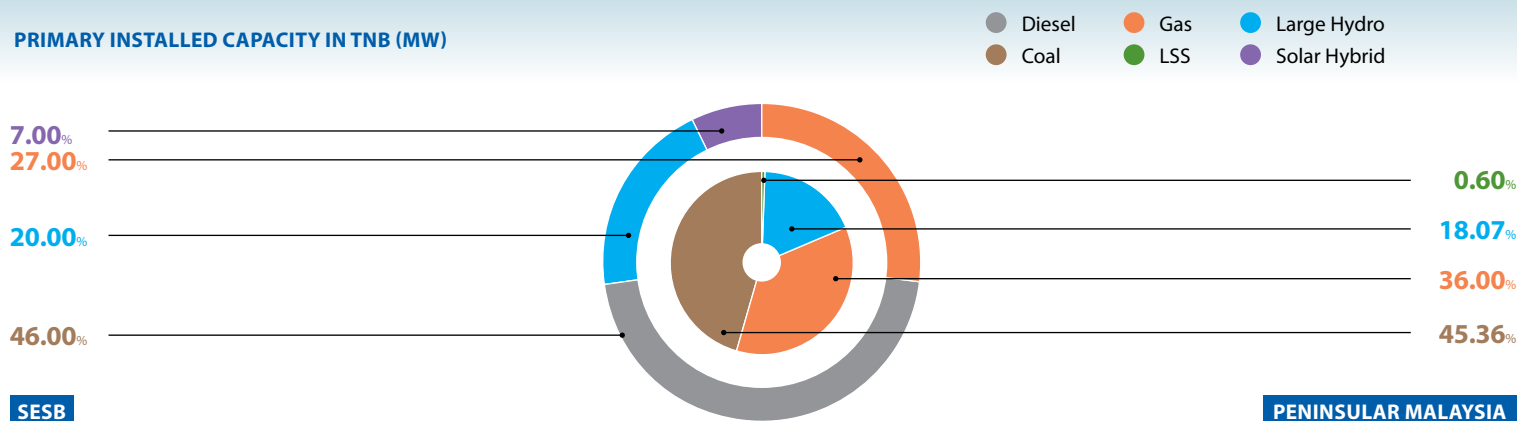
For more information, please refer to Our Response to Climate Change - Expand renewable assets within Malaysia, ASEAN, and Europe, page 61.

Installed Capacity

In 2021, there was an increase in gas installed capacity contributed by the operation of the newly commissioned Southern Power Generation Sdn Bhd (SPG), channeling electricity to the National Grid through its 1,440MW capacity of Combined Cycle Gas Turbines (CCGT).

Sabah Electricity Sdn. Bhd. (SESB) is an 80% owned subsidiary of TNB and 20% by the States Government of Sabah. It is a vertically integrated utility providing reliable generation, transmission and distribution services in the states of Sabah and the Federal Territory of Labuan. TNB Group Peninsular Malaysia's and SESB installed capacity in FY2021 is as follows:

PRIMARY INSTALLED CAPACITY IN TNB (MW)



Efficient CCGT

- Southern Power Generation Sdn Bhd's (SPG) Track 4A Power Plant in Pasir Gudang, Johor with 1,140MW capacity was commissioned in 2021. The plant is equipped with 9HA.02 combustion turbine technology from General Electric (GE) capable of with an efficiency rate of 60% contributes to the reduction of carbon footprint. SPG is one of the world's largest and the most efficient power-generating model gas turbines. The plant has also been recognised as "Plant of the Year 2021" by Power Magazine, a United States-based international power generation industry publication in July 2021.
- Prai CCGT is a 1,071.43MW gas fired power plant located in Penang, Malaysia, it comprises two (2) blocks of single shaft combined cycle gas turbines (SGT5-8000H) with a block efficiency of approximately 60%.

Clean Coal Technology

- Jimah East Power (JEP) won the Clean Coal Technology Utilisation for Large Power Generation category at the ASEAN Energy Awards 2021 organised by the ASEAN Centre of Energy. The award recognises best practices of cleaner and sustainable coal use and emission. JEP boasts two-ultra-supercritical plants, which makes power generation from coal more efficient.
- TNB Janamanjung Sdn Bhd located in Perak with a capacity of 3,100 megawatts has achieved extremely high availability achieving almost 40% efficiency rate, surpassing the global average of 33%.



Sustainable Business Expansion

103-2 | 103-3

During the COVID-19 pandemic, Renewable Energy (RE) proved to be a fast growing source of energy as it gained global market share amidst volatile supply and demand dynamics. In this regard, the international market offers TNB abundant opportunities for renewables growth and strategic partnerships.

Green Energy Growth

Our TNB International Asset Group (IAG) division has been restructured into the New Energy Division (NED) to focus purely on RE asset management, partnerships, and growth initiatives. The restructuring involves reorganisation of departments within NED to drive strategic partnership, greenfield projects and business development in the RE space. NED streamlines our RE expansion arms and oversees two key entities: Vantage RE operating out of the UK to focus on UK and Europe markets, and TNB Renewables based in Malaysia, to focus on the domestic and Southeast Asian markets.

Our RE growth strategies focus on the following ambitions:

1. Leveraging existing assets, capabilities and experience to expand within UK before entering European RE markets.
2. Grow RE capacity within the SEA region.

In the domestic renewables industry, we continue to develop renewable energy generation and market distributed generation solutions including rooftop solar photovoltaic (PV) panels, mini hydro, biogas and waste-to-energy plants through existing programmes such as Feed-in Tariff (FiT) and Net Energy Metering (NEM).

Our Focus	Description and FY2021 Highlights
Large Scale Solar	<ul style="list-style-type: none"> To date, TNB operates 78MWp and 45MWp large scale solar farms in Sepang, Selangor and Bukit Selambau, Kedah respectively.
GSPARX	<ul style="list-style-type: none"> TNB's fully owned subsidiary, GSPARX, focuses on rooftop solar solutions. To date, a total capacity of 116.3MW has been secured as compared to 81MW in 2020.
LSS4 Solar Farm bidding	<ul style="list-style-type: none"> TNB Renewables Sdn Bhd shortlisted as one of the winning bidders to develop 75MWp solar farm.
Hydroelectric Power Plant	<ul style="list-style-type: none"> In November 2021, TNB announced the RM5 billion construction of a 300MW hydroelectric dam in Nenggiri, Gua Musang which is expected to commence commercial operations in 2027.
Floating Solar PV System (FSPV)	<ul style="list-style-type: none"> 105kWp capacity of FSPV on Coal Ash Pond in TNB Janamanjung.

For more information, please refer to Customer Centricity - Empowering customers towards energy transition, pages 47-48.

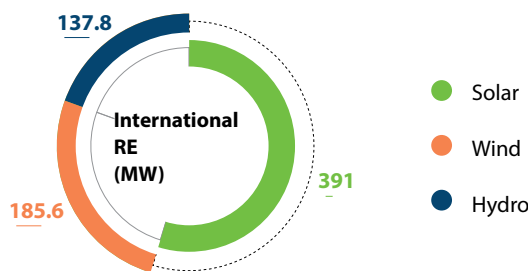
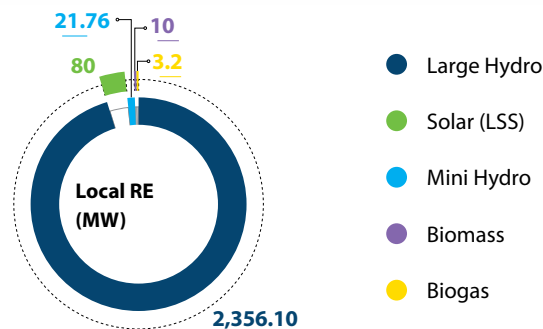


BUILDING THE NATION

Internationally, we have a presence in energy-related assets in countries such as Turkey, Kuwait, Saudi Arabia, Pakistan, and the United Kingdom. Our growth strategy focuses on markets in the UK, European and the SEA region emphasising on RE assets and technologies to enable our energy transition. We target to achieve a total of 8.3GW RE globally by 2025.

Key Initiatives	Descriptions
Setup Vantage RE	In July 2021, TNB formed Vantage RE to drive RE growth in the UK and European market.
Partnership with Électricité de France (EDF)	In October 2021, we developed a strategic partnership with EDF through acquisition of 49% stake in EDF's UK floating offshore wind farm company, (Bylth Offshore Demonstrator Limited (BODL). The wind farm has been in operation since 2017 under the Renewable Obligation Certificates (ROC) subsidy regime that is expected to provide stable revenues. BODL currently owns offshore wind assets including five turbines with a total installed capacity of 41.5MW and further development rights for a floating offshore wind project of up to 58.4MW.
Divestment	TNB continues to streamline its international portfolio and seeks to monetise assets in non-focus markets such as India and Pakistan, as seen in the divestment of compulsory convertible debentures (CCD) issued by India-based GMR Bajoli Holi Hydropower Private Ltd, and TNB Power Daharki Ltd in Pakistan.

OUR PERFORMANCE FOR FY2021



Note: From operations in which TNB has controlling stake

Ensuring Reliable Electricity Supply

EU28 | EU 29

Business Continuity Management

Business Continuity Management (BCM) practices are established to safeguard human lives, assets and the environment in a crisis or disruption, both natural and technological. TNB's BCM Framework is the basis on which divisions, including power plants, customise and implement their respective business continuity and emergency response plans. The effectiveness of these plans are tested at each level of the organisation, from corporate headquarters to zones and states. Drills were conducted with various scenarios such as wide-area electricity disruptions, cyber security intrusions and floods.

For more information on our flood response, please refer to *Emphasis on Health, Safety, and Wellbeing - Encouraging Occupational Health and Safety Practices*, page 79

Intellectual Property

TNB's intellectual property portfolio facilitates the sharing of ideas, technologies and knowledge to cultivate innovation and progress. As at FY2021, we held a portfolio of 120 intellectual properties, 69 of which is registered under Universiti Tenaga Nasional (UNITEN), while the remaining 51 is registered under TNB Research (TNBR).

TNBR's registered Intellectual Property Rights (IPR) covers innovation within its five technology portfolios namely power generation, renewable and green technology, sustainable environment, asset management and smart grid to accelerate our investment efforts in achieving the strategic objective of decarbonisation.

Notable innovations by UNITEN such as a method of predicting long-term energy demand in a given location and smart meter for energy monitoring, sharing and forecasting have provided progressive solutions in our energy management. Patents filed under UNITEN plants include an optimisation method to achieve high-efficiency in thermophotovoltaic cell, a computer-implemented method and system for modelling and predicting failure of a power grid configuration and composite insulator assembly comprising kenaf fiber for power transmission line.

Asset Optimisation

Grid of The Future, one of the four (4) RT pillars, is an essential strategy for us to strengthen our position in the energy transition. The integrated strategy for advancing and digitalising our distribution network system allows us to accommodate increased contributions from renewables in providing sustainable energy solutions. Grid modernisation initiatives optimises our assets to improve power distribution system reliability and efficiency while also paving the way for adoption of new disruptive technologies such as bi-directional power flows from distributed generation, grid storage, and smart meters.

Our Asset Management Plan is ISO 55001:2014 Asset Management - Management Systems - Requirements certified. The Plan charts a roadmap to achieve the greatest value from physical assets while the Asset Performance Management System focuses on the management of the asset's entire lifecycle. The table below shows our asset optimisation initiatives and performance.



Ensuring Reliable Electricity Supply

Initiatives	Descriptions	Contribution	FY2021 Highlights
Advance Automatic Fault Analysis System (AFA)	Provides automatic detection and detailed fault analysis to improve decision making during unplanned outage and restoration processes.	<ul style="list-style-type: none"> Improvement of response time during unplanned outage and restoration process. Efficiency improvement with less patrolling time during Overhead Line (OHL) fault locating process, and reduction of multiple site visits during preliminary investigation upon tripping. Reduction of CAPEX with optimum disturbance recording modular installation. 	As of FY2021, AFA is in operation and monitoring AFA fault location & lightning analysis for OHL of 275kV and above.
Substation Digital Intelligent Infrastructure (SDII)	Development of an open data platform to provide ready access to quality real-time data.	<ul style="list-style-type: none"> Provides real-time data to all application and users within TNB, enabling data exploration and insight findings. 	As of FY2021, data mapping and data validation has been performed by TNB's internal Grid System Expertise team.
Defense Plan Infrastructure <i>Previously reported as Wide Area Monitoring System (WAMS) is now incorporated as part of the Defense Plan Infrastructure</i>	Sustains transmission network stability and availability during disturbances and other power system contingencies.	<ul style="list-style-type: none"> Projects and initiatives are expected to provide technical performance and Grid security enhancements, to enable quick and safe restoration of the network. 	After successfully commissioning the Special Protection Scheme for Pengerang, Southern, and Eastern Phase 1 in FY2020, TNB Grid continued with the next phase of the initiatives in FY 2021 i.e. Pengerang intertrip scheme was upgraded to full redundancy, and Eastern SPS Phase 2.
Advanced Distribution Management System (ADMS)	Supports the full suite of distribution management optimisation.	<ul style="list-style-type: none"> Allows for automation of outage restoration and optimise the performance of the distribution grid. 	66% of planned upgrades completed in the third quarter of FY2021.
Distribution Automation (DA)	Enables remote monitoring and control of network assets to improve CAIDI and SAIDI.	<ul style="list-style-type: none"> Allows for fast and efficient supply restoration in central business districts and industrial zones in major cities. 	As of FY2021, 3,520 DA facilities were successfully installed.
Distributed Generation (DG)	Infrastructure that enhances network visibility, transparency, and reliability for all DG connectors.	<ul style="list-style-type: none"> Enablement of effective and efficient energy integration to the distribution network. 	As of FY2021, 78 out of 162 sites are installed with bi-directional transducer & SCADA, Hosting Capacity Platform is live for internal usage, and RE application handbook published.
Pelan Jalinan Digital Negara (JENDELA)	Increases accessibility of high-speed broadband services.	<ul style="list-style-type: none"> Increase in accessibility of broadband services. 	To date, total premises passed for high-speed broadband services is 174,431, which covers five (5) states (Perak, Johor, Kedah, Melaka and Penang).
Volt-Var Optimisation (VVO)	Manages system-wide voltage levels and reactive power flow to enhance network efficiency and reduce power losses.	<ul style="list-style-type: none"> Optimises network efficiency. 	70 MVAR deployed in FY2021.
Turnaround Programme	Unlocks asset potential and enhances the performance of TNB's power plants.	<ul style="list-style-type: none"> Roll out Business Turnaround Program through Transformation & Performance Sustainability (TPS) methodology, concurrently inculcate High Performance Culture among the staff, to achieve rapid and radical operational and financial performance improvement beyond PPA projections at Genco Power Plants. 	Full Fledge Turnaround Program at Jimah East Power (JEP) has been completed on September 2021 with projected improvements on plant energy efficiency, plant availability, Planned Outage Optimization and Variable Operating Cost (VOC) optimizations.

SESB on the other hand is moving towards Asset Management best practices and to obtain ISO55001 certification by 2023. In FY2021, SESB Transmission Division's renewed organisation structure under the VUP has been operationalised. The structure was designed to enable asset management roles and functions.

Initiatives	Descriptions	Contribution	FY2021 Highlights
Extensive Distribution Automation Deployment	Installations DA facilities towards achieving 150 mins as per SESB business plan and transformation agenda by year 2025.	<ul style="list-style-type: none"> 3,000 customers will enjoy fast restoration (6 feeders to be fully equipped with C-11 automation package). 	Implemented DA for 60 PEs to improve customer experience through fast restoration and achieve SAIDI reduction of up to 5 mins in Kota Kinabalu.
Condition-Based Maintenance	Overhead Line Inspection using Drone (UAV) in Distribution Network.	<ul style="list-style-type: none"> Usage of drone to locate faults or potential problem areas led to efficient resource management and improvement in technical performance. 	

BUILDING THE NATION

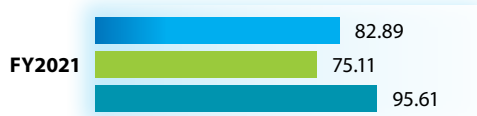
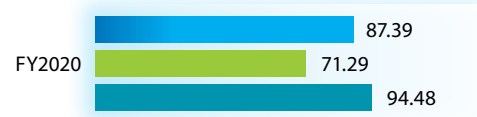
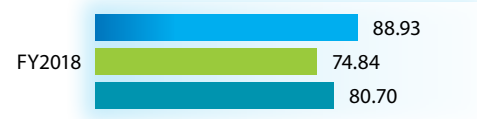
Ensuring Reliable Electricity Supply

Our Performance for FY2021

EQUIVALENT AVAILABILITY FACTOR (EAF)

(%)

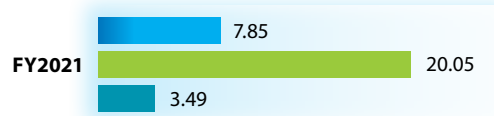
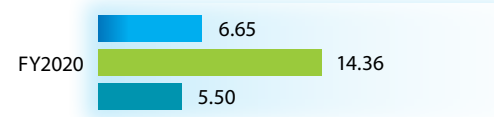
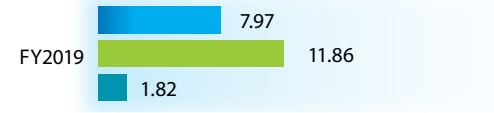
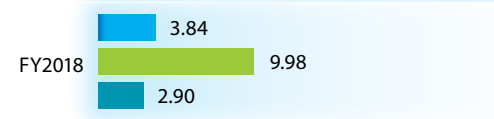
- Peninsular Malaysia
- SESB
- International



EQUIVALENT UNPLANNED OUTAGE FACTOR

(EUOF) (%)

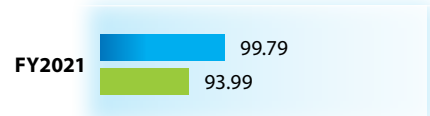
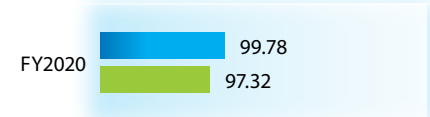
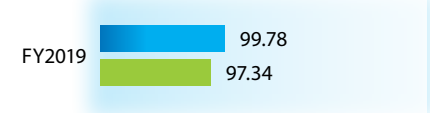
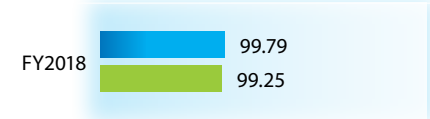
- Peninsular Malaysia
- SESB
- International



PERCENTAGE OF SYSTEM AVAILABILITY

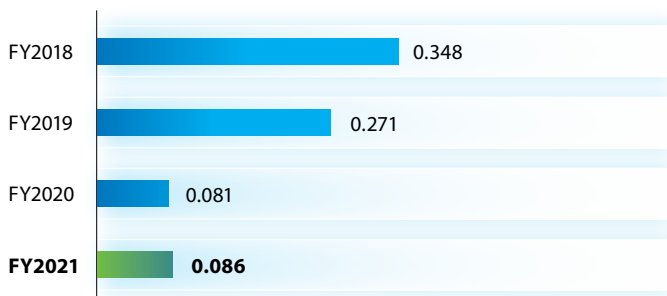
(%)

- Peninsular Malaysia
- SESB

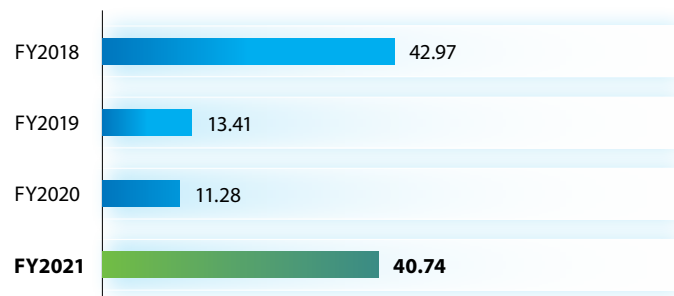


TRANSMISSION SYSTEM MINUTES

Peninsular Malaysia



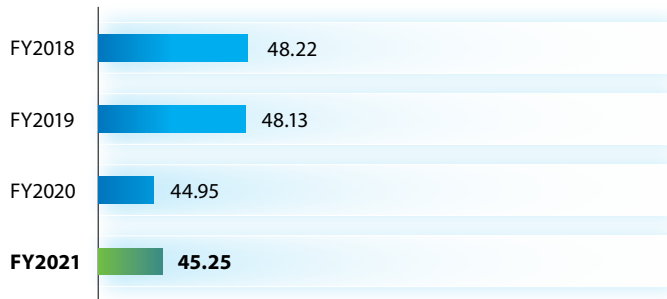
SESB



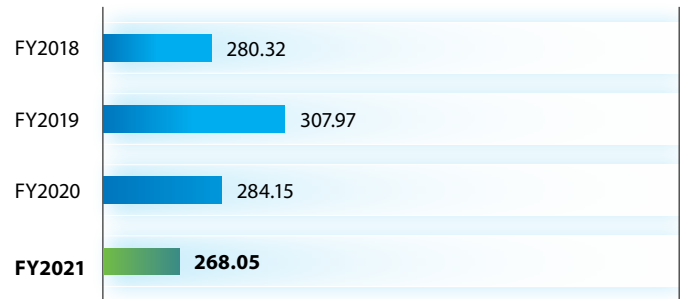


SYSTEM AVERAGE INTERRUPTION DURATION INDEX (SAIDI)

Peninsular Malaysia

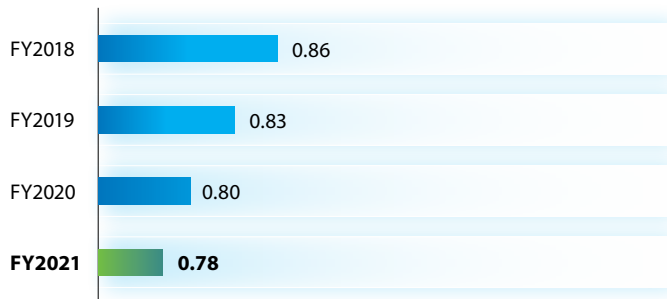


SESB

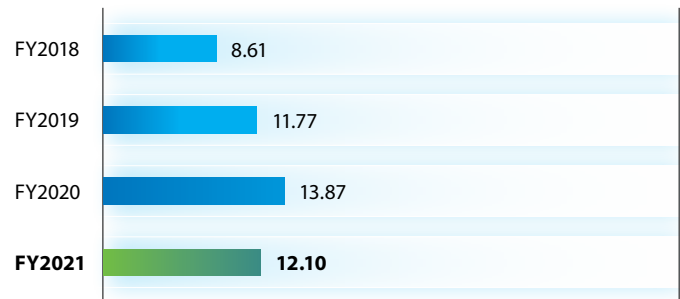


SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX (SAIFI)

Peninsular Malaysia



SESB

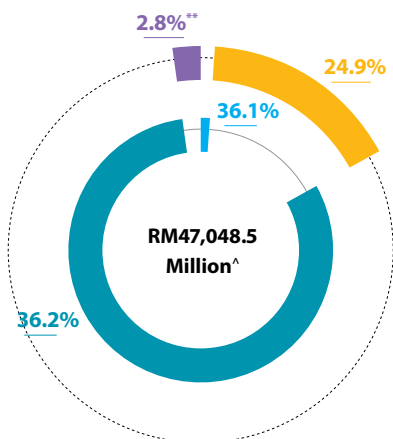


Customer Centricity

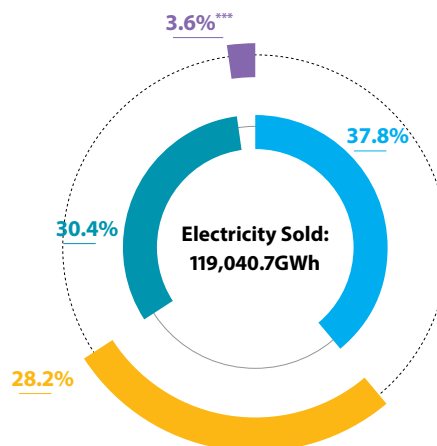
102-43 | 102-44 | 103-2 | 103-3 | EU3 | G4-DMA (Former EU7) | G4-DMA (Former EU23)

Customers remain at the heart of our business as it is our top priority to serve our customers with reliable, affordable, and sustainable services and solutions. We aim to do so through continuous and effective customer engagement and offering innovative solutions.

GROUP SALES OF ELECTRICITY BY SECTOR



- Industrial
- Residential
- Commercial
- Others



** Others include Agriculture, Mining, Public Lighting, Accrued Revenue, Sales Discount, EGAT, LPL, TNBI (UK WIND & Vortex) and other regulatory adjustment, Relief Package from Government, SESB Tariff Support Subsidy and Merdeka Incentive

*** Others include Agriculture, Mining, Public Lighting, EGAT, LPL, TNBI (UK WIND & Vortex) and Accrued Revenue


^ Exclude Imbalance Cost Pass-Through

Customer Centricity

Flood Relief

In December 2021, Peninsular Malaysia was hit by flash floods which devastated our communities. During this time, TNB temporarily shut down 333 power substations in six states due to concerns over the safety of consumers and TNB employees. Nevertheless, we did our best to keep the lights on for the nation by supplying electricity to *Pusat Pemindahan Sementara* (PPS) via portable generators instead.

To alleviate the financial burden of our customers, TNB offered a one-off 100% rebate for the December electricity bill to a total of 148,881 residential customer affected by the floods. We also channelled RM2 million in monetary aid to flood victims via our *Tabung Warga TNB Prihatin* (TWTP) initiative, and conducted free wiring inspections at affected B40 homes in Selangor, Pahang, and Kuala Lumpur to ensure the safety of our community.

 For more information on our TWTP, please refer to *Brighter Communities – Together with You*, page 83.

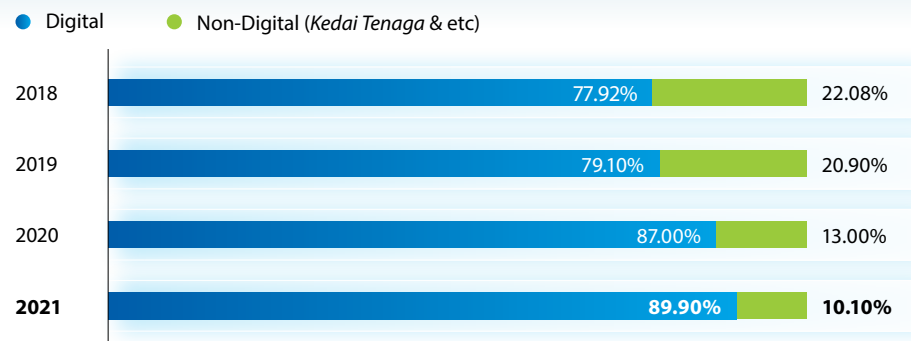
Customer Engagement

In FY2021, we improved our three (3) main interaction channels from ‘Click, Call & Come Over’ to ‘Click, Call, Come Over & Go Over’ to enable us to proactively meet and engage with our customers while strictly adhering to safety measures set in place to prevent the spread of COVID-19.

As a result of both the pandemic and digitalisation, TNB continued to see an increase in digital interactions with customers in FY2021. Customers were encouraged to use our digital platforms such as the myTNB mobile application and myTNB web portal which support to conduct payments and view bills and provide excellent customer experience. However, appointment booking for *Kedai Tenaga* visits was also made available through the myTNB web portal for customers who prefer to conduct physical transactions.

To date, we have had
ZERO reported complaints
regarding breaches to
customer privacy

CUSTOMER INTERACTION



Note: From operations Peninsular Malaysia

Additional digital customer solutions that TNB implemented in FY2021 include:

- *TNB Temujanji* was introduced in September 2021 to empower customers to make an appointment to any *Kedai Tenaga* based on their preferred time and date.
- Guaranteed Service Level (GSL) Rebate was rolled out nationwide to allow customers to claim GSL rebates and track compensation payments via the myTNB App.
- Digital Solution for Overvoltage Claim (OVIS) was rolled out to eight (8) business areas to enable customers from targeted areas to request for overvoltage claims via the myTNB App and myTNB web portal.

Our myTNB app continues to be well-received by the public with 88.25% of 1.7 million users in FY2021 giving it a 5-star rating. This was also an improvement compared to the 86% 5-star rating from 396,286 users in FY2020. In addition, the number of users on both the web platform and app has increased. The myTNB web portal now has 1.39 million users in FY2021 compared to 1.27 million in FY2020, while the app has seen a substantial increase to 5.57 million users in FY2021 from 3.11 million in FY2020. Correspondingly, the myTNB mobile application was downloaded 3.77 million times in FY2021 compared to 1.97 million in FY2020.

Customer Satisfaction

TNB has achieved an 87% satisfaction rate in our Customer Satisfaction Index (CSI) for FY2021, a new all-time high from 86% in FY2020. This is our second consecutive year achieving our target CSI score of between 82% to 86%. A new methodology was deployed for this year’s CSI, which was based on customer segments; i.e. Small Medium Enterprise & Residential (SME&R) and Govt & Large Business (GLB) segment. Our targeted KPI is between 81% to 86%.

CUSTOMER SATISFACTION INDEX (CSI)



Note: From operations in Peninsular Malaysia



Customer Centricity

Safeguarding Customer Privacy

TNB constantly strives to improve user experience and protect data privacy of the customers. To date, we have received zero complaints from third parties or regulatory bodies regarding breaches of data privacy by ensuring that we are compliant with relevant regulations, including the Personal Data Protection Act (PDPA) 2010. Strict security controls are also in place to protect customers' data privacy such as our Cyber Security Operating Model, Personal Data Protection Policy, and the use of Payment Card Industry Data Security Standard for online transactions. Overall, we are vigilant against the risk of unlawful access and use of our customers' data.

Empowering Customers Towards Energy Transition

At TNB, we recognise that the journey towards transitioning to cleaner sources of energy is one that the nation must embark on together. As a key electricity and utilities provider, we empower our customers to join the energy transition journey and become prosumers through a variety of innovative products and programmes. Our FY2021 key highlights are as below:

Initiative	Description	Our Performance in FY2021
Feed-in Tariff (FiT) Programme	A mechanism for RE asset owners to export solar energy produced to TNB grid at a fixed price.	9,481 FiT projects have been commissioned with an installed capacity of 533.77MW.
Net Energy Metering (NEM) Scheme	Allows customers in Peninsular Malaysia to export excess energy produced from their solar PV systems back to the grid.	11,792 NEM participants making up a total capacity of 794.19MW.
Malaysia Renewable Energy Certificate (mREC)	Malaysia Green Attribute Tracking System (mGATS) is a national marketplace for Malaysia Renewable Energy Certificates (mREC). Sales of unbundled RECs from LSS and hydroelectric plants stopped in November 2021 to make way for the new Green Electricity Tariff (GET) programme.	In FY2021, 612,361MWh of mRECs has been contracted.
myGreen+	myGreen+ is a green energy tariff programme which allows customers the option to purchase green energy without having to incur the high initial investment of rooftop solar or other forms of RE system installations. Subscriptions are currently sold in 100kWh blocks of RE electricity at 8 sen/kWh. Moving forward, this initiative will be replaced by GET.	256 customers subscribed to 253.30MWh of RE electricity in FY2021 through myGreen+.
Green Electricity Tariff (GET)	This programme was introduced as an option to enable electricity consumers to indirectly purchase green electricity without having to incur the high initial investment of RE system installations. All consumers are eligible for the GET programme which is available in 100kWh blocks for residential consumers and 1,000kWh blocks for non-residential consumers at a rate of 3.7 sen/kWh. Consumers enrolled in GET programme will receive an internationally recognised mREC after the end of a calendar year.	Subscriptions for GET programme began on 1 st December 2021 for early reservations and will officially commence on 1 st January 2022. As of 31 st December 2021, 232,368MWh has been subscribed.

BUILDING THE NATION

Customer Centricity

Initiative	Description	Our Performance in FY2021
Rooftop Solar PV (GSPARX)	TNB's fully owned subsidiary, GSPARX focuses on solar solutions. GSPARX allows customers (residential, commercial and industrial) to install solar PV at zero upfront cost and enjoy savings via self-consumption.	In FY2021, GSPARX clinched 49 new contracts with a total secured capacity of 35.3MW. This increased the cumulative secured capacity to 116.3MW.
Supply Agreement for Renewable Energy (SARE)	TNB offers SARE, a tripartite agreement between TNB, solar PV investor and the customer. SARE enables single convergence billing to customers for energy taken from the TNB grid and the solar PV system. Currently, SARE is offered to commercial, industrial and government sectors in Peninsular Malaysia.	In FY2021, 368 contracts were secured by commercial and industrial customers through SARE. This resulted in a total SARE contracted capacity of 127.66MWp.



To enable electricity customers to reduce their carbon footprint in electricity consumption, the Government has introduced the Green Electricity Tariff (GET) to offer low carbon electricity supply to all customers. TNB and its subsidiary, TNBX Sdn. Bhd. offers the GET programme to customers. The role of TNBX include forecasting and managing the GET quota, as well as developing policy and managing system enablement of the GET offerings. Additionally, TNBX is responsible for managing the issuance of mRECs and transfer of mRECs to the GET customer.

GET Features

Subscribers to Pay:



Standard applicable tariff as per the Tariff Schedule for their monthly electricity consumption.



Additional payment of 3.7 sen/kWh for the total RE generation subscribed.

Subscription in Block:



Residential:
1 block = 100kWh
Non-Residential:
1 block = 1,000kWh

Internationally Recognised:



Received **Malaysia Renewable Energy Certificate (mREC)** certified by internationally accredited registries.

GET Benefits



Enable consumers to **subscribe to green electricity supply** from utility companies.



Support the growth of the country's **Renewable Energy (RE) industry**.



Enable companies to meet **Environmental, Social & Governance (ESG) commitment** as well as reduce their electricity consumption.

Notes:

- Consumers can subscribe on the myTNB portal (www.mytnb.com.my) starting 1 Dec 2021.
- The GET subscription will be effective for total electricity consumption from 1 Jan 2022.

For more information visit <https://www.tnb.com.my/get> for FAQ about GET contact TNB CareLine at 1-300-88-5454 | email to tnbcareline@tnb.com.my



Customer Centricity

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

Initiative	Description and Performance in FY2021
Sustainability Achieved via Energy Efficiency (SAVE) 2.0	<ul style="list-style-type: none"> We supported the Government through the promotion of the SAVE 2.0 programme which offers RM200 e-rebate vouchers to help customers purchase 4 or 5 Star labelled energy efficient home appliances.
Energy Efficiency Awareness Programmes	<ul style="list-style-type: none"> We collaborated with NGOs to spread awareness on energy savings to school teachers and children. We also supported the 'Let's Stay Home, Be Energy Efficient' competition by <i>Sekolah Kebangsaan Seri Rejo Sari</i> to encourage the younger generation to embrace a more sustainable lifestyle. TNB collaborated with <i>Kelab Duta Rimba</i> to organise the Electrical Energy Efficiency Awareness Competition which 1,562 students nationwide participating.
Energy Efficiency Online Talks	<ul style="list-style-type: none"> In FY2021, a total of 32 energy efficiency online talks were given to various residential and commercial consumers including government associations and schools throughout Malaysia.
Energy Performance Contracts (EPCs)	<ul style="list-style-type: none"> TNB Energy Services Sdn Bhd (TNBES) was awarded two (2) EPC projects with Institut Teknologi Petroleum PETRONAS (INSTEP) and Penang International School (UPLANDS) to improve Energy Efficiency (EE) through investments in energy efficient equipment until FY2030. The expected annual energy savings from the two (2) EPC projects is approximately 473,402kWh, which is equivalent to 30.3 tCO₂e of GHG emission reduction.

Advanced Metering Infrastructure (AMI)

AMI is an integrated and intelligent system that includes smart meters. Its well-equipped digital features provide near real-time data through our myTNB web portal and mobile app that customers can use to monitor and manage their electricity usage, hence potentially leading to cost savings. Customers with smart meters will also have access to the myTNB app and Smart Meter Web Portal which provides insights to their energy consumption through energy usage analysis at half-hourly intervals.

We achieved our FY2021 target to install 1.5 million smart meters by September 2021. With approval from the Government, we increased our target to 1.8 million smart meters installation, and successfully installed 1,836,919 smart meters in FY2021, with the latest batch being installed in KL Timur, KL Selatan, Langkawi, Kuala Nerang and Ipoh. Beyond 2021, we target to install 7.5 million smart meters nationwide throughout the Regulatory Period 3 and beyond.



TNB has achieved 1.8 million smart meters installation target in September 2021.

BUILDING THE NATION

Sustainable Supply Chain

102-9 | 204-1

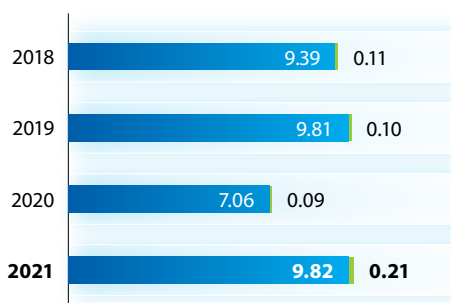
TNB intends to establish a Sustainable Supply Chain ecosystem by integrating digitalisation into its procurement process. Digital transformation of business process helps to improve efficiency and reduce time consumed in manual processing.

We support the development of Malaysia's business ecosystem by channelling over 98% of our procurement spend to local suppliers. We reinforce ethical business practices in our suppliers who have to abide by TNB's Procurement Code of Conduct, Procurement & Supply Chain Policy and Procedures, Integrity Pact and Anti Fraud and Bribery Policy. Our wide supply chain network requires us to continuously engage with our suppliers to improve their ESG practices on various aspects such as health & safety, environmental stewardship and integrity.

Our Performance for FY2021

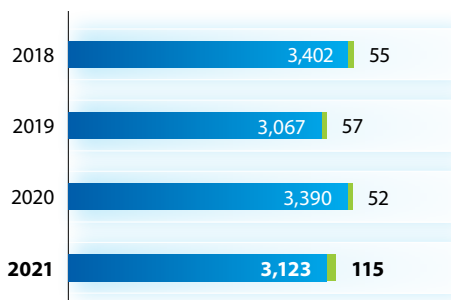
TOTAL SPENT ON PROCUREMENT (RM BILLION)

● Local Suppliers ● International Suppliers



TOTAL NUMBER OF SUPPLIERS (NO.)

● Local Suppliers ● International Suppliers



Note: For operations in Peninsular Malaysia

P&SC Transformation Programme

We are improving our procurement operating model with the introduction of P&SC 2.0 Transformation Programme launched in July 2021, leveraging on digitalisation and nation-building agenda. We develop long-term and meaningful relationships through our supplier ecosystem development programme, the Corporate Strategy for Vendor Relationship (CSVR). We optimise value delivery and productivity enabled by future-proof capabilities and platforms to deliver higher performance.

Key Initiatives	Descriptions
Procurement Connected Planning (PCP)	Digitalises planning for procuring, delivery and improvements of material and service availability.
Procurement Cycle Digitalisation (PCD)	Facilitates and guides the end-to-end Procurement Lifecycle process via Business Process Management System.
Robotic Process Automation (RPA)	Automate business processes to enhance integrity, productivity and efficiency in Purchase Order (PO) award rotation, contract-to-buy, stock transfer order, product inspection management and material availability notification.
Sistem Maklumbalas Bahan (SMB)	Product and service quality management system.
LAPASAR	Business platform which allows users to purchase supplies from a listing of more than 2,000 items (increased from 1,000 from previous year).
Contractor and Supplier Evaluation (CASE)	Provides a centralised platform to evaluate and monitor the performance of contractors and suppliers from Purchase Order (PO) Issuance to works completed.
TNB Rates and Cost Engineering (TRACE) 1.0	<p>The platform to standardise rates, Bill of Quantity (BQ) and technical specifications through automation in digital platform replacing existing manual method. The key benefits of this system:</p> <ul style="list-style-type: none"> • 22% improvement in lead time per Purchase Request (PR). • FTE savings of RM3,461 per PR, equivalent to RM1.27 million annually. • Digitalisation reduces manual BQ preparation and paper-based sourcing by 50%.

Vendor Engagement Programme

We continue to engage with our vendors and stakeholders through various programmes and platforms:

TNB Open Day for vendors and contractors	Vendor programme Memorandum of Understanding with MEDAC (Ministry of Entrepreneur Development and Cooperatives)	Engagement Session with <i>Suruhanjaya Tenaga (ST)</i> , <i>Persatuan Rakan Niaga Strategik Malaysia (PERNISMA)</i> , and <i>Persatuan Usahawan Tenaga Malaysia (PUTM)</i>	TNB Procurement & Supply Chain <i>Teh Tarik</i> Session with vendors and contractors
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Tax

207-1 | 207-2 | 207-3

Sustainable Development Strategies and Disclosures

Realising that taxes an important source of revenue to the country's economic and social wellbeing, TNB maintains a cooperative relationship with relevant authorities and takes tax positions after conducting detailed analysis. In enhancing operational efficiency and transparency, TNB complies with tax laws and regulations with active engagement in domestic and international tax planning. This is driven by commercial considerations and is aligned with business activities. TNB regularly reviews taxation compliance, in the context of deductions or incentives, and takes the necessary steps to ensure conditions are met and refrains from supporting activities deemed as aggressive tax planning to secure tax benefits with no commercial substance.

When a commercial activity or transaction is viable, TNB will review it for availability of a tax incentive or exemption. From the planning perspective, TNB reviews transactions to minimise potential tax liability or tax risk. For potential new investment ventures, The Group Tax Department (GTD) will consult with the TNB management on the likely tax impact of the venture besides tax efficiency of the proposed transactions in compliance with relevant tax laws and obligations.

In claiming tax treaty reliefs pertaining to structures or transactions entered, TNB ensures that the tax laws are complied with and substance requirements are met. As part of the statutory process, independent assurance is performed on TNB's financial reporting for income taxes, such as those relating to tax accounting and tax provision.

With commercial activities in multiple jurisdictions such as the United Kingdom, Kuwait and Turkey, TNB submits the country-by-country reporting annually to the relevant tax authorities.

Principle Approach and Governance

TNB has developed structured policies, procedures and guideline to oversee activities pertaining to tax functions including compliance, planning and risk management. It is overseen by the Chief Financial Officer (CFO), however, depending on the degree of risk and nature of the transaction, actions or decisions will be referred to the Board of Directors for approval and guidance.

TNB's Group Financial Policies and Procedures (GFPP) provides procedural instructions to streamline tax compliance efforts throughout TNB Group with the aim to achieve uniformity of tax policies and procedures. The GFPP identifies action items and department's roles to ensure responsibility and accountability of the relevant parties within TNB's Group. The GTD, under Group Finance is responsible to implement TNB Group taxation policies and to monitor compliance with tax laws. All subsidiaries are responsible for their own income tax submissions and GTD plays an oversight role by reviewing the draft tax computations of the subsidiaries before final submission to the Inland Revenue Board of Malaysia (IRBM).

TNB seeks to develop and sustain an amicable relationship with the tax authorities and recognises the importance of engaging with the tax authorities. Often, TNB engages constructively to support the development of effective tax systems, legislation, and administration at the national level. Feedback is also provided to government representatives on proposed changes or introduction of new

Tax

taxes. In such events, GTD will discuss internally to consider the impact of the changes on the Company and its subsidiaries, and where applicable, the changes are adopted to ensure compliance with the tax laws. Where necessary, TNB would engage its tax advisors in undertaking analysis of the new legislation or changes and whether information to be provided to the tax authorities are sufficient and meets the requirements.


To ensure a holistic approach in the formulation of TNB's tax policies, procedures and guidelines, the process of drafting or amendment also often involves internal stakeholders. With any changes in tax legislation, the GFPP will be updated accordingly and is reviewed by TNB's Head of Tax and Chief Financial Officer.

In the event of tax audits, engagement with the tax authorities is based on transparency and integrity. TNB is committed to providing full cooperation and assistance to the IRBM and Royal Malaysian Customs Department (RMCD) on their official request for information and this includes all subsidiaries as well.


Tax Risk and Controls

Tax risks are subject to annual review and separately identified, analysed, evaluated and treated under TNB's risk register. The Head of Tax is responsible for carrying out thorough assessments of such risks, mitigating them through adequate and effective controls, and communicating risk information to relevant parties in a timely manner. Those in supervisory roles are also consulted or informed adequately through proper review, escalation or approval procedures. TNB has a well-resourced tax function that is made up of an appropriate number of personnel with the relevant tax expertise and experience that carefully considers the tax sensitivity of potential transactions. TNB also proactively seeks independent advice following the identification of issues that involve significant tax uncertainty. In ensuring coordinated assessment of tax risks, the tax function is also involved in the planning, implementation, and documentation of all significant transactions. It is required that the Head of Tax reviews tax risks and provides a report to the Risk Management Department biannually.

TNB's Risk Management Framework provides a structured and consistent approach to risk management across the Group for informed decision making, including management of tax risks. The Board of Directors, through the Board Risk Committee, is responsible for overseeing the effectiveness and adequacy of the Group's Risk Management Framework, and for ensuring that it is integrated within the Group's corporate culture.

 For more information on Risk management framework, please refer to Risk Management and Internal Control section of our IAR 2021, page 118.

The establishment of TCIMS allows both TNB personnel and external parties to report information relating to malpractice, misconduct, illegal activities or omissions that may have been committed by a TNB personnel, including reporting on tax related mismanagement. A top-level committee is specially designated to oversee cases and protect disclosures made in good faith. All concerns raised via the whistleblowing channels are assessed, managed and investigated in a fair and proper manner.

 For more information on TCIMS, please refer to pages 17-18 and Risk Management and Internal Control section of our IAR 2021, pages 98-99, 124.

Cross-functional guidelines also direct how the tax function work alongside with other functions in selected undertakings. The Due Diligence and Final Investment Proposal Guidelines which was developed based on key learnings from TNB's past investment transactions, industry practices and internal expert references lays out the role of the tax function when supporting TNB in potential mergers and acquisition investments including greenfield project development activities. This helps support TNB in making better future investment decisions. Personnel in the tax function can access



these tax policies, procedures and guidelines via TNB's intranet. The documents are also reviewed and updated as appropriate.

Compliance with tax policies, procedures and guidelines is keep monitored through feedback on staff's performance. Huge emphasis is placed on ensuring that personnel in the tax function are equipped with the relevant up-to-date expertise. Tax personnel are provided with technical training, especially those which concern new legislative or regulatory changes, to ensure that they keep abreast with the latest developments in the tax landscape. If the tax function is allocated a new role, there would be an assessment on risks that may flow from this, and an implementation of the corresponding controls and mitigation plan will be developed.

Transfer Pricing

All intercompany transactions within TNB follow a transfer pricing policy which has been adopted in line with the Arm's Length Principle. TNB regularly prepares transfer pricing documentation in accordance with the transfer pricing guideline to substantiate intercompany transactions. Adhering to transfer pricing rules is required by the law, hence as a best practice, TNB endeavours to appoint tax advisors at the onset of new intercompany transactions to ensure that they are undertaken at arm's length. Where applicable, periodic reviews will be undertaken on intercompany transactions, and necessary adjustments will be made to ensure the justifications to support the transfer price are adopted.



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ENVIRONMENTAL SUSTAINABILITY



In line with our Sustainability Pathway 2050 (SP2050) aspiration, TNB is committed to achieving the target of reducing 35% of emissions intensity and 50% of coal generation capacity by 2035.

Related Material Matters

- Climate Change and Energy Efficiency
- Energy Transition and Innovation
- Environmental Management
- Natural Resource Consumption
- Waste Management
- Biodiversity Management

Feature Story

Shaping TNB's Net Zero 2050 Aspiration

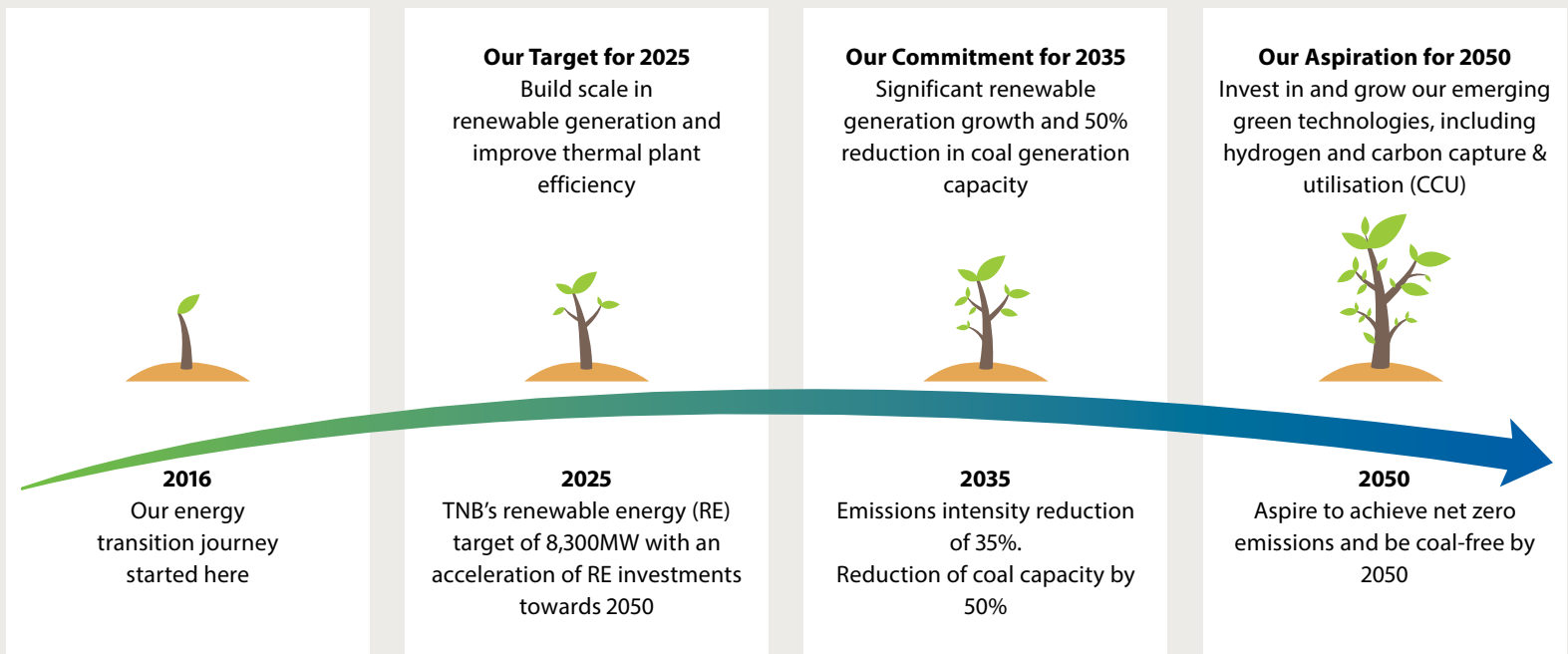
As a national electricity utility company, TNB is responsible for ensuring reliable supply and delicately balancing socio-economic considerations and the conservation of the environment within our sustainability strategy. A robust sustainability plan will enable TNB to stay ahead of industry disruptions, centred on decarbonisation, decentralisation, digitalisation and deregulation, while managing the interests and concerns of our multiple stakeholders.

SP2050, which was unveiled in 2021, sets out our green ambition to achieve net zero emissions by 2050. In addition, we have also pledged to ensure our revenue from coal generation plants does not exceed 25% of our total revenue. To this end, RE will play a critical role in driving our energy transition and decarbonisation efforts up to 2035, while emerging green technologies will become commercially viable in the 2030s.

SP2050 was shaped through an iterative process that involved multiple strategic internal and external stakeholder engagements with our leadership team and Board of Directors, employees and unions, investors and the government, among others. The stakeholder engagements discussed the many challenges we will undoubtedly face in decarbonising from our current coal-dependent business model and strategies that we will deploy to achieve our net zero aspiration.



TNB's sustainability pathway spans over thirty (30) years, with the goal of achieving net zero emissions by 2050



- TNB targets not to invest in new coal plants and will honour existing power purchase agreements
- In tandem, TNB intends to significantly ramp up its RE generation portfolio on the path to becoming coal-free by 2050
- To achieve net zero emissions, TNB will accelerate investments in emerging green technologies (e.g. green hydrogen, CCU) as soon as it becomes economically viable to do so

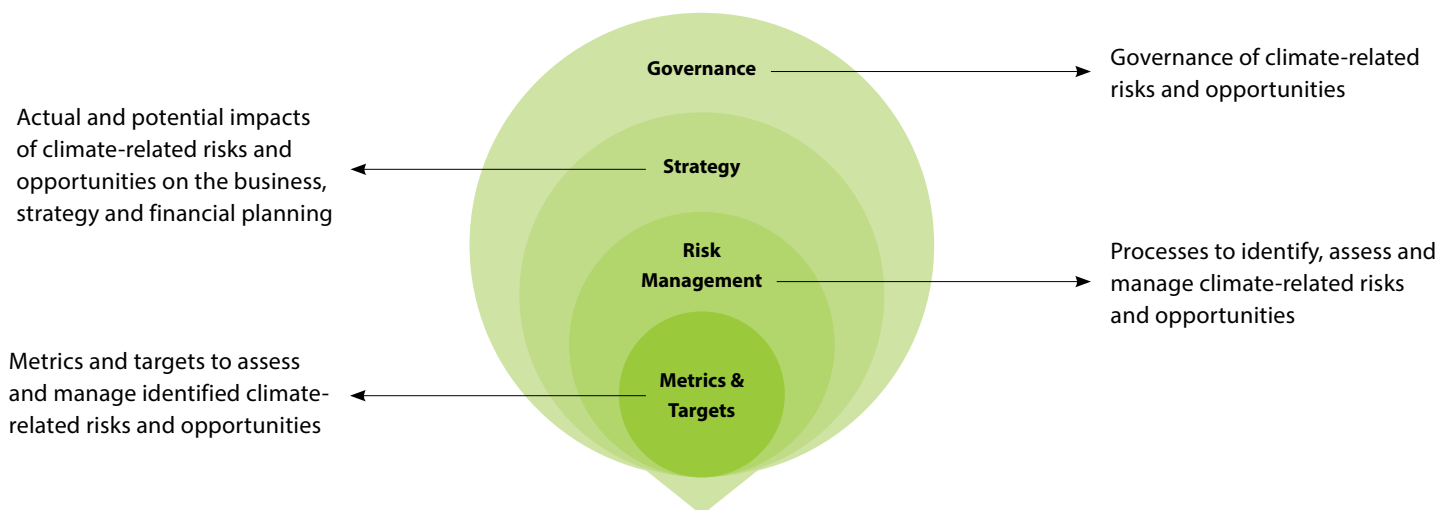
As part of SP2050, we have identified three (3) strategic pillars to drive our efforts towards mitigating climate change and achieving our net zero aspiration.

Please refer to Our Response to Climate Change for further details.

Our Response to Climate Change

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.

ENVIRONMENTAL SUSTAINABILITY

Our Response to Climate Change

TNB has voluntarily adopted the TCFD framework since 2019 to address potential climate-related physical and transition risks and opportunities in our business strategy, as well as the resulting financial impact. Aligned with the recommendations of the TCFD, TNB completed our first climate change scenario planning in 2021 to identify the risks, opportunities and strategies associated with 4°C and 2°C warmer scenarios. Correspondingly, our disclosures narrate our efforts across the four (4) core elements recommended by the TCFD.

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 SP2050. The Sustainability Development Council (SDC) 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 Board Risk Committee 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.

Moving forward, the Corporate Strategy and Sustainability function will monitor and report performance against the SP2050 targets and aspirations, alongside business performance.


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.

 For more information on sustainability and climate governance, please refer to the Governance Structure under the Strong Leadership and Governing Responsibly section, page 16

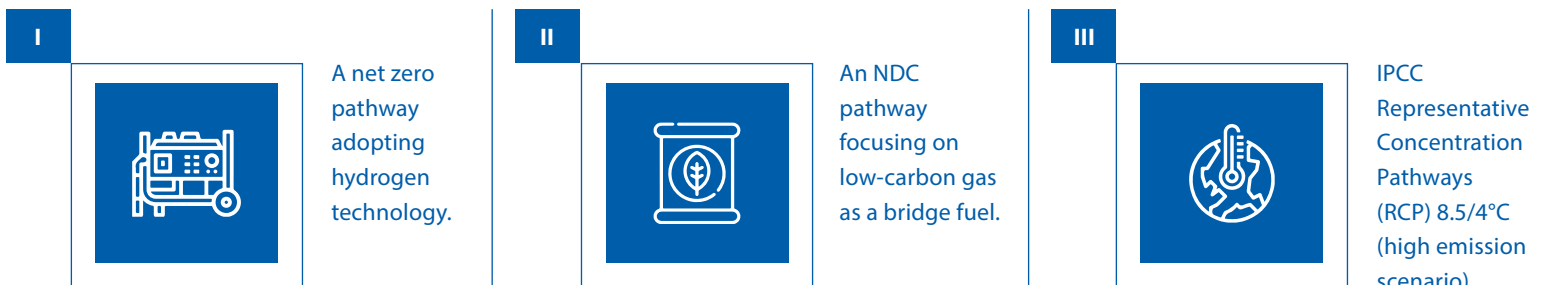
Strategy and Risk Management

201-2 | 103-2 | 103-3

TNB leverages its Risk Management Framework to identify, assess and manage enterprise risks. Climate-related risk has been identified as a strategic risk to TNB and is being addressed within our ERM Framework. Besides the ERM Framework, climate-related risks and opportunities are managed by the ISO 14001:2018 Environmental Management System.

 For more information on risk management, please refer to our Statement on Risk Management and Internal Control (page 118-122), and What Matters Most (page 27).

Through our Seeding Fund research project titled 'Climate Change Action towards TNB's Business Resiliency', we have conducted our inaugural climate scenario analysis with reference to the IPCC RCP 8.5/4°C (high emissions) and Network of Central Banks and Supervisors for Greening the Financial System (NGFS) e.g. the Nationally Determined Contributions (NDCs) scenario. TNB's climate change scenario analysis included three (3) pathways modelled on:





Our Response to Climate Change

TNB's climate-related risks and opportunities were modelled based on the following scenarios:

Type of Scenario	Scenario Description	Temperature increase by 2100	Transition Consequence
Physical risks – IPCC Representative Concentration Pathways (RCP) 8.5/4°C (high emissions scenario)	The 'Business as usual' scenario suggests a likely outcome if society does not make concerted efforts to cut greenhouse gas emissions.	>3°C	High
Transition risks – NGFS' 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
Transition risks – 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 ₂ emissions around 2050.	1.5°C to 2°C	Low

Referring to the scenario analysis above, we have identified both climate-related risks and opportunities and the potential impact on our business. The Task Force has divided climate-related risks into two (2) major categories: (1) risks related to the transition to a lower-carbon economy; and (2) risks related to the physical impact of climate change. There are nine (9) transition risks and five (5) transition opportunities, together with the expected exposure over the short-term (2030) to long-term (2050) horizon. Overall, TNB will have high exposure to most transition risks identified by 2050 and this will need to be addressed via TNB's Strategic Pillars to ensure TNB maintains its competitive edge and remains resilient.

Transition Risks	NET ZERO ¹			NDC ²		
	2030	Shift	2050	2030	Shift	2050
Carbon price Introduction of carbon pricing mechanisms on carbon emissions increasing operational expenditure while decreasing revenue	●	→	●	●	→	●
Stranded assets Assets that have suffered from unanticipated or premature write-downs or devaluation due to change in demand increasing raw materials cost	●	→	●	●	→	●
Divestment Increased investor scrutiny over uncertain future sustainable earnings and commitments to responsible financing leading to investment sell-off and increased cost of capital	●	→	●	●	→	●
Talent The requirement to upskill and reskill talent to navigate new and emerging technologies leading to an increase in operational expenditure	●	→	●	●	→	●
Reduction in market share Changes in market demand or consumer sentiment in a specific market (e.g. wholesale) with a higher margin resulting in a decrease in revenue	●	→	●	●	→	●
Shift in customer behaviour Changing customer behaviour and preference for low-carbon options leading to a decrease in revenue	●	→	●	●	→	●

ENVIRONMENTAL SUSTAINABILITY

Our Response to Climate Change

Transition Risks	NET ZERO ¹			NDC ²		
	2030	Shift	2050	2030	Shift	2050
Low-carbon technology Deployment of low emissions technology to meet decarbonisation commitments requiring high capital expenditure	●	→	●	●	→	●
Emissions reporting obligations Emissions data collection and manpower requirements for data monitoring, tracking and reporting of emissions increasing operating costs due to increased data	●	→	●	●	→	●
Exposure to litigation Fines and judgements driven by environmental and climate activism leading to increased operating costs	●	→	●	●	→	●

Legend:

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

Notes:

- The Net Zero Scenario is aligned with 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) are based on the trajectory associated with global commitments that are aligned with current NDCs to limit the impact of climate change.

Transition Opportunities	NET ZERO ¹			NDC ²		
	2030	Shift	2050	2030	Shift	2050
Electrification Introduction of EV policy aimed at increasing electric vehicle uptake leading to increased revenue from growth opportunities for e-Mobility services (EV charging infrastructure)	●	→	●	●	→	●
Renewable energy growth Acceleration of renewables expansion in regional and international markets leading to increased revenue	●	→	●	●	→	●
Low-carbon options Opportunities beyond the kWh solutions (EE, rooftop solar, storage) due to a shift in customer behaviour (prosumers) leading to creation of new revenue streams	●	→	●	●	→	●
Shift towards decentralisation Increasing system efficiencies through the reduction of peak load to reduce transmission losses and allow for the extension of generational assets leading to reduced operational cost and increased margins for TNB	●	→	●	●	→	●
Diversification of business activities Diversifying business activities through the use of distributed generation, hydrogen and O&M as green technologies emerge (e.g. hydrogen, storage, CCU) through partnerships leading to opportunities for new revenue streams	●	→	●	●	→	●

Legend:

● Opportunities exposure is low ● Opportunities exposure is moderate ● Opportunities exposure is high

The qualitative financial impacts of the transition risks are identified as follows:

- Policy and legal: Increased operating costs (e.g. higher compliance costs, carbon pricing)
- Technology: Expenditure on new and alternative low-carbon technologies, capital investments in technology development/upskilling and cost to adopt/deploy new practices and processes
- Market: Abrupt and unexpected shifts in energy costs
- Reputation: Reduced revenue from decreased demand



Our Response to Climate Change

Physical climate scenario modelling was carried out for three (3) power plants (TNB Janamanjung Sdn Bhd (TNBJ), Southern Power Generation (SPG) and SJ Sultan Mahmud) and a selection of 100 substations as a start. 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 outcomes of the scenario modelling for TNB's assets is as follows:

- 100 substations: Riverine flooding is the dominant hazard
- TNBJ: Coastal inundation is the clear dominant hazard
- SPG: Coastal inundation is the dominant hazard. Surface water flooding is the next most significant hazard
- SJ Sultan Mahmud: Riverine flooding is the dominant hazard.

The physical risks impacts of these assets range from low to high in the long-term horizon, i.e. 2050, as shown below:

Physical Risks	IPCC RCP 8.5/4°C ³			
	100 substations	TNBJ	SPG	SJ Sultan Mahmud
Coastal Inundation Rising sea levels and higher incidence of extreme sea events.	●	●	●	●
Extreme Wind Changes in wind regimes, sea surface temperatures and wind speeds.	●	●	●	●
Forest Fire Increased incidence of fire weather due to confluence of days with higher temperatures, high wind speeds and drier conditions.	●	●	●	●
Riverine Flood Increased frequency and intensity of rainfall changing the frequency and intensity of river flooding.	●	●	●	●
Soil Movement Changes in rainfall patterns and drought.	●	●	●	●
Surface Water Flooding Increased frequency of extreme rainfall leading to floods.	●	●	●	●
Freeze Thaw Changes in the annual freeze and thaw cycles resulting from winter periods that trend close to freezing point.	●	●	●	●
Heat New extremes of high temperatures, more frequent hot days and longer-lasting heatwaves.	●	●	●	●

Legend:

- Risk exposure is low
- Risk exposure is moderate
- Risk exposure is high

Note:

3. A high emissions scenario (or 'business as usual') as defined by the Intergovernmental Panel on Climate Change (IPCC).

The qualitative financial impacts of the physical risks were identified as follows:

- Reduced revenue from decreased production capacity
- Increased operating costs
- Increased insurance premiums and potential for reduced availability of insurance for assets in 'high-risk' locations
- Increased capital costs (e.g. damage to facilities).

ENVIRONMENTAL SUSTAINABILITY

Our Response to Climate Change

In response to the climate risks and to capitalise on future opportunities in the energy sector, TNB's carbon mitigation strategy is largely focused on the three (3) strategic pillars of the SP2050 to ensure its resilience against the modelled pathways:



Strategic Pillar 1: Invest in Low Emission & Green Technologies

Our Approach

a) Reduce or eliminate emissions from current generation fleet

b) Invest in R&D and alternative green energy sources

c) Leveraging partnerships and collaborations

Key Highlights and Performance for FY2021

- TNB has committed to no longer investing in greenfield coal plants with Jimah East Power Plant, which was commissioned in 2019 and is the last coal plant in TNB's generation portfolio. Existing plants will be phased out upon expiry of their Power Purchase Agreements (PPAs).
- We also invest in asset optimisation programmes to further reduce emissions from our current generation plants and adopt the latest advancements in technology for our newest plants.

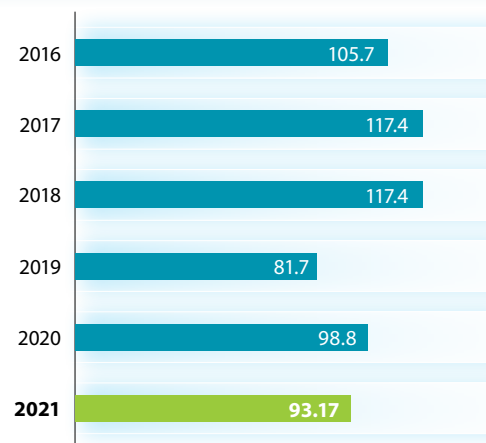
For more information on optimised assets, please refer to *Ensuring Reliable Electricity Supply - Asset optimisation*, pages 42-43

- In anticipation of this growing need, we are allocating 3.5% of our forecasted PAT for our R&D activities from FY2022 onwards. This R&D funding will be strictly managed and monitored by the newly established Technology Council, which is chaired by the CEO.

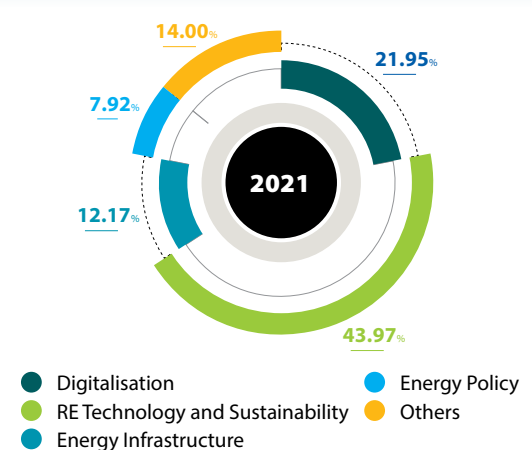
TNB's future emerging technology focus areas:



R&D INVESTMENT (RM MILLION)



BREAKDOWN OF R&D PROJECTS BY RESEARCH AREA



- TNB's collaboration with EDF Renewable enables us to benefit from its extensive experience in the offshore wind sector across our focus markets – the UK, Europe and Southeast Asia.
- TNB participated in a joint study on co-firing ammonia at coal power stations to reduce carbon emissions with IHI Corporation (Japan) and PETRONAS.

For more information on partnerships, please refer to *Sustainable Business Expansion – Green Energy Growth*, pages 41-42



Our Response to Climate Change

Strategic Pillar 2: Evolve the Grid and Grow Renewables

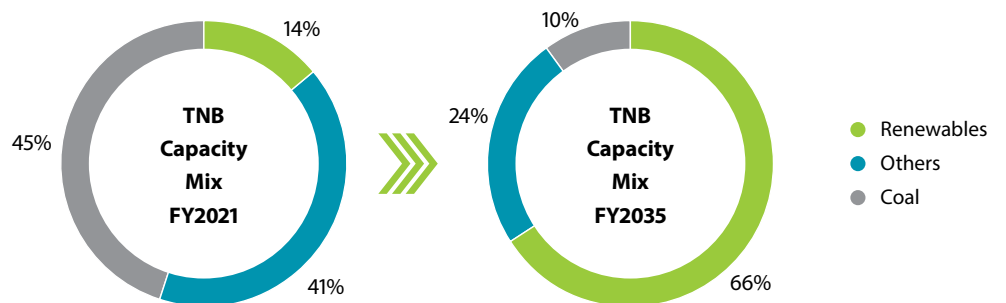
Our Approach

a) Expand renewable assets within Malaysia, ASEAN and Europe

b) Expand Grid & Distribution to enable increased demand and lower energy losses

Key Highlights and Performance for FY2021

- The progressive transition of our generation portfolio towards low-carbon and renewable energy sources is a fair reflection of our commitment to achieving an RE capacity of 8,300MW by 2025 domestically and internationally. International RE expansion is a top priority for TNB to thrive in the long term to significantly ramp up our RE capacity to achieve a 66% capacity mix by 2035.



- Our RE growth strategies encompass three (3) dimensions, which are detailed below:
 - Repowering Roadmap
 - We expect the renewables to be built under RT to deliver a 5% reduction in our emissions intensity by 2026 from the 2021 baseline.
 - By the early 2030s, we expect our repowering efforts to cleaner sources to enable a further 18% reduction in our emissions intensity from the 2021 baseline.
 - The remaining 12% is to be achieved by the end of 2035 through the expiry of 2GW of coal capacity PPAs.
 - New Energy Division (NED)
 - The NED was recently formed to expand the company's RE portfolio in targeted markets and set up strategic partnerships with leading RE players to leverage their technical expertise.
 - The NED streamlines our RE expansion arms and oversees two (2) key entities: Vantage RE, operating out of the UK to focus on the UK and Europe markets, and TNB Renewables, based in Malaysia to focus on the domestic and Southeast Asia markets.
 - Renewable Growth
 - Growing our renewables capacity is necessary to achieve our aspiration of a 35% emissions intensity reduction by 2035.

For more information on RE programmes, please refer to Customer Centricity – Empowering Customers towards Energy Transition, pages 47-48

- TNB will continue to prioritise investments in modernising the national grid into the GOTF to enable a smart grid that remains reliable and resilient with digital technology and flexible in meeting the country's needs for energy transition.
- Conservation Voltage Reduction (CVR) maintains feeder voltage at the lower end of the acceptable range to achieve energy and demand savings. We collaborate with Grid System Operator (GSO) and DN in piloting the CVR project.

For more information on Grid modernisation initiatives, please refer to Ensuring Reliable Electricity Supply - Asset optimisation, pages 42-43

ENVIRONMENTAL SUSTAINABILITY

Our Response to Climate Change



Feature Story

Nenggiri Hydroelectric Project


The Nenggiri Hydroelectric Project (Nenggiri HEP) is a proposed development for a 300 megawatts (MW) hydroelectric power plant in Kelantan, which is expected to commence development in the year 2022 and will be completed in 2027. The project is a strategic initiative to expand TNB's renewables assets while reducing our GHG emissions. It will play a dual role in climate risk adaptation through flood mitigation and providing a clean water supply to the surrounding community.

Nenggiri HEP is expected to generate over 351.5GWh of electricity annually. It will also avoid 244,000tCO₂ of emissions from power generation activities. All buildings constructed under this project will incorporate some aspects of energy-efficient design features in order to reduce energy consumption.

In addition to minimising environmental impacts, Nenggiri HEP is expected to create positive socio-economic benefits such as providing electricity to rural areas, social infrastructure and local job opportunities. Given TNB's experience in developing three (3) other hydro schemes, extreme care has been taken to protect the interests of the *Orang Asli* community as well as the wildlife that will be directly affected by the project.



The Nenggiri Hydroelectric Project, which is expected to be completed in 2027, will be a significant contributor to the nation's goal of increasing its RE capacity.

 For more information on the social impacts of the Nenggiri Hydroelectric Dam, please refer to *Brighter Community – Engaging with Indigenous People*, page 90



Our Response to Climate Change

Strategic Pillar 3: Unlock New Energy Revenue Streams

Our Approach

a) Grow unregulated business to meet evolving customer energy demands – including Electric Mobility

- TNB is ready to lead Malaysia's transition to low-carbon mobility, especially in Battery Electric Vehicles (BEV), through collaborative efforts with various stakeholders.
- Between 2019 and 2020, TNB partnered with the Malaysian Green Technology and Climate Change Centre (MGTC) to install seventy-three (73) EV charging stations nationwide.
- This year, we signed three (3) memorandums of understanding (MOUs) on low-carbon mobility ventures, managed by TNB's Retail team, with:
 - Sime Darby Motors Malaysia
 - To collaborate in exploring various initiatives to accelerate the adoption of EVs.
 - DHL
 - TNB will install EV charging stations along DHL's key service routes, which will advance the electrification of DHL's fleet.
 - SOCAR Mobility Malaysia (SOCAR)
 - To leverage shared demand data on EV usage in Malaysia, in a joint effort to speed up the adoption of EVs, in support of Malaysia's low-carbon mobility ambitions. TNB will leverage SOCAR's data on vehicle usage and travel behaviour, which will be used to identify key strategic locations along travel routes for the installation of charging infrastructure.
- EV transportation for TNB staff and visitors. TNB's Fleet Management Department (FMD) has procured two (2) electric cars, one (1) electric van and one (1) electric coaster, together with fourteen (14) units of EV chargers comprising ten (10) units of Direct Current (DC) and four (4) units of Alternating Current (AC) charger types.

b) Grow the kWh and beyond kWh business

- As customer demands and expectations shift, we will broaden our product and service offerings to grow beyond the kWh business by leveraging digitalisation and new technologies.
- TNB Engineering Corporation Sdn Bhd (TNEC) has expanded the District Cooling System service, establishing a 24% market share in domestic DCS supply.
- Distribution Network is continuing its efforts to enhance the intelligence, flexibility and reliability of its network via SMART projects, which include advanced Metering Infrastructure (AMI), Distribution Automation (DA) and Geographic Information System (GIS).
- We conducted a demonstration project on Virtual Pilot Plant (VPP) technology, which utilises energy storage and digital technologies to improve energy efficiency and grid services.
- Dewan Bandaraya Kuala Lumpur (DBKL) will be collaborating with TNB, the Sustainable Energy Development Authority (SEDA) and others to construct solar farms and install rooftop solar panels on identified buildings.

Metrics and Targets

The SP2050 has enabled us to establish clear climate-related targets:

1 Increase RE Capacity to 8,300MW by 2025

2 Reduction of emissions intensity by 35% by 2035 and net zero emissions by 2050

3 Reduction of coal capacity by 50% by 2035 and 100% by 2050

Steps have been taken to monitor and report the progress of our performance against targets beginning in FY2022, including enhancing the sustainability governance roles and cadence. The key environmental metrics monitored by TNB include carbon emissions, energy and water consumption and waste generation and management. We utilise our GHG Emissions Management System (GEMS), a web-based data input and processing software system, for regular monitoring of Scope 1 and 2 emissions data. We intend to expand the monitoring of our other environmental data via GEMS progressively.

An internal carbon pricing (ICP) study was recently commissioned to establish the purpose of setting an ICP and pricing mechanism for TNB. TNBR is also assessing Scope 3 value chain emissions in preparation for Science Based Targets initiative (SBTi) accreditation.

ENVIRONMENTAL SUSTAINABILITY

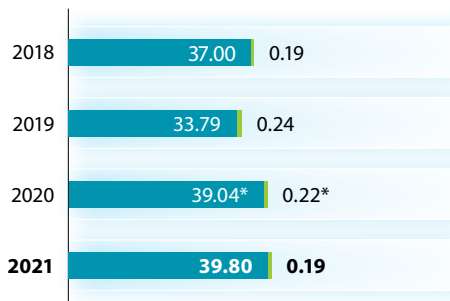
Our Response to Climate Change

Our Performance in FY2021

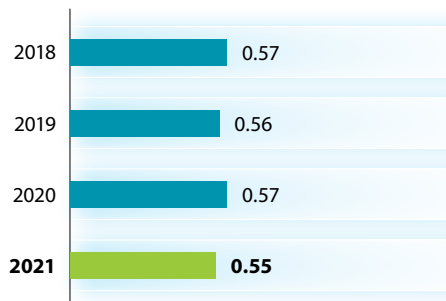
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SCOPE 1 AND 2 GHG EMISSIONS (million tCO₂e)

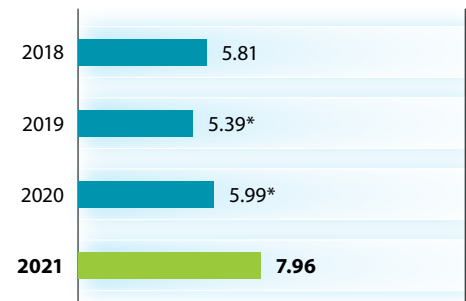
● Scope 1 ● Scope 2



GHG EMISSIONS INTENSITY (tCO₂e/MWh)

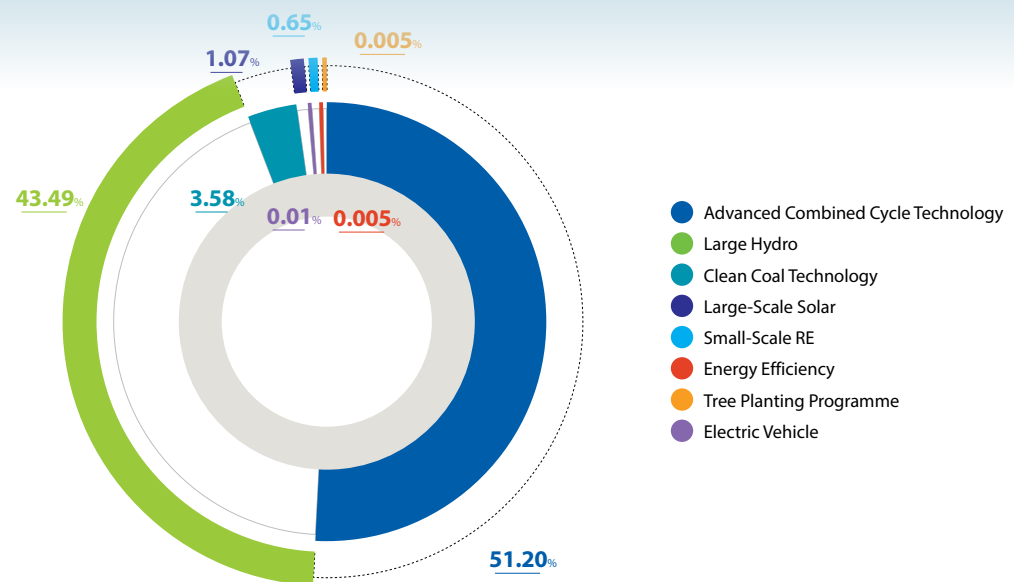


GHG EMISSIONS MITIGATED (million tCO₂e)



* Data updated after third-party verification.
Note: For TNB operations in Peninsular Malaysia.

GHG EMISSIONS MITIGATED IN FY2021



Note: For TNB operations in Peninsular Malaysia.

Our GHG emissions mitigation programme via EE initiatives includes:

Green Buildings

Balai Islam TNB and *Residensi Kelana Jaya* are Green Building Index (GBI) Certified while the upcoming *Jalan Pantai* commercial-office development has been awarded the GBI GOLD Design certification. All the certified buildings are designed with energy-efficient features.

Balai Islam TNB is designed to be energy-efficient by utilising daylighting and energy-efficient features. Double volume with full-height glazing, roof skylights and dome clerestory windows provide excellent daylighting. Meanwhile, the complex has high-efficiency LED lights and motion sensors installed to reduce building lighting energy usage. The building is expected to achieve a 51% reduction in energy consumption compared to a conventional building.

A new commercial-office development at *Jalan Pantai* was awarded the GBI Gold Design certification and is currently under construction. The building has been designed with rooftop solar PV panels and energy-efficient features, such as high-performance glazing, insulated roof, efficient cooling system, LED lighting, photocells and motion sensors and a Building Energy Management System (BEMS), with the aim of reducing energy consumption by more than half.

Residensi TNB, a 22-storey building located in *Kelana Jaya*, consists of 240 units of staff quarters and a multipurpose hall on the ground floor. The building has achieved the Green Building Index (GBI) Certified rating. The major energy efficiency features of the building include the use of tinted glass to reduce external heat gain, the application of roof insulation and daylighting.



Our Response to Climate Change



Balai Islam TNB is certified with Green Building Index (GBI).

LED Lighting

Light bulbs in all TNB buildings have been replaced with LED lighting to provide better energy efficiency and considerably longer lifespans.

Innovation & Research and Development

TNB has been actively investing in the R&D of new technologies that can assist in climate change mitigation.

Initiatives	Description
<p>Renewable Energy</p>	<p>Solar PV Cooling Technology TNBR has successfully developed two (2) types of retrofit PV cooling systems (active and passive cooling systems), which will improve the energy yield of the PV system.</p> <p>Biogas Sourced from Non-POME (Palm Oil Mill Effluent) Organics TNBR is collaborating with other divisions, subsidiaries and external parties to carry out a feasibility study on biogas plants from non-POME organics, such as food and animal waste.</p> <p>Exploring Suitable Crop Alternatives for Biomass Energy Generation Pending lifecycle analysis and qualification of fuel properties, TNBR is exploring alternative crops for biomass generation. Currently, palm based empty fruit bunch (EFB) of higher quality is undergoing feasibility studies by TNBR & GenCo for co-firing in a power plant. TNBR is exploring the effect of CO₂ exposure towards enhancement of energy crop (Napier grass) and high value crops biomass.</p> <p>Pyrolysis of Organic and Plastic Waste to Bio-Oil (Waste-to-Energy) TNBR has developed and is exploring a waste-to-energy system that aims to divert organic and plastic waste from landfills. The process converts organic and plastic waste through pyrolysis to liquid bio-oil, which contains high energy content and also can be used for producing chemicals.</p> <p>Green Hydrogen The research is in its initial stages and we are studying the potential use of Two-Stage Anaerobic Digestion Technology (TSAD) on organic waste of Palm Oil Mill Effluent (POME) for the purpose of green hydrogen and bio-hythane production.</p>
<p>Co-firing</p>	<p>Empty Fruit Branch (EFB) Co-Firing Feasibility Study TNBR has embarked on a collaborative effort with GenCo to carry out a feasibility study on co-firing high-quality palm based empty fruit bunch (EFB) in a power plant. This effort was built on TNBR's experience & technology in a EFB pre-treatment plant.</p> <p>Ammonia-Biomass Coal Firing (ABC) Feasibility Study GenCo, Jimah East Power Plant (JEP), Mitsui & Co and Chugoku have agreed to conduct a feasibility study on co-firing of biomass and ammonia in JEP to reduce our coal usage.</p>
<p>Building Resilience against Natural Disasters</p>	<p>Business Continuity Measures Flood management practices, such as Flood Analysis and Risk Assessment (FARA), flood drills, community-based early warning systems and flood mitigation upgrade works, are implemented to minimise service disruptions during storms and flooding.</p>

ENVIRONMENTAL SUSTAINABILITY

Minimising Our Environmental Impact

302-1 | 303-5 | 304 -1 | 304-3 | 304-4 | 306-3 | 307-1

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

Governing Environmental Matters

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

In FY2021, 11 compounds were received from the Department of Environment (DOE), totalling RM19,000 in monetary value, due to non-compliance with the Environmental Quality Act 1974 (Scheduled Waste Regulation 2015 & Industrial Effluent Regulation 2009). Our efforts to mitigate this issue include establishing an end-to-end consequences management process for compounds and lawsuits, devising the Strategic Engagement Plan (SEP) 2022 – 2025 together with the DOE and conducting regular audits, inspections and awareness sessions, among others.

Our approach and key FY2021 highlights:

- Our environmental performance across the Group is under the purview of the Health, Safety & Environmental (HSE) Council, which comprises the Environmental Performance Monitoring Committee and Environmental Regulatory Compliance Monitoring Committee. This organisational framework monitors environmental performance and compliance with the various environmental requirements applied within the Group.
- Several divisions in TNB have been certified as ISO14001:2015 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 HSEMS was introduced on 1 July 2019 and has strengthened the governance of environmental requirements across the Group.
- Guided Self-Regulation (GSR), the self-monitoring environmental management tool, has been implemented across all the divisions and subsidiaries in TNB. In 2021, a GSR score sheet was developed and implemented for the purpose of analysing and identifying gaps for continuous improvement.
- An environmental awareness training module was developed and rolled out through ILSAS to improve environmental awareness among employees.
- Our overall commitment to reducing our environmental impact is encapsulated in our comprehensive environmental management policies and guidelines, including:
 - Environmental Policy
 - Scheduled Waste Guidelines 2021
 - Polychlorinated Biphenyls (PCB) Guidelines
 - Grid Division Green Code Conduct.

In supporting TNB's net zero 2050 aspiration, Grid Division has introduced its Grid Division Green Code Conduct. The Green Code Conduct shows our commitment to ESG, which 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 throughout the supply chain, the details of which are as follows:



Target

Grid Division targets are to:

- Align with TNB aspiration on net zero carbon emission aspiration.
- Achieve zero pollution impact on nature, and
- Achieve a 30% Reduction of deforestation in forest reserve by 2050



Strategies

Strategic Initiatives:

GHG Reduction Initiatives:

- To focus on the reduction of SF₆ emissions through various initiatives, including recycling of SF₆ and exploring alternatives to SF₆ gas in assets

Deforestation Control Initiatives:

- To minimize the impact of deforestation in accordance with environmental standards and promote biodiversity

Pollutant Management Initiatives

- Migrate to environmentally friendly equipment and product



Minimising Our Environmental Impact

Focus	Our approach and key highlights in FY2021	Performance in FY2021																																								
<p>Natural Resource Management</p>	<p>Water management</p> <ul style="list-style-type: none"> Closely monitoring our water usage at operation sites to ensure minimal risk of water overuse or pollution. Performing monthly tracking of water consumption at all TNB assets. Investigating any deviations in water consumption higher than the norm at all power plants and performing any required follow-up mitigation action and implementation plans. Genco was certified with ISO 14001: 2015 in April 2021. <p>Fuel management</p> <ul style="list-style-type: none"> Striving to do our best in managing and reducing any resulting environmental impacts. Conducting the Business Turnaround programme to improve plant energy efficiency. The programme at JEP was completed in September 2021. 	<p>There was a slight increase in total water withdrawal for Peninsular Malaysia operations in FY2021 compared to FY2020, due to new asset expansion in Peninsular Malaysia.</p> <p>TOTAL WATER WITHDRAWAL (Megalitres)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Peninsular Malaysia</th> <th>SESB</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>8,047.90</td> <td>774.34</td> </tr> <tr> <td>2019</td> <td>7,269.30</td> <td>784.9</td> </tr> <tr> <td>2020</td> <td>7,065.30</td> <td>724.65</td> </tr> <tr> <td>2021</td> <td>7,771.09</td> <td>659.82</td> </tr> </tbody> </table> <p>Note: From operations in which TNB has a controlling stake.</p> <p>Fuel consumption from non-renewable sources to power the generation plants is shown below, with a notable increase in natural gas consumption in FY2021, reflective of the newly commissioned SPG.</p> <p>TOTAL FUEL CONSUMPTION ACROSS ALL TNB OPERATIONS IN PENINSULAR MALAYSIA (Gigajoules)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Coal</th> <th>Natural gas</th> <th>Distillate fuel</th> <th>Medium fuel oil</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>396,332,933</td> <td>181,810,853</td> <td>687,794</td> <td>307,793</td> </tr> <tr> <td>2019</td> <td>361,956,288</td> <td>188,532,460</td> <td>573,644</td> <td>783,847</td> </tr> <tr> <td>2020</td> <td>456,964,497</td> <td>161,785,964</td> <td>31,328,099</td> <td></td> </tr> <tr> <td>2021</td> <td>451,081,428</td> <td>204,196,092</td> <td>1,093,738</td> <td></td> </tr> </tbody> </table> <p>Note: From operations Peninsular Malaysia.</p>	Year	Peninsular Malaysia	SESB	2018	8,047.90	774.34	2019	7,269.30	784.9	2020	7,065.30	724.65	2021	7,771.09	659.82	Year	Coal	Natural gas	Distillate fuel	Medium fuel oil	2018	396,332,933	181,810,853	687,794	307,793	2019	361,956,288	188,532,460	573,644	783,847	2020	456,964,497	161,785,964	31,328,099		2021	451,081,428	204,196,092	1,093,738	
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<p>Waste Management</p>	<ul style="list-style-type: none"> All hazardous waste is centrally managed and disposed of according to our Health, Safety and Environment (HSE) guidelines on Scheduled Waste Management, which are in compliance with the regulatory requirements set by the DOE. Continuous improvement and enforcement of waste management practices were implemented through site inspection and internal audits. Issuance of the 2nd Edition of the Scheduled Waste Guidelines 2021 to provide the latest guidelines on waste management. Issuance of Polychlorinated Biphenyls (PCB) Management Guidelines to phase out PCB usage in TNB by 2025. A new environmental KPI was introduced in FY2021 that focuses on the Non-Conformity Report (NCR) closure rate for any environmental audits conducted. 	<p>TNB monitors its scheduled waste generation directed to disposal and diverted from disposal regularly.</p> <p>SCHEDULED* WASTE GENERATED AND DIVERTED FROM DISPOSAL (Metric Tonnes)</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Scheduled* Waste Directed to Disposal</th> <th>Scheduled* Waste Diverted from Disposal</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>33,234</td> <td>1,549</td> </tr> <tr> <td>2020</td> <td>18,121</td> <td>5,456</td> </tr> <tr> <td>2021</td> <td>46,667</td> <td>1,162</td> </tr> </tbody> </table> <p>* We use the DOE terminology of scheduled waste, which refers to waste that has hazardous characteristics and thus has the potential to negatively affect the environment and public health.</p> <p>Note: From operations in which TNB has a controlling stake.</p>	Year	Scheduled* Waste Directed to Disposal	Scheduled* Waste Diverted from Disposal	2019	33,234	1,549	2020	18,121	5,456	2021	46,667	1,162																												
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ENVIRONMENTAL SUSTAINABILITY

Minimising Our Environmental Impact

Focus

Biodiversity Management

Our approach and key highlights in FY2021

In FY2021, we ramped up our initiatives to conserve the biodiversity surrounding our operation sites:

Sungai Perak Hydroelectric Station – Temenggor Dam

- TNB conducted a study on threatened fish species (based on the International Union for Conservation of Nature's (IUCN) 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 a collaboration with the Pahang State Forestry Department to rehabilitate and restore dredging disposal sites at Jor and Ringlet Lakes.
- The rehabilitation works include soil treatment, tree planting, nursery maintenance and tree growth monitoring.

Bukit Selambau Large-Scale Solar (LSS) Plant

- TNB is conducting a study to manage human-macaque conflict through Behavioural Ecology and DNA Metabarcoding.
- The results of the study will allow TNB to understand the daily activities, behaviour and dietary requirements of the macaques, which will be utilised to reduce the chances of human-macaque conflict.

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

Reforestation

SESB supports environmental preservation through the SFD's reforestation project.

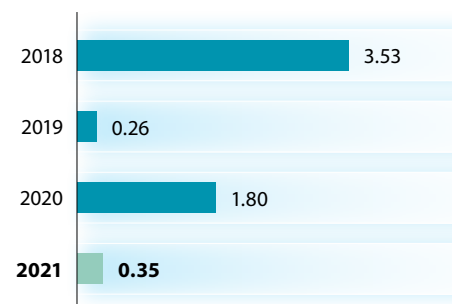
Elephant corridor: Wildlife habitat enrichment

SESB's preservation efforts at its Transmission Grid Development Project (Southern Link) include the planting of Napier Grass along the elephant corridor to provide alternative corridors to the elephants' habitat.

Performance in FY2021

In FY2021, RM0.35 million was spent on monitoring fish species at Temenggor Dam.

TOTAL SPEND (RM MILLION) ON IUCN STUDIES AT SUNGAI PERAK HYDROELECTRIC STATION (TEMENGGOR DAM)



Note:

The study on terrestrial species at the Sungai Perak Hydroelectric Station (Temenggor Dam) was concluded in FY2018. The study on fish species at the Hulu Terengganu Hydroelectric Station and Pergau Dam, Sungai Perak Hydroelectric Station was concluded in FY2020.

Key Findings of TNB's IUCN Red List Studies as of FY2021

Site	Species Group	Number of Species							Total Spend (RM)
Sungai Perak Hydroelectric Station (Temenggor Dam)	Fish	1	0	0	1	57	2	2	0.35 million
	Terrestrial	20	32	46	0	0	0	0	

- Critically Endangered (CR)
- Endangered (EN)
- Vulnerable (VU)
- Near Threatened (NT)
- Least Concern (LC)
- Data Deficient
- Not Evaluated

In FY2021, SESB spent RM27 million on reforestation activities to protect elephants.

Site	Breakdown	Units	FY2018	FY2019	FY2020	FY2021
Elephant Corridor	Reforestation	RM Million	-	18.5	-	27
	Wildlife habitat enrichment	RM Million	-	-	0.05	-

The site location was determined by the SFD.



Minimising Our Environmental Impact

Site and habitat protection

In FY2021, TNB's Biodiversity Initiatives were focused on the prevention, protection, reduction and mitigation of the impacts on species and habitats within selected areas. Several areas in which TNB conducts its activities are areas of high biodiversity value where a plethora of floral and faunal species can be found. Some species in these areas are protected under domestic and/or international declarations by public authorities. At TNB, we take preventive and palliative measures to reduce our impact on the local biodiversity, including by minimising our operations within areas of high biodiversity value. However, our current activities situated in the said areas commenced prior to the issuance of the said declarations of protection, or after thorough analyses of alternatives and environmental assessments with oversight from the competent authorities, which found that there were no alternatives, and that the development of TNB facilities in protected or high biodiversity value areas could not be avoided. Key initiatives that were initiated in FY2021, or were initiated in prior years and continued in year 2021, are shown below:

Location and area	Project	Biodiversity Value	Methodologies	Third-Party Partnerships
Sungai Tiang, Royal Belum State Park (12km)	Fish Management & Eco-Tourism	<ul style="list-style-type: none"> IUCN Red List Aquatic freshwater fauna Culture and tradition of Jahai Tribe 	<ul style="list-style-type: none"> Release of fish fry at Sungai Tiang Fish and water quality assessment (quarterly per year) Tourist satisfaction surveys 	<ul style="list-style-type: none"> Fisheries Department of Perak: Provided fish fry services for the sustainability efforts of the fish sanctuary JAKOA Perak: Provided additional funding and moral and material support, such as boats and ICT equipment, for the successful implementation of this project Suruhanjaya Koperasi Malaysia: Provided skill and technical development through various training initiatives
Jor Lake (20.23 hectares) and Ringlet Lake - Jasik (87.34 hectares), Cameron Highlands	Sediment Deposit Habitat Rehabilitation and Restoration	<ul style="list-style-type: none"> IUCN Red List Tree species available within PDA3 of dumping site at Jor (HS Bukit Tapah) 	<ul style="list-style-type: none"> Terrestrial flora revegetation Biomass estimation Carbon sink extrapolation Cost-benefit analysis 	<ul style="list-style-type: none"> Jabatan Perhutanan Negeri Pahang: Commitment to rehabilitating the disposal area with Eucalyptus Jabatan Perhutanan Negeri Pahang: TNBR to seek agreement to utilise suitable land for a control plot within the Cameron Highlands area as an in-kind contribution and support for this study
Solar Farm: TNB Bukit Selambau LSS Plant's Adjacent Areas (600 hectares)	Human-Monkey Conflict Management	<ul style="list-style-type: none"> IUCN Red List National Policy on Biological Diversity (NPBD) 2016-2025 National commitment to the Convention on Biological Diversity (CBD) 	<ul style="list-style-type: none"> Fecal sampling of existing monkey population for DNA sequencing works Socio survey to understand community perception Behavioural study of the monkey population 	<ul style="list-style-type: none"> Jabatan Perhilitan: Collaboration to eradicate the monkey population as a last option if all mitigation measures applied are unsuccessful

EMPOWERING OUR PEOPLE AND NURTURING TALENT





EMPOWERING OUR PEOPLE AND NURTURING TALENT

- Related Material Matters**
- Safety, Health and Well-being
 - Employment Culture
 - Capability Development
 - Community Development and Education
 - Sustainable Supply Chain
 - Rights of Indigenous People



The TNB Way of Working (TWOw) framework offers our employees a suitable hybrid work arrangement and flexibility, depending on the nature of the job.



Feature Story Transforming Our Ways of Working

A major component that is currently under development as part of SP2050 is TNB's Ways of Working Sustainably (WoWS), which emphasises the shift towards a more sustainable work culture. Our WoWS comprises five (5) main categories: Green Office Practices, Culture and Values, Improving Operations and Fleet Management, Energy Efficiency and Natural Resource Consumption.



Green Office Practices

During the COVID-19 pandemic in March 2020, we adopted flexible working arrangements with options to Work in Office (WIO), Work from Home (WFH), or Work Home Based (WHB). These flexible working arrangements were primarily driven by compliance with the guidelines issued by the Government of Malaysia and implemented as a crisis response with the aim of stopping the spread of the virus among employees.

After nearly two (2) years, we decided to re-evaluate the impact of our current flexible work arrangements on the motivation of our organisation and employees. Following analyses and engagements with our key stakeholders, we embarked on a new TNB Way of Working (TWOw) framework supported by three (3) key drivers – people, process and technology. Depending on the nature of the job (i.e. field force, office-based, shift-based or customer-facing), a suitable hybrid work arrangement encompassing options to WIO, WFH, WHB, Work from nearby TNB premises (WFN) and Work from Anywhere (WFA) was introduced. The TWOw is a subset of the green office practices category under WoWS.

As accelerated by the pandemic and our SP2050 commitments, we are also shifting towards a paperless office through the rapid digitalisation of our operations, including but not limited to:

- Training and capability development via e-learning modules;
- Adoption of digital platforms such as cloud storage and Enterprise Content Management (ECM) to scan and share documents digitally; and
- Digitalisation of internal processes, including health and safety potential incident reporting via the HSE e-wallet.

EMPOWERING OUR PEOPLE AND NURTURING TALENT

Employment Management and Growth

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Our employees are our greatest asset. Throughout the COVID-19 pandemic, our people demonstrated a deep sense of responsibility in guaranteeing TNB's continued success. Therefore, we strive to nurture an inclusive working environment that grooms strong leaders, promotes high performance and develops skilled and agile talent.

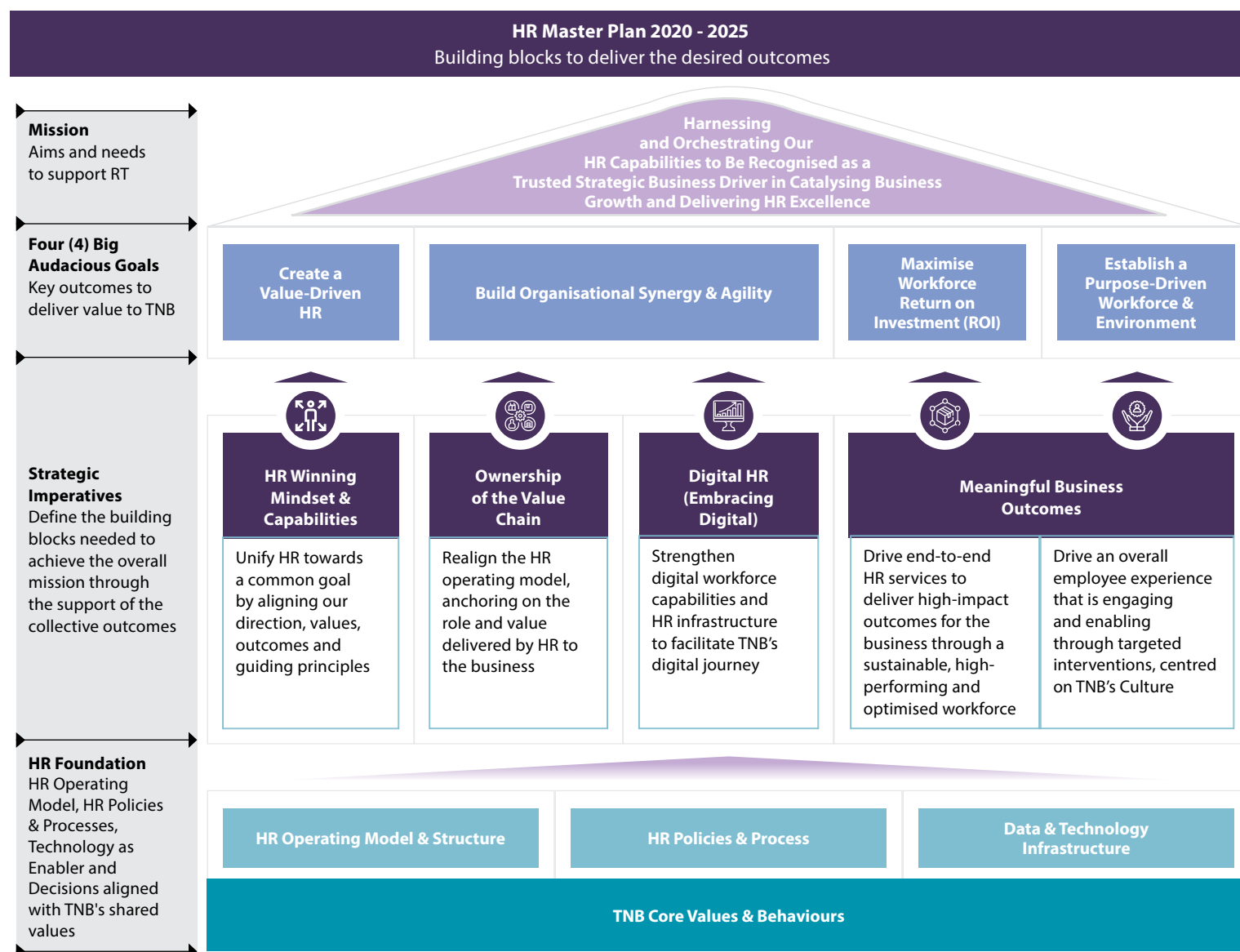
Creating a Conducive Workplace

TNB aspires to provide a conducive working environment that is flexible, supportive and inclusive, which encourages employees to live a balanced lifestyle anchored on three principles – Trust, Empowerment and Mindfulness.

We comply with all relevant labour laws in the countries we are operating in, including supporting the rights of freedom of association and collective bargaining. The rights of our non-executive employees are also well protected through our unions. In addition to legal compliance, we respect the inherent human right of all employees to fair and humane treatment, we treat everyone with respect and we have zero tolerance for discrimination, harassment or bigotry.

HR Guiding Principles and Strategy

We support and align with our Transformation Journey – RT – through our Human Resources (HR) strategy, which comprises the HR Leap 6, HR Guiding Principles and HR Master Plan 2020 - 2025. We have set four (4) Big Audacious Goals to guide our journey towards delivering the desired outcomes by 2025.





Employment Management and Growth

Reimagining Culture (RC) was launched in FY2020 to redefine our core values and culture – Integrity, Collaborative, Professionalism, Customer-centricity, Forward-thinking, and Mindfulness – that will drive our business transformation. As part of the RC journey, we launched our TNB Identity comprising our Purpose, Aspiration, Culture and Behaviours.

For more information on TNB's Reimagining Culture, please refer to the About TNB section, page 9

In our efforts to disseminate and embed this culture and these values within our people, we have conducted several engagement and promotional programmes:

- 1 **Conducted 17 Divisional Leadership Activation Sessions that involved the top management and their respective direct reports. These sessions were aimed at strengthening the bonds in every divisional top team and equipping them with the motivation and knowledge needed to drive the TNB strategy and identity as high-performing teams.**
- 2 **Ongoing communication efforts on the TNB Identity at corporate and divisional levels via internal bulletins, Facebook and other platforms. We also embedded elements of the TNB Identity in TNB appointment and offer letters, as well as people development courses and training.**
- 3 **Organised three (3) Wira Budaya Awards to recognise employees who who exemplified our TNB Core Values.**
- 4 **Conducted Change Engagement Circle (CEC) monthly engagement sessions with representatives from all divisions and subsidiaries to update and share on TNB's Reimagining Culture (RC) initiatives.**

As of FY2021, the TNB Identity has been rolled down to an impressive 84% of employees (22,857 out of 27,050 employees (excluding subsidiaries)). Moving forward, we established our Value-Driven Initiatives (and Quick Wins 2021) and TNB RC Journey 2022 to 2025 to set the direction for RC initiatives in the years to come.



EMPOWERING OUR PEOPLE AND NURTURING TALENT

Employment Management and Growth

Our approach to managing and nurturing our human resources:

► Approach	Key highlights for FY2021 ►
<p>Talent attraction, recruitment and retention is vital to build a strong workforce pipeline</p>	<p>We searched for fresh talent via various platforms:</p> <p>Talent Engagement:</p> <ol style="list-style-type: none"> 1. International Islamic University Malaysia (IIUM) Fly High Career Forum 2. UNITEN Forum Sharing Session 3. Virtual Career Pumped-Up Session <p>Talent Branding Outreach</p> <ol style="list-style-type: none"> 1. Four (4) talent stories published on electrifying careers social media platforms
<p>We offer competitive employee benefits packages to maintain employee morale and attract and retain talent</p>	<p>Our competitive remuneration and benefit packages that support work-life balance as well as the mental and physical health of our employees include:</p> <ul style="list-style-type: none"> • Competitive benefits packages • Childcare facilities and nurseries • Housing accommodation and quarters for employees • Counselling services • Sports and recreational facilities • Career and development opportunities • Long Term Incentive Plan (LTIP)
<p>Employee engagement for open communication and sharing of different perspectives</p>	<ul style="list-style-type: none"> • We encourage two-way communication with our employees through various engagement channels. • A Change Engagement Circle (CEC) has been mobilised to monitor our employee engagement and culture-driven initiatives throughout the Company. The CEC consists of 33 representatives from various divisions, departments and subsidiaries. • Grievance mechanisms are outlined in our Grievance Policy, which is supported by our Whistleblowing Policy and channels such as the Whistle Blowing Information System (WBIS). This serves as a safe platform for employees to channel their feedback and concerns. • 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. • Through our biannual Engagement Pulse Survey (EPS) and our biennial Employee Engagement Survey (EES), we are able to gain an understanding of our strengths and areas for improvement, which include our diversity and inclusion, collaboration and job security. The EES conducted in December 2021 received a score of 85%. • In FY2021, we maintained a low turnover rate of 3.76%, which reaffirms our exemplary efforts in employee management.



CEO Turun Padang is an engagement ceremony participated by our employees and our CEO, Datuk Ir. Baharin bin Din.



Employment Management and Growth

Upskilling & Reskilling Our Workforce

The development and training of our employees are crucial to achieving TNB's strategic objectives. At TNB, we support and empower our employees in their learning to ensure they are equipped to become an integral part of our sustainable business growth. TNB aspires to be a learning organisation, focused on creating, acquiring and transferring knowledge and skills that continuously evolve with new business needs and global trends.

In FY2021, a new organisation-wide Functional Competency Framework was introduced, focusing on realigning current functional competencies and future capability requirements for the organisation. As part of the framework, a new Learning Journey Guideline was established.



Our people are the key enablers in all of TNB's value creation activities, and we are passionate about developing and empowering our employees, to ensure their skills and capabilities are consistent with new business needs.

FY2021 Highlights

RM65.53 million
learning and development investment

639,040
training hours

EMPOWERING OUR PEOPLE AND NURTURING TALENT

Employment Management and Growth

Initiative	Key highlights for FY2021
<p>Division Academies A collaboration with TNB Integrated Learning Solution Sdn Bhd (ILSAS) to develop Subject Matter Experts (SMEs) and a world-class workforce in TNB's core business areas</p>	<ul style="list-style-type: none"> Genco Academy: 37 SMEs Grid Academy: 32 SMEs Distribution Network (DN) Academy: 32 SMEs Retail Academy: 1,690 talents enrolled HR Academy: 30 SMEs (established in FY2021). <p>The HR Academy was established in FY2021 as an integrated capability building platform to develop leaders in the HR fraternity and facilitate an active learning and development experience, including sustainable coaching and mentoring.</p>
<p>Upskilling & Reskilling Programmes Programmes targeted at upgrading employee skills and transition</p>	<ul style="list-style-type: none"> A total of 918 staff were enrolled in upskilling/reskilling programmes in 2021, namely: <ul style="list-style-type: none"> Program Pendidikan Kemahiran Ketukangan (PPKK) Program Pendidikan Kemahiran Juruteknik (PPKJ) Program Pendidikan Kemahiran Penyelenggara Stor (PPPS) Program Pendidikan Pembantu Tadbir (PPPT) Conversion Programme of Mechanical Technician to Electrical. 63 people underwent Conversion Programmes to facilitate continued employability among TNB employees.
<p>SESB Talent Management Programme</p>	<ul style="list-style-type: none"> In FY2021, a preliminary assessment was carried out under this programme to develop successors for Key Leadership Positions in SESB. This leadership development programme is expected to be conducted in FY2022.
<p>Digital Skills Training A collaboration with ILSAS to accelerate digital learning solutions for TNB employees. A variety of e-learning modules allows employees to pace their learning and development</p>	<ul style="list-style-type: none"> 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. Digital learning platforms and contents employed included bite-sized learning, webinars, virtual learning and e-learning. Learning T-Day: 135 editions of bite-sized learning content on leadership. TNB Leadership webinar: 20 webinars conducted. ILSAS E-Learning Programme: 632 sessions conducted with 12,377 participants (20,489 hours of training*). Total e-learning hours: 281,999 hours. Total e-learning modules listed by ILSAS: 153 e-learning modules available. <p>* Note: These 20,489 hours conducted by ILSAS were part of the 281,999 hours for TNB e-learning.</p>
<p>TNB Leadership Competencies & Leadership Development Centre (LDC) Provides experiential leadership development interventions that aim to develop a surplus of leaders who embody the TNB Identity. The leadership interventions are diagnosed from TNB's strategic intent and employees' career lifecycles</p>	<p>TNB Leadership Competencies:</p> <ul style="list-style-type: none"> Continuous leadership learning and development initiatives such as Agile, Virtual Case Study and various online courses and simulation programmes. Manager-level First-Time Manager Programme (FTM) and Young Executive Development Programme (YEDP) to re-strategise (review) development content. These programmes strengthen leadership capabilities in role transition. Empower Informal Learning (20%) through Group Coaching in FTM. Leadership webinar series featuring internal and external speakers on various current and future leadership topics. In FY2021, 185 sessions were conducted involving a total of 8,533 participants.
<p>TNB Reskilling Malaysia Programme Spearheaded by ILSAS, this initiative provides job matching opportunities to unemployed members of the public as well as training in necessary skills for their new roles. All courses under this Programme are applicable and open to non-TNB employees.</p> <p>This programme is expected to benefit Malaysian companies by filling up to 17,500 vacancies over a three-and-a-half-year (3½-year) period beginning in October 2020 and ending in early 2024</p>	<ul style="list-style-type: none"> In FY2021, we conducted five (5) flagship programmes: <ul style="list-style-type: none"> Solar Panel Installation Smart Meter Installation Power System Operation and Maintenance Medium Voltage Electrical Facilities Low Voltage Electrical Facility. In FY2021, TNB invested RM9,842,820.76 to provide employment opportunities to 4,760 individuals and train 2,576 individuals under the Reskilling Malaysia Programme. Since the inception of this programme in October 2020, TNB has cumulatively invested RM10,723,220.76 to provide employment opportunities to 5,202 individuals and train 3,018 individuals.



Employment Management and Growth

Advocating for Diversity and Inclusiveness

102-7 | 102-8 | 102-41 | 401-1 | 405-1 | 405-3

As part of one of the pillars of TNB's Culture – 'Collaborative' – we embrace diversity and inclusion in our workforce as we believe they offer a greater variety of perspectives and viewpoints to enable us to adapt to dynamic markets and catalyse creativity and innovation. We strive to ensure all our employees feel trusted and appreciated for their ideas, presence and contributions to the organisation regardless of their age, gender, religious affiliation or disability.

Through our Employee Experience (EX) framework, we focus on strengthening diversity and inclusion in the organisation. We do not tolerate any form of discrimination or harassment (verbal, physical, sexual or visual, including discriminatory comments), as outlined in our Code of Ethics. We are working on developing a diversity and inclusion policy and including it as an indicator in our Employee Engagement Surveys.

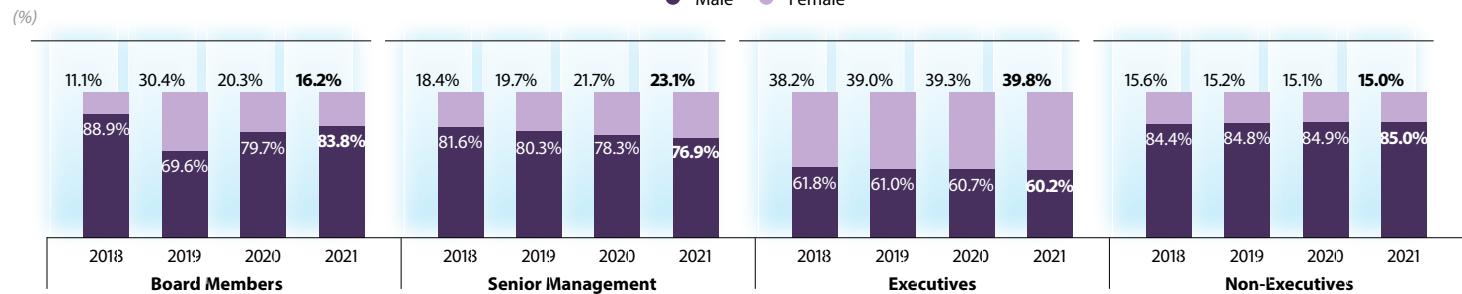
Key Highlights in FY2021

- TNB registered as a member of the '30% Club', – which advocates for at least **30% women's representation** on all boards and in top management globally. This demonstrates our commitment to achieving diversity, equality and inclusion in our organisation.
- This year, there has been about a **5%** increase in women in senior management roles in TNB Group, from **95** in FY2020 to **100** in FY2021.
- TNB continues to promote equal pay for men and women based on their roles and responsibilities, as indicated in our HR manuals as well as Collective Agreement (CA) document, with the basic salary and remuneration ratio set at **1:1**.

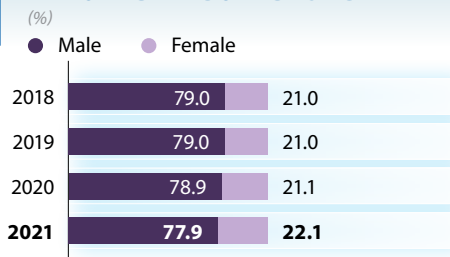
Our Performance in FY2021

	FY2018	FY2019	FY2020	FY2021
Total TNB Group Employees	35,516	36,307	35,576	34,938

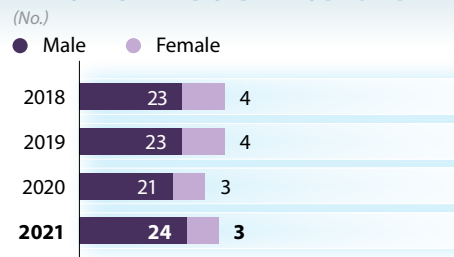
GENDER DIVERSITY BY LEVEL



EMPLOYEE BREAKDOWN BY GENDER

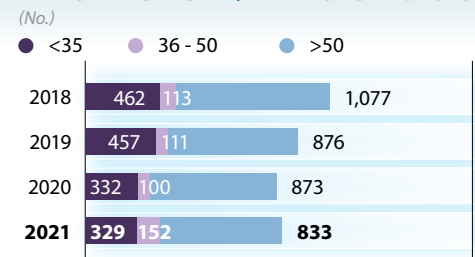


EMPLOYEES WITH DISABILITIES BY GENDER*

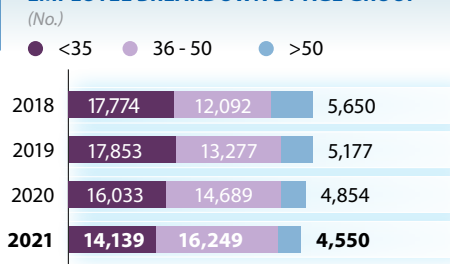


* excluding temporary disabilities.

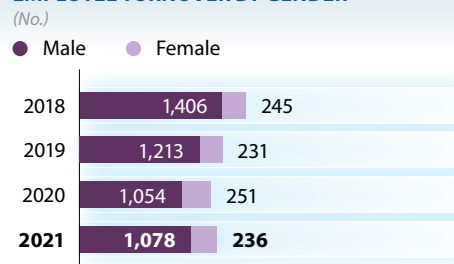
EMPLOYEE TURNOVER/ATTRITION BY AGE GROUP



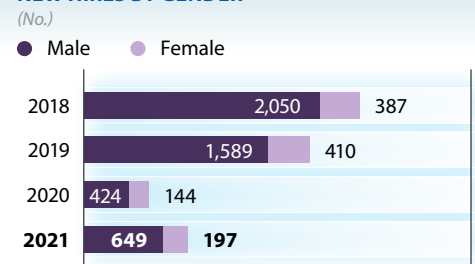
EMPLOYEE BREAKDOWN BY AGE GROUP



EMPLOYEE TURNOVER BY GENDER



NEW HIRES BY GENDER



Note: From operations in which TNB has a controlling stake.

EMPOWERING OUR PEOPLE AND NURTURING TALENT

Employment Management and Growth

Emphasis on Health, Safety and Well-being

As a responsible employer, we prioritise the occupational health, safety and welfare of our employees and contractors. We recognise their inherent human rights in addition to their importance to our operations.

Encouraging Occupational Safety and Health Practices

403-8 | 403-9 | 403-10

Safeguarding the lives of both our employees and contractors through robust occupational safety and health systems and practices remains our utmost priority. We uphold strong safety standards to prevent work-related injuries and illnesses and strive to achieve our targets of having zero fatalities at the workplace and maintaining our Lost Time Injury Frequency (LTIF) rate at below 1.0. We are also prepared to mitigate the consequences of emergency situations in proportion to the magnitude of the emergency and its potential impact on health, safety and the environment.

FY2021 Approach and Key Highlights:

1 Health, Safety and Environmental Management System (HSEMS)

We are guided by TNB's Safety and Health Policy in implementing 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.

The TNB HSE Steering Committee, convenes quarterly to discuss performance, mitigation measures and the overall strategic direction for HSE management at TNB.

Key highlights for FY2021 included:

- In FY2021, only one (1) HSE corporate audit was conducted (for GSPARX Sdn Bhd) due to COVID-19 restrictions.
- The **TNB Occupational Safety and Health Policy and TNB Environmental Policy** have been reviewed and endorsed.
- Grid Division, Distribution Network Division and TNB Power Generation Sdn Bhd maintained their **ISO 45001:2018** certification (Occupational Health & Safety Management System).
- **Two (2)** TNB HSE Steering Committee meetings were held during the year.
- **ISO 45001** certifications were obtained for several SESB divisions and departments, namely Sandakan Power Station of SESB Generation Division, the Operation & Maintenance Department of the Eastern Region (SESB Transmission Division), and the Eastern Region of SESB Distribution Division.
- Implementation of Contractor Safety Quality Assurance (CSQA) that requires contractors under the **Distribution Network Division** to provide self-declaration of safety compliance before commencing work.

2 Accident reduction programmes

In FY2021, the HSE digital platform was established for TNB employees to report any potential incidents (PIs) at the workplace. This promotes early intervention in potential incidents. Meanwhile, the Tenaga 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.

Key highlights for FY2021 included:

- The development of comprehensive Permit-to-Work System Guidelines that are expected to be a game changer in preventing accidents and fatalities.
- The launching of TNB Working at Height Guidelines, TNB Safe Working in Confined Space Guidelines, Permit-to-Work System Guidelines and Contractor Work Permits (CWP) on 8 October 2021.

3 HSE digitalisation

In line with greening our office practices, we continue to take strides towards digitalising our HSE practices by progressively rolling out modules in preparation for the full implementation of our HSE online system by FY2027. Currently we have two (2) HSE online reporting systems that are available on web and mobile application platform.

Key highlights for FY2021 included:

- The development of a comprehensive **chemical management system** in TNB. Through the online system, our divisions are able to digitally register the chemicals used at their sites and measure the risk levels.
- **Legal Compliance (LC Module)** for our divisions to conduct self-evaluations for applicable HSE legal requirements and measure their compliance status through the eHSE online platform.



Employment Management and Growth

Emergency Response – Flood

In preparation for the monsoon season, TNB released guidelines, namely the Electrical Safety Guide During the Monsoon Season and Electrical Safety Tips During Floods, which details a step-by-step guide to electrical safety during flood occurrences. Precautionary measures were also taken, including flood response training for TNB personnel, strategic placement of mobile generator sets and other critical equipment and operation of flood monitoring rooms. TNB has also previously taken steps to raise substation sites and build flood barriers at substation entrances to reduce the risk of substations being inundated and damaged by floods.

During the devastating flash floods that affected Peninsular Malaysia in December 2021, we shut down 647 power substations across Peninsular Malaysia due to safety considerations.

Implementing a 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, with our Safety Culture Assessment (SCA) score reaching >4.0 at 4.02.

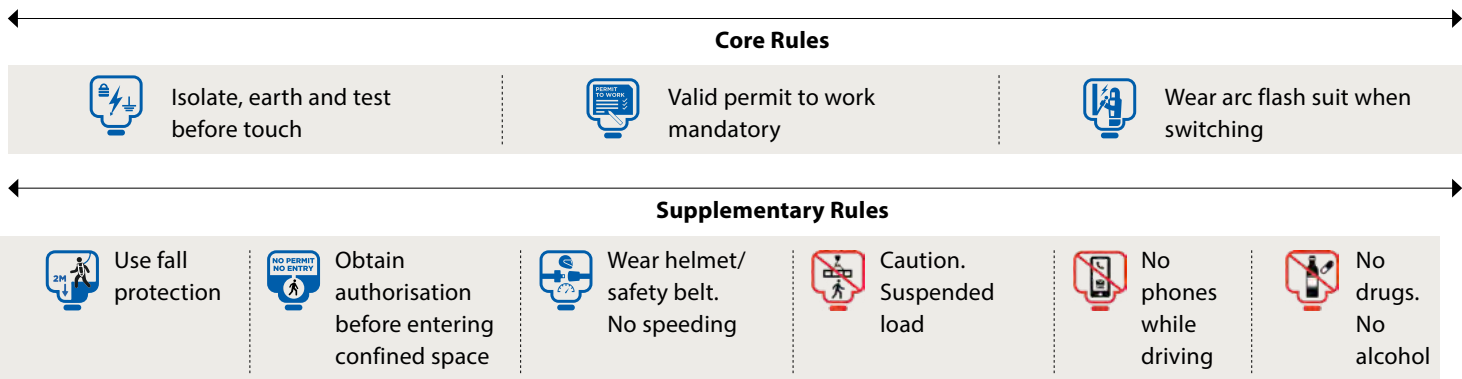
Our Approach and Key Highlights for FY2021:

1 Tenaga Safety Culture

The Nampak, Dengar dan Rasa Selamat (NDRS) programme to enhance awareness on early detection or symptoms of incidents was initially introduced by the Distribution Network Division in FY2020. This year, the programme was extended to TNB Group to boost the Group's safety culture. The NDRS model is a holistic approach towards supporting safety culture transformation that comprises three (3) main elements (the 3Es – Engineering, Education & Enforcement) and two (2) consequence management aspects, namely JB – Julang & Benam. In aligning our safety culture assessment outcomes with the NDRS-Julang & Benam initiatives, we have implemented HSE reward and recognition programmes, i.e. the Potential Incident Competition, Department HSE League and HSE Monthly Quiz, to recognise the efforts and contributions of our employees in elevating HSE performance.

2 Life-Saving Rules (LSR)

- TNB has established nine (9) life-saving rules as part of injury prevention measures since 2017:



- In 2021, we further developed and issued guidelines for working at height and in confined spaces.
- SESB has also begun implementation of the LSR in July this year.

3 Risk Assessment

In TNB, we identify all work-related hazards, assess their related risks and determine the relevant controls necessary, guided by the Hazard Identification, Risk Assessment and Determining Control (HIRADC) procedure. In determining the controls required to eliminate hazards and reduce risks, the hierarchy of controls (i.e. 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, PIs reported in the digital platform will also be assessed to alleviate any potential risks.

Risk assessments conducted by TNB include:

- HSE Risk Assessment (HSERA), Environmental Impact Assessment (EIA), Quantitative Risk Assessment (QRA), Fire Risk Assessment (FRA), Process Hazard Analysis (PHA).
- Chemical Health Risk Assessment (CHRA) for any work activities that relate to hazardous chemicals.
- Noise Risk Assessment (NRA) to identify work-related activities with exposure to noise.
- Ergonomic Risk Assessment (ERA) to identify ergonomically-related risks at the workplace.

EMPOWERING OUR PEOPLE AND NURTURING TALENT

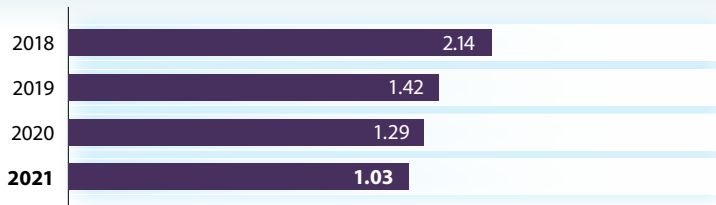
Employment Management and Growth

Our Performance in FY2021

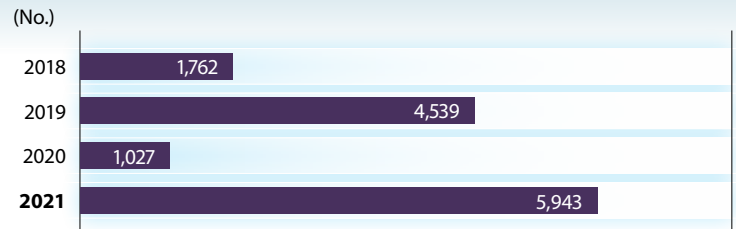
We saw an improvement in terms of our safety performance, reflected by a decrease in our Group-wide Lost Time Injury Frequency (LTIF) rate from 1.29 in FY2020 to 1.03 in FY2021.

In 2021, 22% (5,934) of the total number of employees completed HSE training, achieving a cumulative 103,225 training hours, our highest results since 2018.

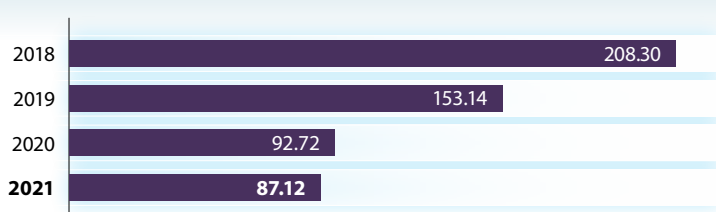
LOST TIME INJURY FREQUENCY RATE OF EMPLOYEES



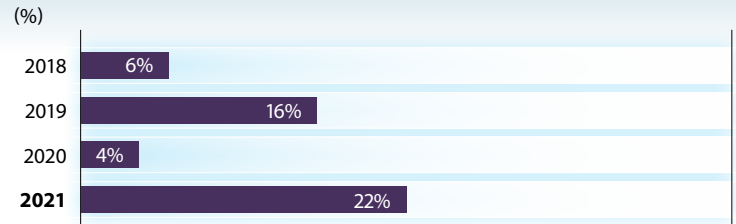
NUMBER OF EMPLOYEES TRAINED



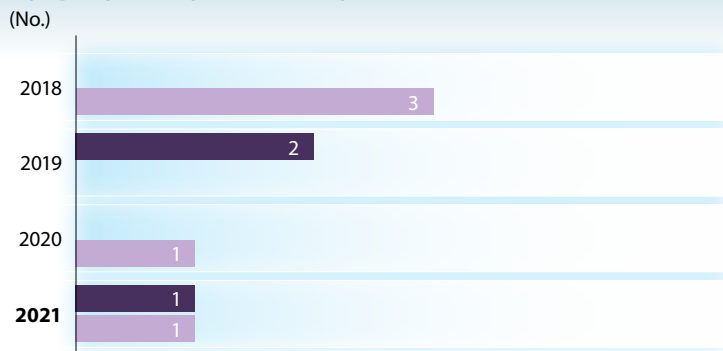
LOST DAYS SEVERITY RATE



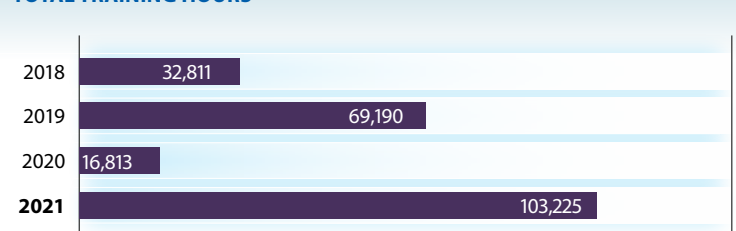
PERCENTAGE OF EMPLOYEES TRAINED



NUMBER OF EMPLOYEE FATALITIES

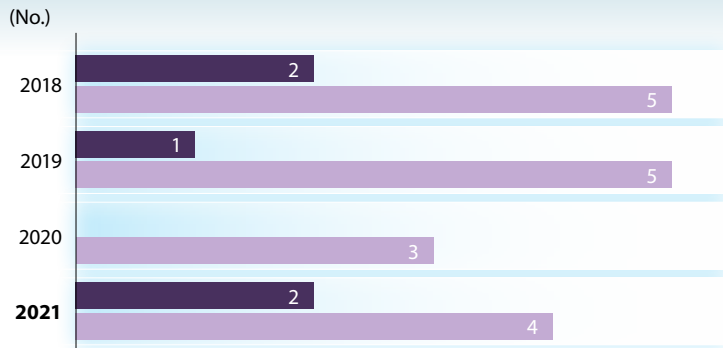


TOTAL TRAINING HOURS



Note: From operations in which TNB has a controlling stake.

NUMBER OF CONTRACTOR FATALITIES



■ Electrical ■ Non - Electrical

We are, however, deeply saddened to report that there were eight (8) work-related fatalities this year involving two (2) employees and six (6) 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

Implementing NIOSH - Tenaga Safety Leader Passport (NTSLP) modules in collaboration with NIOSH

Completion of Inspection Module development, to be launched in the year 2022

Enhancement of LSR for contractors, NDRS implementation and development of holistic contractor management



Employment Management and Growth

Supporting Employees' Health and Wellness

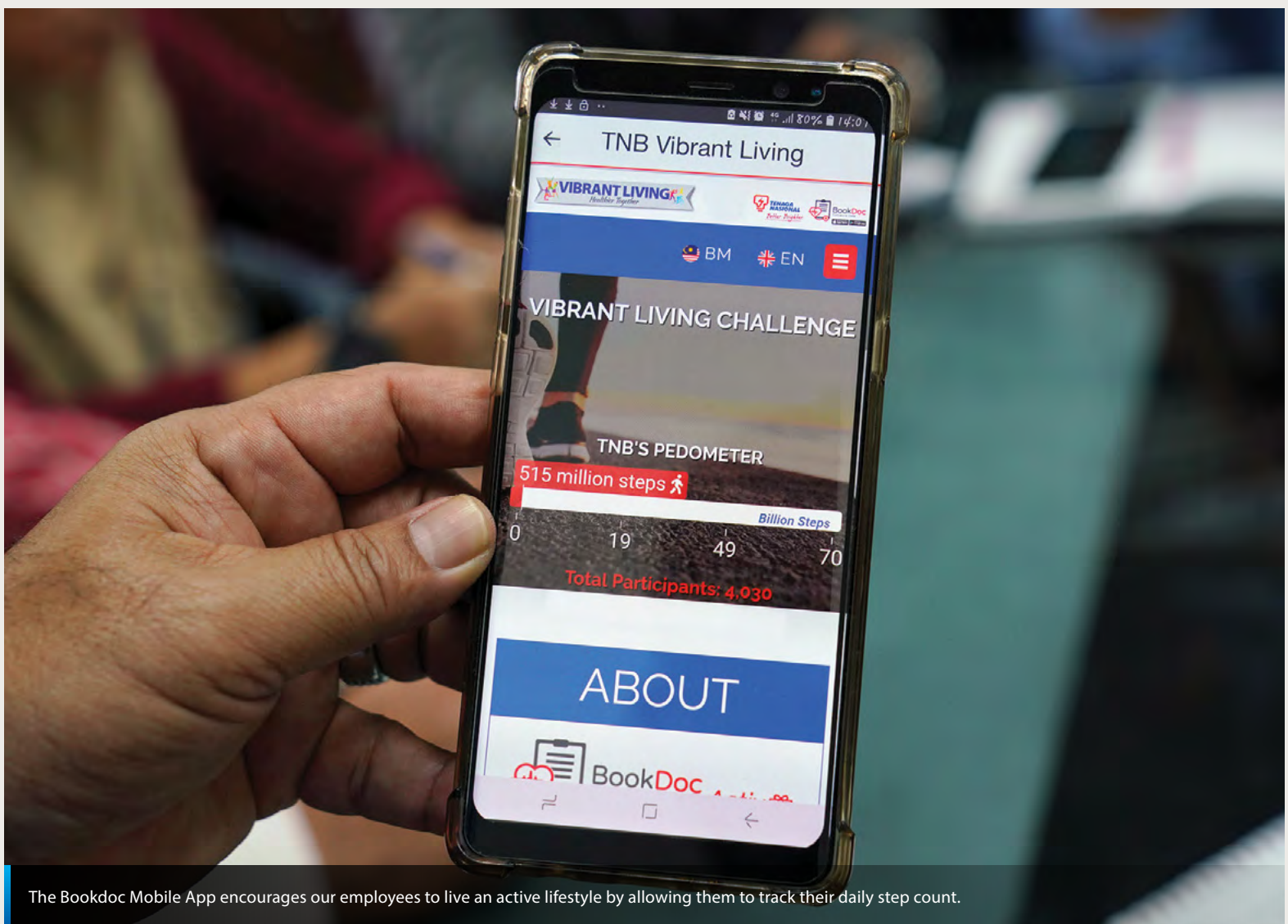
TNB encourages our employees to live an active lifestyle in order to improve their health and well-being. We have established mobile applications and health screening programmes to improve employees' physical and mental wellness.

We also conducted wellness programmes for our staff such as:

Wellness Champion Award

Top Three (3) highest step counts for the year for male and female staff

Bookdoc Mobile App



The Bookdoc Mobile App encourages our employees to live an active lifestyle by allowing them to track their daily step count.

BRIGHTER COMMUNITY



83 [Contributing to Community Development](#)

83 [Feature Story: Together with You](#)

90 [Engaging with Indigenous People](#)



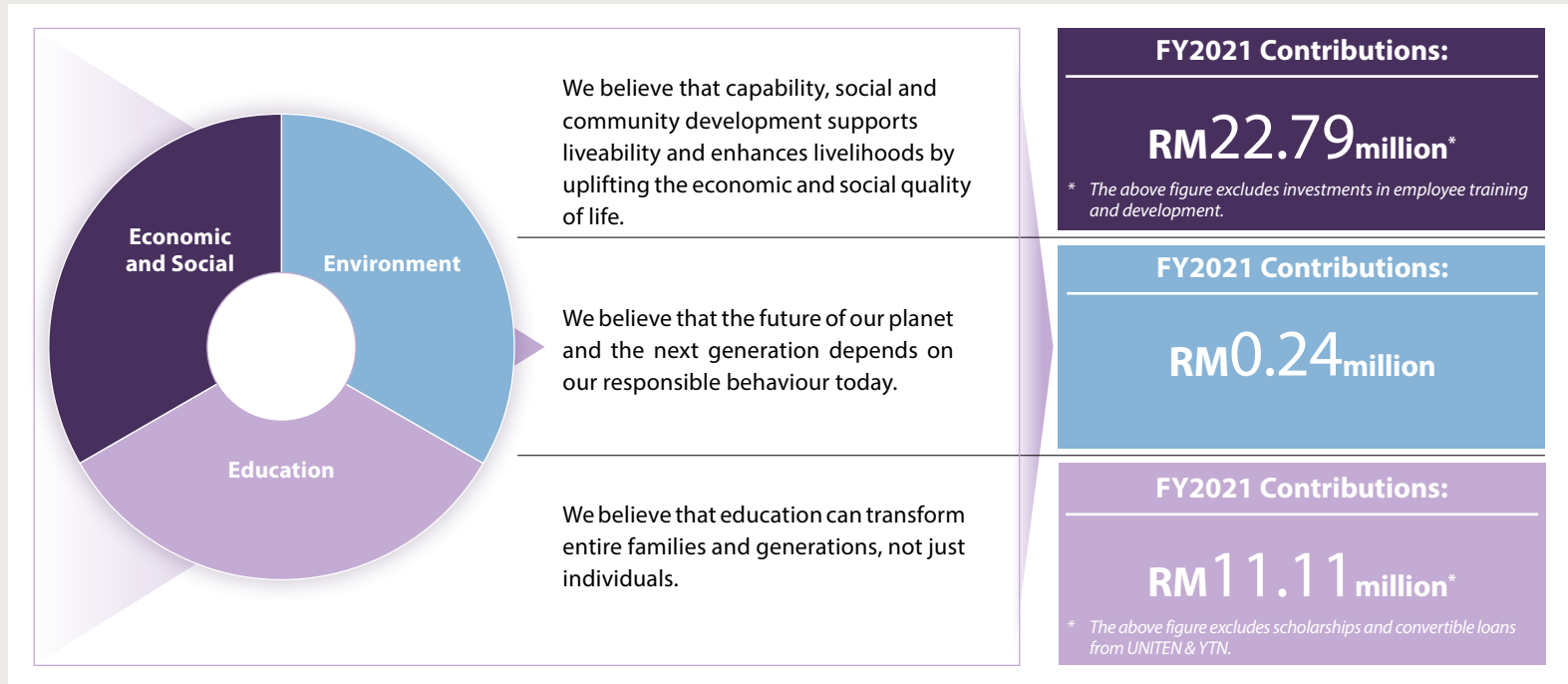
BRIGHTER COMMUNITY

Contributing to Community Development

203-2

We recognise our fiduciary responsibility to uplift the nation and aid in economic recovery, while brightening the lives of our people. Through our various community engagements, we seek to leave lasting positive impact on our people and communities.

In FY2021, we invested a total of RM39.57 million in community programmes, which included RM5.43 million for our sports-related programmes and three (3) focus areas:



To date, we have contributed a total of RM28.63 million towards assisting the government in its efforts to sustain our country's health system as a result of COVID-19 impacts, with RM1,131,819 being contributed in FY2021 in the form of personal protective equipment (PPE) and contributions to the community.

For more information on how we responded to the COVID-19 pandemic, please refer to our Feature Story - Supporting the Economic Recovery, pages 36-38

Feature Story

Together with You

Tabung Warga TNB Prihatin (TWTP) was introduced in June 2021 with an initial target of RM3 million to provide financial aid to Malaysians whose livelihoods were severely impacted by the COVID-19 pandemic. The funds were contributed voluntarily by TNB employees through a direct deduction of their June or July salary, in a joint effort to provide financial assistance to our fellow Malaysians to enable them to cope during these challenging times.

TWTP successfully raised RM1.63 million in thirty-four (34) days. To expand the campaign's reach, our Board of Directors unanimously agreed to double the amount donated by TNB staff, bringing the total to RM3.27 million.

Collections for the TWTP were extended until the end of FY2021. As of December 2021, RM4.04 million has been successfully collected from 15,734 TNB employees, with RM3.41 million having been distributed to 6,295 Malaysian citizens affected by the COVID-19 pandemic.

Recipients of the TWTP consisted of members of the B40 group, including those listed under *e-Kasih*, *Jabatan Kebajikan Masyarakat* (JKM) and *Program Perumahan Rakyat Termiskin* (PPRT) under the Ministry of Federal Territories and state *Zakat* centres.

RM2 million from the TWTP was allocated to provide financial assistance to victims of the December 2021 flash floods.



BRIGHTER COMMUNITY

Contributing to Community Development

Economic and Social Transformation

Electricity is an enabler of development, social welfare, improved healthcare and socio-economic growth. With that in mind, we have launched a number of initiatives to provide homes to our communities, improve their access to electricity and promote energy efficiency. We are proud to be a collaborator with the Government of Malaysia in implementing these efforts as part of our commitment and responsibility to empowering and progressing society towards a better and brighter future.

RURAL DEVELOPMENT



BELB Programme

TNB, with the support of *Kementerian Pembangunan Luar Bandar* (KPLB), supplies power to rural areas such as villages and indigenous people's 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 in remote areas that are not accessible to our grid lines, we utilise off-grid alternatives such as solar hybrids, generator sets and mini-hydro plants. To date, we have improved the connectivity of around 30 villages.

Village Street Lighting (LJK) Programme

The government introduced the Village Street Lighting (LJK) programme in 2002 with the purpose of ensuring public areas in remote villages are well lit at night, facilitating community safety. TNB, in collaboration with the Government of Malaysia, successfully completed Phase 10 of Project LJK in October 2021, with 29,487 streetlights successfully installed.

Pos Kawalan Tempatkan Kejadian (PKTK) 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), is expected to be handed over in 2022. As of December 2021, RM2.31 million has been spent on the development of this project.



Bakul Prihatin Negara (National Food Basket Programme)

In our efforts to provide additional relief and assistance to those affected by the challenges of the COVID-19 pandemic, TNB contributed a total of RM2 million in aid funds to the National Food Basket Programme in collaboration with *Yayasan Kebajikan Negara* (YKN).



Contributing to Community Development

PROVIDING HOMES FOR COMMUNITY WELL-BEING



Home for the Needy Programme

Through our Home for the Needy programme, we helped to refurbish or build new homes for an additional 144 families in FY2021, targeted mainly at single parents, senior citizens and individuals with disabilities. This programme is carried out under two (2) concurrent projects, namely *Program Baiti Jannati* (PBJ) and *Program Mesra Rakyat* (PMR). This year, we contributed RM3.05 million to the needy under this programme.

Better Brighter Shelter Programme

Through this programme, we provide accommodation facilities for 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 underserved communities from rural areas or the outskirts of Kuala Lumpur. We have partnered with Serdang Hospital's National Welfare Foundation, the National Heart Institute (IJN) Foundation and Melaka Hospital. In FY2021, this programme was expanded to the Raja Perempuan Zainab II Hospital, Kota Bharu.

In FY2021, approximately RM1.56 million was allocated for this programme, with a breakdown of RM200,000, RM59,000, RM45,000 and RM1.25 million spent on IJN, Serdang Hospital, Melaka Hospital and Raja Perempuan Zainab II Hospital, Kota Bharu, respectively.

ENVIRONMENTAL SUSTENANCE PROGRAMMES WITH THE COMMUNITY

The conservation of the natural environment is crucial in safeguarding both the diversity of flora and fauna as well as the livelihoods of surrounding communities.

TNB's environmental sustenance programmes include the following:



Mangrove Planting Programme

As part of our reforestation efforts, we conduct an annual mangrove planting programme that is spearheaded by our power plants. In FY2021, RM180,207 was spent on this initiative.

At the JEP power plant, we planted approximately 1,344 trees in the surrounding coastal parameters to preserve the mangrove ecosystem, which is crucial to the local fisheries industry. JEP has been performing tree planting activities in this area since

2021. We partnered with the Malaysian Nature Society (MNS) to plant mangrove trees along the access road to the power plant.

Apart from JEP, this mangrove planting initiative was also conducted in Sg. Limau, Manjung, Perak. Under Phase 2 (2021-2022) of the programme, a total of 5,000 mangrove trees were planted by the Global Environment Centre (GEC) in 2021 and another 2,000 trees will be planted in 2022.

Forest Tree Planting

The programme is a continuous effort to restore our forests. This year, we spent RM50,000 on planting 130 trees in Tasik Raban, Lenggong, Perak.



Fireflies Conservation Project

We are committed to conserving the firefly population through our conservation efforts in Kampung Kuantan, Kuala Selangor, Selangor – home to one of the largest firefly colonies in Southeast Asia – as well as in Kampung Yak Yah, Kemaman, Terengganu; Kampung Sungai Timun, Rembau, Negeri Sembilan; and Kampung Dew, Taiping, Perak. In FY2021, we channelled RM52,000 to these conservation efforts.

BRIGHTER COMMUNITY

Contributing to Community Development

Transforming Lives through Education

In FY2021, we maintained our commitment to providing accessible education through significant investments in our key educational institutions – UNITEN, TNB ILSAS and Yayasan Tenaga Nasional (YTN).

UNITEN – The Energy University

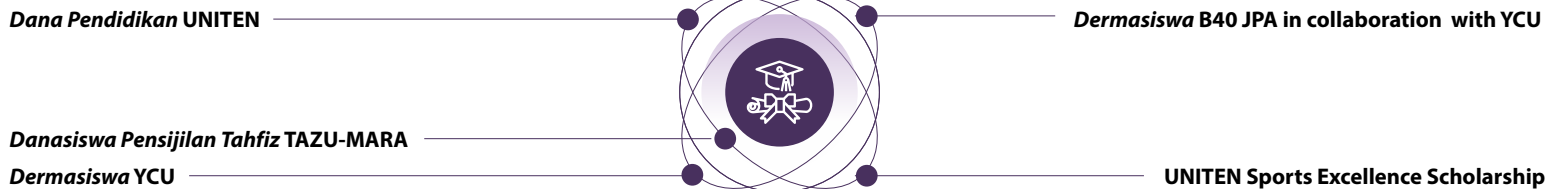
Universiti Tenaga Nasional (UNITEN) is devoted to teaching, learning and research excellence, as well as financial sustainability. We are an institution at the forefront of energy research. Leveraging TNB's extensive industry experience in power generation, transmission, distribution and retail, we offer courses in the fields of engineering, energy economics, business management and accounting, as well as computing and informatics.

As a subsidiary of TNB, UNITEN aspires to be a globally competitive, energy-focused university by 2025 through the implementation of a 10-year strategic plan: 'Building Opportunities, Living Dreams 2025' (BOLD2025). In FY2021, the strategic plan was updated to BOLD2025 Refresh, which supports TNB by:



This year, UNITEN awarded RM6.81 million to a total of 1,768 recipients. The funding and scholarships included:

UNITEN FUNDING AND SCHOLARSHIPS



Notes:
TAZU: Tabung Amanah Zakat UNITEN.
YCU: Yayasan Canselor UNITEN.

As of FY2021, 101 research projects conducted by UNITEN have been supported by TNB.

1,698
graduates

*Updated from TNB IAR Report 2021 - Sustainability Statement

144th
in the QS Asia University Rankings 2022

94.5%
employability rate

227th in the U.S. News & World Report Best Global Universities for Engineering 2022

UNITEN PERFORMANCE IN FY2021

Ranked among the world's Top **550** universities by QS Graduate Employability Rankings 2022

Collaborated with Nano-Malaysia in developing **20-kw** nanogrid proof-of-concept

Successfully secured **RM3.25million** in commercial funds for two (2) of UNITEN's innovations under MOSTI's National Technology Innovation Sandbox (NTIS)

Four (4) UNITEN researchers ranked among the World's Top **2%** Scientists by Stanford University, USA

#1 in the world for 'percentage of highly cited papers among the top 1% most cited in Engineering' in the U.S. News & World Report Best Global Universities for Engineering 2022



Contributing to Community Development

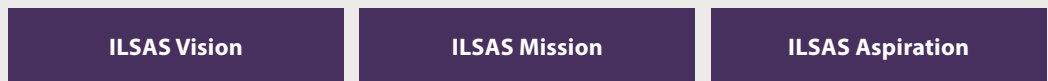
Key Activities	FY2021 Initiatives
Smart Energy Management System (EMS) Using Big Data Analytics	<ul style="list-style-type: none"> UNITEN partnered with TNB Energy Corporation Sdn Bhd (TNEC) to develop a smart energy management system that leverages UNITEN's wide array of CCTV cameras as an occupancy detection tool. By using cameras and cloud storage, crowd behavioural patterns can be captured and processed by the EMS, which will then regulate UNITEN's College of Engineering chiller plant according to occupancy analyses. This ultimately contributes to energy savings at UNITEN. This project was completed in 2021 and contributed up to 15% electricity savings for UNITEN.
Floating Solar PV (Senslar)	<ul style="list-style-type: none"> UNITEN is developing a 25KWp floating solar PV system on UNITEN Mosque's lake covering 131 m² of the lake area. The energy produced by the Senslar will be sent directly to UNITEN Mosque. The project is expected to be completed in April 2022 and is estimated to reduce UNITEN Mosque's electricity consumption by up to 20%.
PV Nanogrid with Battery and Ultracapacitor Energy Storage	<ul style="list-style-type: none"> UNITEN collaborated with Nano-Malaysia to develop a 20-kW nanogrid, comprising nano-PV panels, nano-light energy panels, ultracapacitor and battery, at the food court of the College of Engineering for proof-of-concept. This project also involved designing a system for high-level coordinated control of the converters for the PV generators, ultracapacitor and battery, which is based on load analysis and prolonging battery life. The project expected to be completed in December 2021.

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 the technical capability development programmes conducted by ILSAS are in line with Malaysian standard requirements.

The training modules at ILSAS are also accredited by City & Guilds UK (for technical programmes) and the Institute of Leadership & Management (ILM) UK (for leadership & management training modules).

ILSAS aspires to be a transformational learning platform for TNB and the energy sector in line with its 2019 – 2023 business plan founded on three (3) pillars:



Its strategic objectives are as follows:

- To build capabilities for current and future organisational strategies by providing learning solutions to increase individual, team and organisational performance and productivity
- To rapidly respond to growth and embed innovation in products and services
- To position ILSAS for quantum leap growth as a business entity that is cash positive and sustainable



Key Highlights in FY2021

- Received the **Asian Photovoltaic Industry Association (APVIA) Award** in the Academic Contribution (For Enterprise) category
- Received the **Energy Institute Award 2021 (EIAwards)** for excellence in providing innovative learning solutions towards energy sustainability
- The **5th ILSAS International Conference on Learning and Development (ICLAD)** was held in a hybrid format and received commendable feedback from participants
- Introduced **ICLAD Annex** – To provide knowledge sharing and insights from speakers during the interim period until the next ICLAD conference
- 299** employees with **188** trainers
- 36,807** individuals trained
- RM56.67 million** FY2021 revenue

BRIGHTER COMMUNITY

Contributing to Community Development

Yayasan Tenaga Nasional (YTN)

YTN was established with the mission of transforming lives through excellent education opportunities. Since its establishment in 1993, YTN has been governed by a Board of Trustees and an organising 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 RM1.3 billion in scholarships and helped over 20,000 students to achieve their dreams.

In FY2021, YTN provided a total of RM119.2 million to 8,271 recipients through financial aid including scholarships, convertible loans and the MyBF programme.



Dermaiswa 2021 MyBrighter Future scholarship award presented by our chairman, Dato' Sri Hasan bin Arifin (centre) to a recipient.

Our My Brighter Future (MyBF) programme aims to provide opportunities to marginalised youth and families in the B40 bracket to pursue tertiary education in Science, Technology, Engineering & Mathematics (STEM) and Technical & Vocational Education & Training (TVET) at any of seven (7) selected public universities, community colleges and polytechnic institutions in Malaysia. The MyBF scholarship covers the tuition fees and boarding and living expenses of recipients pursuing tertiary education.

Key Highlights in FY2021

- **RM53.3** million in financial aid provided to MyBF scholars
- **6,600** students benefitted from MyBF scholarships
- **MyBF** Student Development Programme in collaboration with *myHarapan* to develop competency and harness the potential of *dermaiswa* students in terms of community engagement, ethics, self-confidence and other positive values
- Collaboration with UNITEN to run the **Leadership Exploration and Development (ULEAD)** Programme for scholars. In FY2021, **41 programmes** were successfully organised, benefitting **4,210 students**

Highlighted Projects under ULEAD:

- **Time for Nature** has won the **ULEAD Most Influential Leader Award** for its work with a butterfly sanctuary and successfully instilling a love of the environment and animals in 195 participants.
- The **Selangor XTIV ESPORT ULEAD PUBG Edition**, organised by ULEAD students and the Selangor Esports Association, attracted 320 participants throughout Malaysia and won the ULEAD Top Profit Leader Award due to its well-managed and successfully executed programme.
- The **ULEAD Passion for Emotion programme** is a podcast session led by a professional counsellor focusing on the topic 'How to Manage Emotions in the Study or Work Environment', which had 154 participants.



A podcast session by a professional counsellor under ULEAD Passion for Emotion program provided students with mental health exposure and has won the ULEAD High Impact Leader Award.



Contributing to Community Development

SUPPORT FOR EDUCATION



Ceria ke Sekolah Programme

Every year, TNB holds the *Ceria Ke Sekolah* Programme to provide primary school students from low-income families with adequate school supplies such as clothing (school uniform, pants and headscarf), school bags and face masks. In FY2021, RM3 million was channelled by TNB to this programme, which benefitted 30,000 students.



Tabung Cerdik (Smart Fund) Programme

This year, the Government of Malaysia introduced the *CERDIK* initiative to provide laptops, tablets and internet access to students from low-income families. TNB contributed RM5 million to this fund, which benefitted 3,253 students from 40 schools throughout Malaysia. Digital items contributed included complete sets of laptops, dongles and sim cards (15GB for 12 months).



*Picture taken before the COVID-19 pandemic.

PINTAR School Adoption Programme

The PINTAR School Adoption Programme was continued in FY2021 with 11 new schools adopted across Peninsular Malaysia. TNB will sponsor a total of RM945,000 for three (3) years (until FY2023) under this programme.

This year, RM315,000 was channelled to initiatives focused on virtual learning and motivational programmes to encourage improvement in schools' academic performance.

Program Sekolah Angkat SESB

Through this programme, RM204,000 was invested in upgrading works for six (6) adopted schools in the rural areas of Sabah to provide students with a more conducive learning environment. RM366,250 is more than than RM204,000.

Bursary Award SESB

The Bursary Award SESB is dedicated to students who achieve excellent results in *Universiti Malaysia Sabah's* (UMS) Foundation in Science course to further their studies in mechanical, electrical, electronic and civil engineering programmes. One-off contributions worth RM10,000 each were awarded to seven (7) selected students from B40 income households.



National Hockey Development and Thunderbolts

Through this hockey development 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 (newly added in 2021). Since its inception in 2006, this programme has successfully nurtured several national hockey players and in FY2021, we contributed RM5.14 million.

BRIGHTER COMMUNITY

Engaging with Indigenous People

411-1

TNB is steadfast in its commitment to engaging with the communities we serve, which include indigenous people's or *Orang Asli* communities.



Initiatives to Engage with *Orang Asli* Communities

We actively engage with 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 socio-economic benefits. To date, we have improved connectivity in around 30 villages through the BELB Programme, which focuses on supplying power to rural areas such as villages and *Orang Asli* settlements.

TNB is in the process of developing a strategic communication tool to facilitate communication between TNB and the *Orang Asli* near the Jor Reservoir (the Semai Clan). The main objective of this tool is to discuss sediment disposal works proposed within *Orang Asli* customary land and mediate any misunderstandings that may arise.

Engagement with *Orang Asli* Communities regarding the Development of the Nenggiri Hydroelectric Project



The proposed Nenggiri hydroelectric power plant project located in Gua Musang, Kelantan will enhance the nation's grid system's reliability and security while providing numerous socio-economic benefits to the region. Since this project will be located near several *Orang Asli* settlements, special consideration was given to mitigating any social impacts on the local communities. TNB has pledged to appropriately compensate and provide assistance to those impacted by the Nenggiri Dam project. The affected *Orang Asli* community, totalling 1,115 people from 257 families and currently residing in Pos Tohoi, Pos Pulat and Kampung Kuala Wias, will be relocated to two (2) new sites with modern facilities (Kuala Yai and Ladang Sungai Terah).



*Picture taken before the COVID-19 pandemic.

Thus far, residents living within the site demarcated for the dam project have provided positive feedback, as revealed by the Human Rights Commission of Malaysia (SUHAKAM). At an engagement session with the *Orang Asli* community in early April 2021, SUHAKAM also shared that some residents have asked for the project to be expedited to reap the benefits of modernisation in the area. SUHAKAM further disclosed that the local community is optimistic that the project will be able to address their concerns about clean water and flooding, as well as improve socio-economic opportunities in the area.

The engagement session was attended by community leaders from the *Orang Asli* settlements and representatives from SUHAKAM, the Department of *Orang Asli* Development and TNB. TNB continues to operate in accordance with and adhere to ESG standards, and welcomes open discussions and engagement sessions with all interested parties on its development projects.

To date, we have conducted all necessary environmental and social work and studies to obtain approval for the project, such as the Mineral Potential Study, Public Acceptance Study, Environmental Impact Assessment (EIA), Social Impact Study and Heritage Impact Study.



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
BUSINESS PERFORMANCE										
GENERATION										
G4 - EU1	Generating capacity broken down by primary source and regulatory regime									
	Gas	MW	4,743.43	4,443.43	4,054.43	5,052.16	For wholly-owned power plants in Peninsular Malaysia		✓	
	Coal	MW	5,040.00	6,440.00	6,440.00	6,366.40				
	Large Hydro	MW	2,536.10	2,536.10	2,536.10	2,536.10				
	Solar	MW	50.00	50.00	80.00	80.00				
	Total	MW	12,369.53	13,469.53	13,110.53	14,034.66				
	Generating capacity broken down by other renewable sources with a capacity below 30MW									
	Mini Hydro	MW	21.76	21.76	21.76	21.76	For wholly-owned power plants in Peninsular Malaysia		✓	
	Biomass	MW	10.00	10.00	10.00	10.00				
	Biogas	MW	3.20	3.20	3.20	3.20				
	Generating capacity broken down by primary source and regulatory regime									
	Gas	MW	103.40	103.40	101.16	97.83	For power plants in Sabah owned by SESB		✓	
	Diesel	MW	192.20	177.36	169.84	171.68				
	Large Hydro	MW	77.85	74.96	72.30	72.16				
	Solar Hybrid	MW	21.50	24.11	28.33	27.68				
Total generated capacity	MW	394.95	379.83	371.63	369.34					
TRANSMISSION AND DISTRIBUTION LINES										
G4 - EU4	Length of above and underground transmission and distribution lines by regulatory regime									
	Transmission	Circuit-km	23,082	23,964	24,607	25,185	For TNB operations in Peninsular Malaysia		✓	
	Distribution	Circuit-km	660,038	683,008	703,312	723,134				
G4 - EU4	Length of above and underground transmission and distribution lines by regulatory regime									
	Transmission	Circuit-km	2,888.54	2,918.23	2,941.20	3,153.00	For SESB operations in Sabah		✓	
	Distribution	Circuit-km	NIL	24,937.00	25,448.00	28,578.00				
SYSTEM EFFICIENCY										
	Generation Plant Performance									
	Equivalent availability factor (EAF)	Percentage	88.93	81.77	87.39	82.89	For TNB operations in Peninsular Malaysia		✓	
		Percentage	74.84	71.43	71.29	75.11	For SESB operations in Sabah			
	Equivalent Unplanned Outage Factor (EUOF)	Percentage	3.84	7.97	6.65	8.13	For TNB operations in Peninsular Malaysia		✓	
		Percentage	9.98	11.86	14.36	20.05	For SESB operations in Sabah			
G4 - EU12	Transmission and distribution losses as a percentage of total energy									
	Transmission and distribution network losses									
	Transmission in Malaysia	Percentage	1.43	1.35	1.47	1.60	For TNB operations in Peninsular Malaysia		✓	
		Percentage	N/A	4.32	4.05	4.38	For SESB operations in Sabah			
	Distribution in Malaysia	Percentage	6.39	6.30	6.69	6.16	For TNB operations in Peninsular Malaysia		✓	
Percentage		N/A	12.22	13.13	12.01	For SESB operations in Sabah				
EU12	Electricity Transmission System									
	Transmission System Minutes	Minutes	0.348	0.271	0.081	0.086	For TNB operations in Peninsular Malaysia		✓	
		Minutes	42.97	13.41	11.28	40.74	For SESB operations in Sabah			
	Percentage of System Availability	Percentage	99.79	99.78	99.78	99.79	For TNB operations in Peninsular Malaysia		✓	
Percentage		99.25	97.34	97.32	93.99	For SESB operations in Sabah				

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
BUSINESS PERFORMANCE										
ACCESS										
G4 - EU28	Power outage frequency									
	System Average Interruption Frequency Index (SAIFI)	Frequency/ Customer/ Year	0.86	0.83	0.80	0.78	For TNB operations in Peninsular Malaysia		✓	
		Frequency/ Customer/ Year	8.61	11.77	13.87	12.10	For SESB operations in Sabah		✓	
G4 - EU29	Average power outage duration									
	System Average Interruption Duration Index (SAIDI)	Minutes/ Customer/ Year	48.22	48.13	44.95	45.25	For TNB operations in Peninsular Malaysia		✓	
		Minutes/ Customer/ Year"	280.32	307.97	284.15	268.05	For SESB operations in Sabah		✓	
ECONOMIC PERFORMANCE										
GRI 201-1	Value Added									
	Revenue	RM million	50,392.5	50,939.7	43,976.0	52,629.5				
	Operating expenses excluding staff costs, depreciation and amortisation	RM million	(33,677.6)	(29,624.9)	(22,684.2)	(29,878.7)				
	Net loss on impairment of financial instruments	RM million	(487.3)	(302.4)	(546.2)	(940.2)				
	Other operating income	RM million	825.1	1,131.0	1,061.4	918.1				
	Finance income	RM million	423.8	525.1	317.7	221.8				
	Finance cost	RM million	(1,688.5)	(3,382.7)	(3,668.7)	(3,793.3)				
	Fair value of financial instruments	RM million	36.7	(38.0)	124.9	201.8				
	Foreign exchange gain/(loss) on borrowings	RM million	(418.3)	113.9	26.2	(168.5)				
	Share of results of associates and joint ventures	RM million	(182.7)	52.6	76.5	193.5				
Total value added available for distribution	RM million	15,223.7	19,414.3	18,683.6	19,384.0				✓	



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary		
									TNB Company	TNB Group	
BUSINESS PERFORMANCE											
ECONOMIC PERFORMANCE											
GRI 201-1	Value Distributed										
	To employees										
	Employee cost	RM million	3,685.8	3,747.7	3,825.8	3,954.2					✓
	To Government										
	Taxation and zakat	RM million	1,034.8	922.6	521.6	1,036.1	Figures are excluding deferred tax.	Data for FY2018 has been restated from 1,043.8 to 1,034.8 due to errata			✓
	To shareholders										
	Dividends	RM million	2,931.9	3,014.1	5,235.8	4,568.4					✓
	Non-controlling interest	RM million	21.3	(84.2)	23.7	202.9					✓
	To reinvest to the Group										
	Depreciation and amortisation	RM million	6,491.3	10,188.9	10,622.4	10,691.5					✓
Retained profit	RM million	1,058.6	1,625.2	(1,545.7)	(1,069.1)		Data for FY2018 has been restated from 1,049.6 to 1,058.6 due to errata				
Total distributed	RM million	15,223.7	19,414.3	18,683.6	19,384.0						
CUSTOMERS											
CUSTOMER ACCOUNTS											
G4 - EU3	Number of residential, industrial, institutional and commercial customer accounts										
	Domestic	Number	7,378,425	7,553,229	7,728,407	7,916,379	- In Peninsular Malaysia only - The category of 'Others' consists of mining, street lighting, agriculture and RE generators			✓	
	Commercial	Number	1,553,607	1,575,198	1,590,373	1,618,366					
	Industrial	Number	29,749	30,520	31,654	32,846					
	Other	Number	77,416	89,975	92,679	95,838					
	Total	Number	9,039,197	9,248,922	9,443,113	9,663,429					
CUSTOMER EXPERIENCE											
N/A	Results of surveys measuring customer satisfaction										
	Customer satisfaction index	Percentage	81	81	86	87	- Surveys are conducted on an annual basis - For TNB operations in Peninsular Malaysia			✓	
	Corporate reputation index	Percentage	88	87	81	88					
	Complaints received	Number	35,747	45,275	33,753	25,213					
	Complaints resolved	Percentage	99	99	99	99					
	Service request received	Number	130,405	285,712	447,530	342,276					
Service request resolved	Percentage	98	100	98	95						

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
CUSTOMERS										
DMA	Number of customer interaction channels									
	Digital	Number	4	6	6	6	For TNB operations in Peninsular Malaysia		✓	
	Non-digital	Number	4	5	5	5				
	Total	Number	8	11	11	11				
	Percentage of customer interaction channels									
	Digital	Percentage	77.92	79.10	87.00	89.90	For TNB operations in Peninsular Malaysia		✓	
Non-digital (<i>Kedai Tenaga & etc</i>)	Percentage	22.08	20.90	13.00	10.10					
PROCUREMENT PRACTICES										
GRI 204-1	Number of suppliers and total spent									
	Total number of suppliers	Number	3,457	3,124	3,442	3,238	- Suppliers include Malaysian suppliers and those in the areas where TNB operates internationally - Procurement spend is for TNB Group, excluding TNB Fuel Services Sdn. Bhd. (TNBF), Petroliam Nasional Berhad (PETRONAS) and Electricity Generating Authority of Thailand (EGAT)			✓
	Total spent on procurement	RM billion	9.50	9.91	7.15	10.03				
	Proportion of spending on local suppliers									
	Total number of local suppliers engaged	Number	3,402	3,067	3,390	3,123	- Suppliers include Malaysian suppliers and those in the areas where TNB operates internationally - Procurement spend is for TNB Group, excluding TNB Fuel Services Sdn. Bhd. (TNBF), Petroliam Nasional Berhad (PETRONAS) and Electricity Generating Authority of Thailand (EGAT)			✓
	Percentage of local suppliers	Percentage	98	98	98	96				
	Total spent on local suppliers engaged	RM billion	9.39	9.81	7.06	9.82				
	Percentage spent on local suppliers engaged	Percentage	99	99	99	98				
RESPONSIBLE AND ETHICAL BUSINESS PRACTICES										
GRI 205-2	Training on anticorruption policies and procedures communication	Number	15	14	15	6				✓
GRI 205-3	Total number of confirmed incidents of corruption	Number	10	12	18	5				✓



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary						
									TNB Company	TNB Group					
NATURAL RESOURCE CONSUMPTION															
GRI 302-1	Fuel consumption for power plants from non-renewable sources														
	Coal	GJ	396,332,933	361,956,288	456,964,497	451,081,428	For wholly-owned power plants in Peninsular Malaysia		✓						
	Natural gas	GJ	181,810,853	188,532,460	161,785,964	204,196,092									
	Distillate fuel	GJ	687,794	573,644	31,328,099	1,093,738									
	Medium fuel oil	GJ	307,793	783,847	0	0									
GRI 303-3	Water withdrawal breakdown by power plants														
	TNB Janamanjung GF1	Megalitres	2,862.55	2,307.55	2,059.50	2,289.76	For TNB operations in Peninsular Malaysia		✓						
	TNB Janamanjung GF2	Megalitres	1,053.62	1,079.57	506.01	971.80									
	Manjung Five	Megalitres	280.63	331.38	302.99	461.42									
	Kapar Energy Ventures (KEV) [60%]	Megalitres	1,284.87	1,345.46	1,234.16	986.44									
	Jimah East Power [70%]	Megalitres	N/A	N/A	773.36	939.92									
	TNB Pasir Gudang Energy	Megalitres	77.72	58.35	30.51	20.81									
	SJ Putrajaya	Megalitres	14.89	14.30	12.99	7.75									
	SJ Gelugor	Megalitres	72.80	89.19	62.63	69.61									
	SJ Jambatan Connaught	Megalitres	70.56	N/A	N/A	N/A									
	SJ Sultan Ismail, Paka	Megalitres	183.22	N/A	N/A	N/A									
	TNB Prai	Megalitres	260.72	141.01	99.52	41.97									
	SJ Tuanku Jaafar	Megalitres	312.17	300.66	325.92	354.94									
	Connaught Bridge Sdn. Bhd.	Megalitres	150.95	121.95	105.79	99.59									
	Southern Power Generation	Megalitres	N/A	N/A	N/A	184.83									
	SSJ Sultan Mahmud, Kenyir	Megalitres	7.79	4.53	4.76	4.73									
	SSJ Cameron Highlands	Megalitres	N/A	N/A	N/A	N/A									
	SSJ Sg. Perak	Megalitres	41.15	104.66	31.20	26.05									
	TNB Grid Substation	Megalitres	4.43	4.57	266.11	223.23									
	TNB Grid Building	Megalitres	7.87	7.95	44.42	11.13									
	TNB Distribution Substation	Megalitres	130.79	115.04	82.67	139.54									
	GRI 303-3	Water withdrawal breakdown by other buildings													
		TNB Distribution Building	Megalitres	806.04	814.10	811.03					698.65	For TNB operations in Peninsular Malaysia		✓	
TNB Corporate		Megalitres	425.17	428.98	311.77	238.92									
Total Water Withdrawal		Megalitres	8,047.90	7,269.30	7,065.30	7,771.09									
Total Water Withdrawal		Megalitres	774.34	784.90	724.65	659.82	SESB								

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
EMISSIONS										
GRI 305-1	Direct (Scope 1) GHG emissions									
	Total direct GHG emissions	Million tCO ₂ e	37.00	33.79	39.04	39.80	- 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	Data restated for FY2020 after third party verification	✓	
	HFCs	tCO ₂ eq/year	2,419	2,122	21,237	9,116				
SF6	tCO ₂ eq/year	212,398	140,979	337,828	129,137					
GRI 305-2	Energy indirect (Scope 2) GHG emissions									
	Indirect Emissions	tCO ₂ e	186,829	240,761	224,208	194,735		Data restated for FY2020 after third party verification	✓	
GRI 305-4	Greenhouse gas emission intensity									
	Intensity of CO ₂ emissions	tCO ₂ e/MWh	0.57	0.56	0.57	0.55			✓	
GRI 305-5	Reduction of greenhouse gas emissions									
	Total CO ₂ avoided	Million tCO ₂ e	5.81	5.39	5.99	7.96		Data restated for FY2019 and FY2020 after third party verification	✓	
WASTE MANAGEMENT										
GRI 306-3	Scheduled waste generated									
	Total weight of scheduled waste generated	Metric Tonnes	N/A	34,783.00	23,576.00	47,829.26	- Data has been extracted from the DOE's Electronic Scheduled Waste Information System (eSWIS) - For TNB operations in Peninsular Malaysia			✓
	Total weight of hazardous waste / Scheduled waste diverted from disposal	Metric Tonnes	N/A	1,549.00	5,455.50	1,162.07				
Total weight of hazardous waste / Scheduled waste directed to disposal	Metric Tonnes	N/A	33,234.00	18,120.76	46,667.19					
N/A	Significant spills									
	Total number of recorded significant spills	Number	0	3	7	0				✓
	Total volume of recorded significant spills	m ³	0	0.57	6.10	0				
ENVIRONMENTAL MANAGEMENT										
GRI 307-1	Non-compliance with environmental laws and regulations									
	Total monetary value of significant fines	RM	0	1,000.00	10,000.00	19,000.00				✓
	Total number of non-monetary sanctions	Number	6	5	6	11				



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
LABOUR PRACTICES AND DECENT WORK										
EMPLOYMENT CULTURE										
GRI 102-7	Total size of workforce									
	TNB Group	Number	35,516	36,307	35,576	34,938			✓	
	TNB Company	Number	28,371	28,825	27,957	27,423				
	Generation	Number	1,086	1,005	1,440	1,415				
	Grid	Number	2,510	2,549	2,392	2,436				
	Distribution Network	Number	11,011	11,274	10,956	10,832				
	Retail	Number	4,365	4,604	4,504	4,482				
	Support/Others	Number	9,399	9,393	10,105	9,673				
	Other Subsidiaries	Number	7,145	7,482	6,179	6,100				
Employee Engagement Score (EES)	Percentage	86	-	89	85	EES is conducted biennially.			✓	
GRI 102-8, GRI 405-1	Workforce by geographic area									
	Peninsular Malaysia - East	Number	4,509	4,578	4,330	4,580			✓	
	Peninsular Malaysia - North	Number	6,682	6,752	6,639	6,417				
	Peninsular Malaysia - South	Number	5,256	5,538	5,316	5,245				
	Peninsular Malaysia - Central	Number	15,713	16,087	15,994	15,467				
	Malaysia East - Sabah	Number	3,233	3,229	3,174	3,226				
	Malaysia East - Sarawak	Number	2	0	2	1				
	Others	Number	121	123	121	2				
	Total	Number	35,516	36,307	35,576	34,938				
	Workforce by contract type and geographic area									
	Permanent employees									
	Peninsular Malaysia - East	Number	4,196	4,091	3,859	4,140			✓	
	Peninsular Malaysia - North	Number	6,236	5,994	5,906	5,750				
	Peninsular Malaysia - South	Number	4,715	4,627	4,585	4,568				
	Peninsular Malaysia - Central	Number	14,427	14,074	13,846	13,675				
	Malaysia East - Sabah	Number	3,028	2,947	2,878	2,799				
	Malaysia East - Sarawak	Number	2	0	2	1				
Others	Number	118	121	117	0					
Total (Permanent)	Number	32,722	31,854	31,193	30,933					

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
LABOUR PRACTICES AND DECENT WORK										
EMPLOYMENT CULTURE										
GRI 102-8, GRI 405-1	Contract employees (non-permanent)									
	Peninsular Malaysia - East	Number	313	487	470	440				
	Peninsular Malaysia - North	Number	446	758	733	667				
	Peninsular Malaysia - South	Number	541	911	732	677				
	Peninsular Malaysia - Central	Number	1,286	2,013	2,148	1,792				✓
	Malaysia East - Sabah	Number	205	282	296	427				
	Others	Number	3	2	4	2				
	Total (Contract)	Number	2,794	4,453	4,383	4,005				
Total	Number	35,516	36,307	35,576	34,938					
GRI 102-8, GRI 405-1	Workforce by gender									
	Male	Number	28,061	28,687	28,063	27,220				
		Percentage	79.00	79.00	78.90	77.90				
	Female	Number	7,455	7,620	7,513	7,718				
		Percentage	21.00	21.00	21.10	22.10				
	Total	Number	35,516	36,307	35,576	34,938				✓
	Workforce by contract type and gender									
	Permanent employees									
	Male	Number	25,502	24,819	24,265	23,861				
	Female	Number	7,223	7,035	6,912	6,977				
	Total	Number	32,725	31,854	31,177	30,838				✓
	Contract employees (non-permanent)									
	Male	Number	2,479	3,865	3,796	3,603				
	Female	Number	312	588	603	497				
	Total	Number	2,791	4,453	4,399	4,100				✓
	Workforce by level and gender									
	Board Members									
	Male	Number	40	16	47	31				
	Female	Number	5	7	12	6				
	Total	Number	45	23	59	37				✓
	Male	Percentage	88.90%	69.60%	79.70%	83.80%				
	Female	Percentage	11%	30%	20%	16%				
	Senior management									
Male	Number	363	338	342	333					
Female	Number	82	83	95	100					
Total	Number	445	421	437	433				✓	
Male	Percentage	82%	80%	78%	77%					
Female	Percentage	18%	20%	22%	23%					
Executive										
Male	Number	5,187	5,317	5,325	5,315					
Female	Number	3,212	3,400	3,442	3,515					
Total	Number	8,399	8,717	8,767	8,830				✓	
Male	Percentage	62%	61%	61%	60%					
Female	Percentage	38%	39%	39%	40%					



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
LABOUR PRACTICES AND DECENT WORK										
EMPLOYMENT CULTURE										
GRI 102-8, GRI 405-1	Non-executive									
	Male	Number	22,514	23,033	22,396	21,816				
	Female	Number	4,158	4,136	3,976	3,859				
	Total	Number	26,672	27,169	26,372	25,675				
	Male	Percentage	84%	85%	85%	85%				✓
	Female	Percentage	16%	15%	15%	15%				
	Total (excluding Board Members)	Number	35,516	36,307	35,576	34,938				
	Workforce by age group									
	<35	Number	17,774	17,853	16,033	14,139				
		Percentage	50.00	49.20	45.10	40.50				
	35 - 50	Number	12,092	13,277	14,689	16,249				
		Percentage	34.00	36.60	41.30	46.50				✓
	>50	Number	5,650	5,177	4,854	4,550				
		Percentage	15.90	14.30	13.60	13.00				
	Total	Number	35,516	36,307	35,576	34,938				
	Workforce by level and age group									
	Board Members									
	< 35	Number	0	1	0	0				
	35 - 50	Number	6	11	12	7				
	> 50	Number	41	25	47	30				✓
	Total	Number	47	37	59	37				
	Senior management									
	< 35	Number	7	6	1	4				
	35 - 50	Number	162	165	164	185				✓
	> 50	Number	276	282	272	244				
	Total	Number	445	453	437	433				
	Executive									
	< 35	Number	4,005	3,938	3,615	3,329				
35 - 50	Number	3,544	3,950	4,359	4,736				✓	
> 50	Number	850	800	793	765					
Total	Number	8,399	8,688	8,767	8,830					
Non-executive										
< 35	Number	13,763	13,909	12,411	10,803					
35 - 50	Number	8,388	9,162	10,167	11,331					
> 50	Number	4,521	4,095	3,794	3,541					
Total	Number	26,672	27,166	26,372	25,675				✓	
Total (excluding Board Members)	Number	35,516	36,307	35,576	34,938					
GRI 405-1	Employees with disability by gender									
	Male	Number	23	23	21	24		Data restated for FY2018, FY2019 and FY2020 to exclude temporary disabilities		
	Female	Number	4	4	3	3				
	Total	Number	27	27	24	27				✓
	Women in Senior Management									
	Female	Number	82	83	95	100				
		Percentage	18%	20%	22%	23%				✓

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
LABOUR PRACTICES AND DECENT WORK										
EMPLOYMENT CULTURE										
GRI 102-41	Collective Bargaining									
	Total number of employees under collective bargaining agreements	Number	22,992	23,406	22,546	22,678				
	Percentage of employees under collective bargaining agreements out of total workforce	Percentage	81.0%	81.2%	81.8%	83.7%				
	Total number of grievances against labour practices filed in the year	Number	15	14	15	6			✓	
	Total number of grievances against labour practices resolved in the year	Number	10	12	18	5				
GRI 401-1	Number of new hires by gender									
	Male	Number	2,050	1,589	424	649				
	Female	Number	387	410	144	197				✓
	Total	Number	2,437	1,999	568	846				
	Percentage of new hires by gender									
	Male	Percentage	84.12	79.49	74.65	76.71				✓
	Female	Percentage	15.88	20.51	25.35	23.29				
	Number of new hires by age group									
	< 35	Number	2,345	1,910	480	778				
	35 - 50	Number	73	70	63	51				✓
	> 50	Number	19	19	25	17				
	Total	Number	2,437	1,999	568	846				
	Percentage of new hires by age group									
	< 35	Percentage	96.22	95.55	84.51	91.96				✓
	35 - 50	Percentage	3.00	3.50	11.09	6.03				
	> 50	Percentage	0.78	0.95	4.40	2.01				
	Number of new hires by region									
	Peninsular Malaysia - East	Number	208	177	17	59				
	Peninsular Malaysia - North	Number	308	281	23	69				
	Peninsular Malaysia - South	Number	432	380	23	119				
Peninsular Malaysia - Central	Number	1,084	1,053	464	427				✓	
Malaysia East - Sabah	Number	405	104	41	172					
Others	Number	0	4	0	0					
Total	Number	2,437	1,999	568	846					



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
LABOUR PRACTICES AND DECENT WORK										
EMPLOYMENT CULTURE										
GRI 401-1	Percentage of new hires by region									
	Peninsular Malaysia - East	Percentage	4.61	3.87	0.39	1.29				✓
	Peninsular Malaysia - North	Percentage	4.61	4.16	0.35	1.08				
	Peninsular Malaysia - South	Percentage	8.22	6.86	0.43	2.27				
	Peninsular Malaysia - Central	Percentage	6.90	6.55	2.90	2.76				
	Malaysia East - Sabah	Percentage	12.53	3.22	1.29	5.33				
	Others	Percentage	0.00	3.25	0.00	0.00				
	Employee turnover by gender									
	Male	Number	1,406	1,213	1,054	1,078				✓
	Female	Number	245	231	251	236				
	Total	Number	1,651	1,444	1,305	1,314				
	Employee turnover rate by gender									
	Male	Percentage	5	4	4	4				✓
	Female	Percentage	3	3	3	3				
	Employees turnover by age group									
	< 35	Number	461	457	332	329				✓
	35 - 50	Number	113	111	100	152				
	> 50	Number	1,077	876	873	833				
	Total	Number	1,651	1,444	1,305	1,314				
	Employee turnover rate by age group									
	< 35	Percentage	2.59	2.56	2.07	2.33				✓
	35 - 50	Percentage	0.93	0.84	0.68	0.94				
	> 50	Percentage	19.06	16.92	17.99	18.31				
	Employee turnover by region									
	Peninsular Malaysia - East	Number	228	176	172	154				✓
	Peninsular Malaysia - North	Number	357	279	231	212				
	Peninsular Malaysia - South	Number	280	231	208	202				
	Peninsular Malaysia - Central	Number	706	677	615	622				
	Malaysia East - Sabah	Number	79	80	77	123				
	Others	Number	1	1	2	1				
	Total	Number	1,651	1,444	1,305	1,314				
	Employee turnover rate by region									
Peninsular Malaysia - East	Percentage	5.06	3.84	3.97	3.36				✓	
Peninsular Malaysia - North	Percentage	5.34	4.13	3.48	3.30					
Peninsular Malaysia - South	Percentage	5.33	4.17	3.91	3.85					
Peninsular Malaysia - Central	Percentage	4.49	4.21	3.85	4.02					
Malaysia East - Sabah	Percentage	2.44	2.48	2.43	3.81					
Others	Percentage	0.83	0.81	1.65	50.00					

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary		
									TNB Company	TNB Group	
LABOUR PRACTICES AND DECENT WORK											
CAPABILITY DEVELOPMENT											
GRI 404-1	Training hours										
	Training hours (inc. general and leadership training)	Hours	677,960	1,085,160	490,000	639,040				✓	
	Average training hours	Man-days per employee	8	6	2	4					
	Average hours of training by gender (inc. general and leadership training)										
	Male	Hours	8	48	19	29				✓	
	Female	Hours	8	24	15	27					
	Average hours of training by level (inc. general and leadership training)										
	Senior management	Hours	8	24	15	34				✓	
	Executive	Hours	8	53	29	43					
	Non-executive	Hours	8	36	15	23					
	General training										
	Total general training hours	Hours	3,120	1,047,160	478,000	554,662				✓	
	Average general training hours	Hours	8	37	17	7					
	Programme for skills management and lifelong learning										
	Leadership training										
Total leadership training hours	Hours	2,496	38,000	12,000	84,378				✓		
Average leadership training hours (man-days per employee)	Hours	8	8	0.4	10						
Total spend on training (inc. general and leadership)	RM	142,771,483.08	183,103,277.76	76,513,751.70	65,533,459						
GRI 404-3	Assessment of employees receiving regular performance and career development reviews										
	Regular performance review (employees)	Number	28,371	28,825	27,957	34,938				✓	



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary		
									TNB Company	TNB Group	
OCCUPATIONAL HEALTH AND SAFETY											
NUMBER AND FREQUENCY OF INJURY											
GRI 403-9	Number of fatalities										
	Employees (Electrical)	Number	0	2	0	1					✓
	Employees (Non-Electrical)	Number	3	0	1	1					
	Total (Company)	Number	3	2	1	2					
	Contractors (Electrical)	Number	2	1	0	2					
	Contractors (Non-Electrical)	Number	5	5	3	4					
	Total (Contractors)	Number	7	6	3	6					
	Fatality rate										
	- Employees (Electrical)	Per 1000	0	0.06	0	0.03					✓
	- Employees (Non-Electrical)	Per 1000	0.09	0	0.03	0.03					
	- Contractors (Electrical)	Per 1000	2.00	0.06	0	0.04					
	- Contractors (Non-Electrical)	Per 1000	0.29	0.29	0.17	0.17					
	Lost-Time Injuries										
	Generation	Number	4	1	N/A	N/A					✓
	Grid	Number	19	4	6	4					
	Distribution Network	Number	40	43	35	22					
	Retail	Number	72	42	48	48					
	Others - Non-Core Division	Number	18	24	10	10					
	Total (TNB Company)	Number	153	114	99	84					
	GenCo (after Restructuring)	Number	N/A	N/A	7	5					✓
	RetailCo (after Restructuring)	Number	N/A	N/A	N/A	0					
	Other Subsidiaries	Number	50	24	16	9					
	Total (TNB Group)	Number	203	138	122	98					
	Lost-Time Injuries Frequency Rate (LTIF)										
	Generation	Per million man-hours	1.49	0.42	N/A	N/A					✓
	Grid	Per million man-hours	3.06	0.66	1.05	0.69					
	Distribution Network	Per million man-hours	1.07	1.12	0.96	0.62					
Retail	Per million man-hours	6.88	3.72	4.36	4.25						
Others - Non-Core Division	Per million manhours	N/A	1.25	0.51	0.58						
Total (TNB Company)	Per million manhours	2.08	1.47	1.36	1.20						
GenCo (after Restructuring)	Per million manhours	N/A	N/A	0.75	0.54						

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary		
									TNB Company	TNB Group	
OCCUPATIONAL HEALTH AND SAFETY											
NUMBER AND FREQUENCY OF INJURY											
GRI 403-9	RetailCo (after Restructuring)	Per million manhours	N/A	N/A	N/A	0					
	Other Subsidiaries	Per million manhours	2	1	1	0.6				✓	
	Total (TNB Group)	Per million manhours	2	1	1.3	1					
	Lost days of employees										
	Generation	Number	24	19	N/A	N/A					
	Grid	Number	248	197	90	6,058					
	Distribution Network	Number	6,454	958	1,155	669					
	Retail	Number	6,595	1,019	7,011	780				✓	
	Others - Non-Core Division	Number	210	372	352	465					
	Total (TNB Company)	Number	13,531	2,565	8,608	7,972					
	GenCo (after Restructuring)	Number	N/A	N/A	98	155					
	RetailCo (after Restructuring)	Number	N/A	N/A	N/A	N/A					✓
	Other Subsidiaries	Number	6,180	12,334	92	123					
	Total (TNB Group)	Number	19,711	14,899	8,798	8,250					
	Lost days severity rate of employees										
	Generation	Per million man-hours	8.93	7.99	N/A	N/A					
	Grid	Per million man-hours	40	32.57	15.77	1,050.33					
	Distribution Network	Per million man-hours	173	24.89	31.67	18.82					
	Retail	Per million man-hours	617.6	90.24	637.06	69.01				✓	
	Others-Non Core Division	Per million man-hours	10.82	17.29	17.91	27.08					
	Total (TNB Company)	Per million man-hours	195.16	33.16	118.18	114.22					
	GenCo (after Restructuring)	Per million man-hours	N/A	N/A	10.45	16.78					
	RetailCo (after Restructuring)	Per million man-hours	N/A	N/A	N/A	0					✓
Other Subsidiaries	Per million man-hours	289.41	618.5	7.49	7.69						
Total (TNB Group)	Per million man-hours	208.03	153.14	93.09	87.12						



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary		
									TNB Company	TNB Group	
WORKERS COVERED BY OHS MANAGEMENT SYSTEM											
GRI 403-8	Number of Employees who are covered by occupational health and safety management system										
	Generation (before Sept 2020)	Number	1,054	973	N/A	N/A			✓		
	Grid	Number	2,510	2,549	2,392	2,436					
	Distribution Network	Number	11,194	11,273	10,956	10,832					
	Retail	Number	4,346	4,604	4,468	4,535					
	Others - Non-Core Division	Number	7,694	7,738	7,340	6,983					
	Total (TNB Company)	Number	26,798	27,137	25,156	24,786					
	GenCo (after Sept 2020)	Number	N/A	N/A	3,867	3,726			✓		
	RetailCo (after Jan 2021)	Number	N/A	N/A	N/A	37					
	Other Subsidiaries	Number	8,096	8,316	6,407	6,396					
	Total (TNB Group)	Number	34,894	35,453	35,430	34,945					
	Number of Contractors who are covered by occupational health and safety management system										
	Generation (before Sept 2020)	Number	1,480	1,480	N/A	N/A			✓		
	Grid	Number	4,412	3,615	4,325	4,237					
	Distribution Network	Number	4,751	4,751	4,751	4,751					
	Retail	Number	N/A	N/A	411	411					
	Others - Non Core Division	Number	0	0	0	3,547					
	Total (TNB Company)	Number	10,643	9,846	9,487	12,946					
	GenCo (after Sept 2020)	Number	N/A	N/A	4,589	4,791			✓		
	RetailCo (after Jan 2021)	Number	N/A	N/A	N/A	102					
	Other Subsidiaries	Number	3,953	4,199	6,614	7,574					
	Total (TNB Group)	Number	14,596	14,045	20,690	25,413					
	Percentage of Contractors who are covered by occupational health and safety management system										
	Total (TNB Group)	Percentage	100	100	100	100	All contractors are covered under OSH management system				✓
	GRI 403-10	The number of employee fatalities as a result of work-related ill health									
		Generation (before Sept 2020)	Number	0	0	N/A	N/A			✓	
		Grid	Number	0	0	0	0				
Distribution Network		Number	0	0	0	0					
Retail		Number	0	0	0	0					
Others - Non Core Division		Number	0	0	0	0					
Total (TNB Company)		Number	0	0	0	0					
GenCo (after Sept 2020)		Number	N/A	N/A	0	0			✓		
Other Subsidiaries		Number	0	0	0	0					
Total (TNB Group)		Number	0	0	0	0					

PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary	
									TNB Company	TNB Group
WORK RELATED ILL HEALTH										
GRI 403-10	The number of employee cases of recordable work-related ill health									
	Generation (before Sept 2020)	Number	6	2	N/A	N/A			✓	
	Grid	Number	0	0	0	4				
	Distribution Network	Number	0	4	5	4				
	Retail	Number	0	0	0	0				
	Others - Non Core Division	Number	0	2	0	0				
	Total (TNB Company)	Number	0	8	5	8				
	GenCo (after Sept 2020)	Number	N/A	N/A	5	0			✓	
	Other Subsidiaries	Number	0	0	0	0				
Total (TNB Group)	Number	0	8	10	8					
COMMUNITY DEVELOPMENT AND EDUCATION										
GRI 203-2	Yayasan Tenaga Nasional (YTN)									
	Total spend on YTN scholarships	RM Million	35.00	38.70	37.10	42.80			✓	
	YTN scholarships awarded	Number	816	831	678	655	Number of students refer to onboard/active students			
	Total spend on YTN convertible loans	RM Million	27	27	22	23				
	Students awarded YTN convertible loans	Number	1,158	1,248	1,057	1,016	Number of students refer to onboard/active students			
	Total spend on MyBF scholarships	RM Million	4.69	21.2	40.4	53.3				
Students awarded MyBF scholarships	Number	945	3,592	5,268	6,600	Number of students refer to onboard/active students				



PERFORMANCE TABLE

GRI	Indicator	Units	FY18	FY19	FY20	FY21	Scope/Remark	Restatement of published data	Boundary		
									TNB Company	TNB Group	
COMMUNITY DEVELOPMENT AND EDUCATION											
GRI 203-2	UNITEN										
	Number of local students enrolled	Number	8,703	6,314	6,360	5,862					
	Number of international students enrolled	Number	458	621	628	819					
	Total	Number	9,161	6,935	6,988	6,681					
	Total number of graduates (undergraduate programmes)	Number	3,001	1,944	1,511	1,556				✓	
	Total number of graduates (postgraduate programmes)	Number	144	92	140	142					
	Total	Number	3,145	2,036	1,651	1,698					
	Employability rate within 6 months	Percentage	93.69%	94.00%	93.00%	94.50%					
	ILSAS										
	Total number of individuals trained	Number	50,571	61,067	7,198	7,377	Based on number of internal (TNB) and external participants.				✓
	Number of TNB employees trained	Number	39,077	50,359	13,738	29,430	Subject to number of training programmes in ILSAS.				
	Development and impact to communities										
	Contributions to community in charitable donations	RM 'million	14.20	15.50	43.65	18.19					✓
	Spend on community programmes by area										
	Education	RM 'million	N/A	11.73	9.90	11.11					✓
	Environmental	RM 'million	N/A	6.13	1.36	0.24					
	Social	RM 'million	N/A	15.68	49.22	22.79					
Sports	RM 'million	N/A	6.71	2.45	5.43						
Total	RM 'million	39.3	40.25	62.93	39.57						

GRI STANDARDS CONTENT INDEX

GENERAL DISCLOSURES

GRI Standard	GRI Indicator	Page reference and reasons for omissions, if applicable	GRI Universal Standard 2021	
GRI 102: General Disclosures 2016	Organisational profile			
	102-1	Name of the organisation	Front cover	GRI 2: General Disclosures 2021 2-1
	102-2	Activities, brands, products and services	9-13	GRI 2: General Disclosures 2021 2-6
	102-3	Location of headquarters	9	GRI 2: General Disclosures 2021 2-1
	102-4	Location of operations	9-13	GRI 2: General Disclosures 2021 2-2
	102-5	Ownership and legal form	TNB IAR 2021: 198; 350-353	GRI 2: General Disclosures 2021 2-3
	102-6	Markets served	9-13	GRI 2: General Disclosures 2021 2-6
	102-7	Scale of the organisation	TNB IAR 2021: 187-188; 351-353	GRI 2: General Disclosures 2021 2-6; 2-7
	102-8	Information on employees and other workers	98-102 - Employee numbers are expressed as head count at year end - All employees are full-time employees - Data is compiled through Group Human Resources processes and systems	GRI 2: General Disclosures 2021 2-7; 2-8
	102-9	Supply chain	50	GRI 2: General Disclosures 2021 2-6
	102-10	Significant changes to the organisation and its supply chain	TNB IAR 2021: 339-340	GRI 2: General Disclosures 2021 2-6
	102-11	Precautionary principle or approach	TNB IAR 2021: 118-124	GRI 2: General Disclosures 2021 2-2; 2-23
	102-12	External initiatives	18, 23-30	N/A
	102-13	Membership of associations	31-32	GRI 2: General Disclosures 2021 2-28
	Strategy			
	102-14	Statement from senior decision-maker	6-8; TNB IAR 2021: 22-30	GRI 2: General Disclosures 2021 2-22
	Ethics and Integrity			
	102-16	Values, principles, standards and norms of behavior	TNB IAR 2021: 6, 92 - 94, 98 - 99, 108 - 117	GRI 2: General Disclosures 2021 2-23
	Governance			
	102-18	Governance structure	16	GRI 2: General Disclosures 2021 2-9
	Stakeholder engagement			
	102-40	List of stakeholder groups	20 - 22	GRI 2: General Disclosures 2021 2-29
	102-41	Collective bargaining agreements	101	GRI 2: General Disclosures 2021 2-30
	102-42	Identifying and selecting stakeholders	20 - 22, 23	GRI 2: General Disclosures 2021 2-29
	102-43	Approach to stakeholder engagement	20 - 22	GRI 2: General Disclosures 2021 2-29
	102-44	Key topics and concerns raised	20 - 22	N/A
	Reporting practice			
	102-45	Entities included in the consolidated financial statements	TNB IAR 2021: 16 -17, 219 - 232	GRI 2: General Disclosures 2021 2-2
	102-46	Defining report content and topic Boundaries	2-3, 114	GRI 2: General Disclosures 2021 3-1
	102-47	List of material topics	23 - 26	GRI 2: General Disclosures 2021 3-2
	102-48	Restatements of information	39, 64, 77	GRI 2: General Disclosures 2021 2-4
102-49	Changes in reporting	3	GRI 2: General Disclosures 2021 3-2	
102-50	Reporting period	3	GRI 2: General Disclosures 2021 2-3	
102-51	Date of most recent report	3	N/A	
102-52	Reporting cycle	3	GRI 2: General Disclosures 2021 2-3	
102-53	Contact point for questions regarding the report	3	GRI 2: General Disclosures 2021 2-3	
102-54	Claims of reporting in accordance with the GRI Standards	2	N/A	
102-55	GRI content index	109 - 113	N/A	
102-56	External assurance	3	GRI 2: General Disclosures 2021 2-5	



TOPIC SPECIFIC DISCLOSURES

GOVERNANCE AND ECONOMIC				
GRI Standard	GRI Indicator		Page Reference	GRI Universal Standard 2021
GRI 419: Socioeconomic Compliance 2016	103-1	Explanation of the material topic and its Boundary	24 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	16	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	16-18	GRI 3: Materials Material Topic 3-3
	419-1	Non-compliance with laws and regulations in the social and economic area	17-18	GRI 2: General Disclosures 2021 2-27
GRI 201: Economic Performance 2016	103-1	Explanation of the material topic and its Boundary	24 , 114	
	103-2	The management approach and its components	TNB IAR 2021: 34-35, 44-45	
	103-3	Evaluation of the management approach	TNB IAR 2021: 34-35, 44-45	
	201-1	Direct economic value generated and distributed	39, 92 - 93	
GRI 204: Procurement Practices 2016	103-1	Explanation of the material topic and its Boundary	24 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	50	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	50, 94	GRI 3: Materials Material Topic 3-3
	204-1	Proportion of spending on local suppliers	50, 94	
GRI 205: Anti- corruption 2016	205-2	Communication and training about anti-corruption policies and procedures	24 , 114	
	205-3	Confirmed incidents of corruption and actions taken	18, 94	
GRI 207: Tax 2019	103-1	Explanation of the material topic and its Boundary	24 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	51-52	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	51-52	GRI 3: Materials Material Topic 3-3
	207-1	Approach to tax	51-52	
	207-2	Tax governance, control, and risk management	51-52	
	207-3	Stakeholder engagement and management of concerns related to tax	51-52	
GRI 418: Customer Privacy 2016	103-1	Explanation of the material topic and its Boundary	24 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	42, 47	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	42, 47	GRI 3: Materials Material Topic 3-3
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	47	

GRI STANDARDS CONTENT INDEX

TOPIC SPECIFIC DISCLOSURES

ENVIRONMENT				
GRI Standard	GRI Indicator		Page Reference	GRI Universal Standard 2021
GRI 302: Energy 2016	103-1	Explanation of the material topic and its Boundary	25 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	64-66	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	64-66	GRI 3: Materials Material Topic 3-3
	302-1	Energy consumption within the organisation	64-66	
	302-4	Reduction of energy consumption	64-66	
GRI 303: Water and Effluents 2018	103-1	Explanation of the material topic and its Boundary	25 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	66-67	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	66-67	GRI 3: Materials Material Topic 3-3
	303-3	Water withdrawal	66-67, 95	
GRI 304: Biodiversity 2016	103-1	Explanation of the material topic and its Boundary	25 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	66-69	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	66-69	GRI 3: Materials Material Topic 3-3
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	66-69	
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	68	
GRI 305: Emissions 2016	103-1	Explanation of the material topic and its Boundary	25 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	54-64	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	54-64	GRI 3: Materials Material Topic 3-3
	305-1	Direct (Scope 1) GHG emissions	64, 96	
	305-2	Energy indirect (Scope 2) GHG emissions	64, 96	
	305-4	GHG emissions intensity	64, 96	
	305-5	Reduction of GHG emissions	64, 96	
GRI 306: Waste 2020	103-1	Explanation of the material topic and its Boundary	25 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	66-67	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	66-67	GRI 3: Materials Material Topic 3-3
	306-3	Waste generated	67, 96	
	306-4	Waste diverted from disposal	67, 96	
	306-5	Waste directed to disposal	67, 96	
	N/A	Significant spills	97	
GRI 307: Environmental Compliance 2016	103-1	Explanation of the material topic and its Boundary	25 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	66-69	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	66-69	GRI 3: Materials Material Topic 3-3
	307-1	Non-compliance with environmental laws and regulations	66, 97	GRI 2: General Disclosures 2021 2-27



TOPIC SPECIFIC DISCLOSURES

SOCIAL				
GRI Standard	GRI Indicator		Page Reference	GRI Universal Standard 2021
GRI 401: Employment 2016	103-1	Explanation of the material topic and its Boundary	26 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	71-74	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	71-74	GRI 3: Materials Material Topic 3-3
	401-1	New employee hires and employee turnover	71-74, 101-102	
GRI 403: Occupational Health and Safety 2018	103-1	Explanation of the material topic and its Boundary	26 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	78-81	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	78-81	GRI 3: Materials Material Topic 3-3
	403-4	Worker participation, consultation and communication on occupational health and safety	78-81	
	403-5	Worker training on occupational health and safety	78-81	
	403-6	Promotion of worker health	78-81	
	403-8	Workers covered by an occupational health and safety management system	78-81, 105-106	
	403-9	Work-related injuries	78-81, 104-105	
GRI 404: Training and Education 2016	103-1	Explanation of the material topic and its Boundary	26 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	75-76	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	75-76	GRI 3: Materials Material Topic 3-3
	404-1	Average hours of training per year per employee	75-76, 103	
	404-2	Programs for upgrading employee skills and transition assistance programs	75-76	
	404-3	Percentage of employees receiving regular performance and career development reviews	75-76, 103	
GRI 405: Diversity and Equal Opportunity 2016	103-1	Explanation of the material topic and its Boundary	26 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	77	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	77	GRI 3: Materials Material Topic 3-3
	405-1	Diversity of governance bodies and employees	77, 98-100	
GRI 203: Indirect Economic Impact 2016	103-1	Explanation of the material topic and its Boundary	26 , 114	GRI 3: Materials Material Topic 3-3
	103-2	The management approach and its components	83-90	GRI 2: General Disclosures 2021 2-25; GRI 3: Materials Material Topic 3-3
	103-3	Evaluation of the management approach	83-90	GRI 3: Materials Material Topic 3-3
	203-2	Significant indirect economic impacts	83-90, 108	
GRI 411: Rights Of Indigenous Peoples 2016	103-1	Explanation of the material topic and its Boundary	26 , 114	
	103-2	The management approach and its components	90	
	103-3	Evaluation of the management approach	90	
	411-1	Incidents of violations involving rights of indigenous peoples	90	

GRI STANDARDS CONTENT INDEX

ELECTRIC UTILITIES SECTOR DISCLOSURES

GRI Standard	GRI G4 Indicator		Page Reference
General Standard Disclosures	Organisational Profile		
	EU1	Installed capacity, broken down by primary energy source and by regulatory regime	10-13, 40
	EU3	Number of residential, industrial, institutional and commercial customer accounts	10-11, 45, 93
	EU4	Length of above and underground transmission and distribution lines by regulatory regime	10-11, 91
Specific Standard Disclosure: Economic	Demand-Side Management		
	G4-DMA	Disclosures on Management Approach	38, 42, 65
	System Efficiency		
	EU12	Transmission and distribution losses as a percentage of total energy	91
Specific Standard Disclosure: Society	Disaster/Emergency Planning and Response		
	G4-DMA	Disclosures on Management Approach	42-45, 93
	Access		
	G4-DMA	Disclosures on Management Approach	36-37
	EU28	Power outage frequency	45, 92
	EU29	Average power outage duration	4, 29, 45, 92
	Provision of Information		
	G4-DMA	Disclosures on Management Approach	45-49, 63



GRI STANDARDS ASPECT BOUNDARY

Material Matters	GRI Standards	Boundary and Impact	Where the impact occurs
Business and Financial Performance	GRI 201: Economic Performance EU 28 Power outage frequency EU 29 Average power outage duration	> TNB Group > All stakeholders	Within and outside
Reliable Energy and Fair Tariffs	EU 28 Power outage frequency EU 29 Average power outage duration	> TNB Group > Government > Customers	Within and outside
Customer Experience	GRI 418: Customer Privacy EU3 Number of residential, industrial, institutional and commercial customer accounts DMA Demand-side Management	> TNB Group > Customers	Within and outside
Responsible and Ethical Business Practices	GRI 205: Anti-corruption GRI 419: Socioeconomic compliance	> TNB Group > All stakeholders	Within and outside
Cyber Security Management	None - Disclosure on Management Approach only	>TNB Group	Within
Tax	GRI 207: Tax 2019	> TNB Group > Investors > Government	Within and outside
Climate Change and Energy Efficiency	GRI 305: Emissions GRI 302: Energy	> TNB Group > All stakeholders	Within and outside
Energy Transition and Innovation	GRI 302: Energy EU1 Installed capacity, broken down by primary energy source and by regulatory regime EU12 Transmission and distribution losses as a percentage of total energy	> TNB Group > Government > Customers	Within and outside
Environmental Management	GRI 307: Environmental Compliance	> TNB Group > Government	Within and outside
Natural Resource Consumption	GRI 301: Materials 2016 GRI 302: Energy 2016 GRI 303: Water and Effluents 2018	>TNB Group	Within
Waste Management	GRI 306: Waste 2020	> TNB Group > Government > Communities	Within and outside
Biodiversity Management	GRI 304: Biodiversity 2016	> TNB Group > Communities	Within and outside
Safety, Health and Well-being	GRI 403: Occupational Health and Safety 2018 DMA Disaster/Emergency Planning and Response	> TNB Group > Employees > Trade Unions > Vendors > Communities	Within and outside
Capability Development	GRI 404: Training and Education	> TNB Group > Employees	Within
Employment Culture	GRI 401: Employment GRI 405: Diversity and Equal Opportunity	> TNB Group > Employees > Trade Unions > Vendors	Within and outside
Community Development and Education	GRI 203: Indirect Economic Impact 2016	> TNB Group > Communities > Government	Within and outside
Sustainable Supply Chain	GRI 204: Procurement Practices 2016	> TNB Group > Vendors	Within and outside
Rights of Indigenous Peoples	GRI 411: Rights Of Indigenous Peoples 2016	> TNB Group > Communities > Non-Governmental Organisations (NGOs) and Associations > Government	Within and outside

WEF CONTENT INDEX

The following table provides reference of WEF Stakeholder Capitalism Core Metrics with disclosures in the report.

Pillar	Core Metrics	Key Performance Indicators	Page reference	Response and/or reference and reasons for omissions, if applicable
Principles of Governance	Governing purpose			
	Setting purpose	The company's stated purpose, as the expression of the means by which a business proposes solutions to economic, environmental and social issues. Corporate purpose should create value for all stakeholders, including shareholders.	9	
	Quality of governing body			
	Governance body composition	Composition of the highest governance body and its committees by: competencies relating to economic, environmental and social topics; executive or non-executive; independence; tenure on the governance body; number of each individual's other significant positions and commitments, and the nature of the commitments; gender; membership of under-represented social groups; stakeholder representation.	16; TNB IAR 2021: 58-79	
	Stakeholder engagement			
	Material issues impacting stakeholders	A list of the topics that are material to key stakeholders and the company, how the topics were identified and how the stakeholders were engaged.	20 - 22, 23	
	Ethical behaviour			
	Anti-corruption	1. Total number of governance body members, employees and business partners who have received training on the organisation's anti-corruption policies and procedures, broken down by region. a) Total number and nature of incidents of corruption confirmed during the current year, but related to previous years; and b) Total number and nature of incidents of corruption confirmed during the current year, related to this year.	94	
		2. Discussion of initiatives and stakeholder engagement to improve the broader operating environment and culture, in order to combat corruption.	17-18; TNB IAR 2021: 98 - 99	
	Protected ethics advice and reporting mechanisms	A description of internal and external mechanisms for: 1. Seeking advice about ethical and lawful behaviour and organisational integrity; and 2. Reporting concerns about unethical or unlawful behaviour and lack of organisational integrity.	18; TNB IAR 2021: 99	
Risk and opportunity oversight				
Integrating risk and opportunity into business process	Company risk factor and opportunity disclosures that clearly identify the principal material risks and opportunities encountered by the company specifically (as opposed to generic sector risks), the company's appetite in respect of these risks, how these risks and opportunities have moved over time and the response to those changes. These opportunities and risks should integrate material economic, environmental and social issues, including climate change and data stewardship.	23, 27, TNB IAR 2021: 120-121		



Pillar	Core Metrics	Key Performance Indicators	Page reference	Response and/or reference and reasons for omissions, if applicable
Planet	Climate change			
	Greenhouse gas (GHG) emissions	For all relevant greenhouse gases (e.g. carbon dioxide, methane, nitrous oxide, F-gases etc.), report in metric tonnes of carbon dioxide equivalent (tCO ₂ e) GHG Protocol Scope 1 and Scope 2 emissions. Estimate and report material upstream and downstream (GHG Protocol Scope 3) emissions where appropriate.	63-64, 96	We are assessing Scope 3 value chain emissions in preparation for embarking on a Science Based Targets (SBTi) accreditation.
	TCFD implementation	Fully implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). If necessary, disclose a timeline of at most three years for full implementation. Disclose whether you have set, or have committed to set, GHG emissions targets that are in line with the goals of the Paris Agreement – to limit global warming to well below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C – and to achieve net-zero emissions before 2050.	55 - 65	We are enhancing our disclosures based on the TCFD recommendations in phases over the next 3 years and intend to align our GHG emissions target with the Paris Agreement goals of 1.5°C and SBTi accreditation in the medium term
	Nature Loss			
	Land use and ecological sensitivity	Report the number and area (in hectares) of sites owned, leased or managed in or adjacent to protected areas and/or key biodiversity areas (KBA).	69	
	Freshwater availability			
Water consumption and withdrawal in water-stressed areas	Report for operations where material: megalitres of water withdrawn, megalitres of water consumed and the percentage of each in regions with high or extremely high baseline water stress, according to WRI Aqueduct water risk atlas tool. Estimate and report the same information for the full value chain (upstream and downstream) where appropriate.	67, 95	Based on the classification provided by Aqueduct Water Risk Atlas, the vast majority of the water is withdrawn in areas classified as low risk (<10%)	

WEF CONTENT INDEX

Pillar	Core Metrics	Key Performance Indicators	Page reference	Response and/or reference and reasons for omissions, if applicable
People	Dignity and equality			
	Diversity and inclusion (%)	Percentage of employees per employee category, by age group, gender and other indicators of diversity (e.g. ethnicity).	77, 98-100	
	Pay equality (%)	Ratio of the basic salary and remuneration for each employee category by significant locations of operation for priority areas of equality: women to men, minor to major ethnic groups, and other relevant equality areas.	77	TNB upholds the principle of performance-related compensation regardless of gender. Remuneration data is regarded confidential and not reported
	Wage level (%)	Ratios of standard entry level wage by gender compared to local minimum wage. Ratio of the annual total compensation of the CEO to the median of the annual total compensation of all its employees, except the CEO.	N/A	TNB pursues the principle of performance-related compensation regardless of gender. Remuneration data is regarded confidential and is not reported
	Risk for incidents of child, forced or compulsory labour	An explanation of the operations and suppliers considered to have significant risk for incidents of child labour, forced or compulsory labour. Such risks could emerge in relation to: a) type of operation (such as manufacturing plant) and type of supplier; and b) countries or geographic areas with operations and suppliers considered at risk.	72	TNB has zero incidence of child labor.
	Health and well-being			
	Health and safety (%)	The number and rate of fatalities as a result of work-related injuries; high-consequence work-related injuries (excluding fatalities); recordable work-related injuries; main types of work-related injuries; and the number of hours worked An explanation of how the organisation facilitates workers' access to non-occupational medical and healthcare services, and the scope of access provided for employees and workers.	80, 104-107	
	Skills for the future			
	Training provided (#, \$)	Average hours of training per person that the organisation's employees have undertaken during the reporting period, by gender and employee category (total number of hours of training provided to employees divided by the number of employees). Average training and development expenditure per full time employee (total cost of training provided to employees divided by the number of employees).	75-76, 103	



Pillar	Core Metrics	Key Performance Indicators	Page reference	Response and/or reference and reasons for omissions, if applicable
Prosperity	Employment and wealth generation			
	Absolute number and rate of employment	1. Total number and rate of new employee hires during the reporting period, by age group, gender, other indicators of diversity and region.	77, 101-102	
		2. Total number and rate of employee turnover during the reporting period, by age group, gender, other indicators of diversity and region.	77, 102	
	Economic contribution	1. Direct economic value generated and distributed (EVG&D), on an accruals basis, covering the basic components for the organisation's global operations, ideally split by: <ul style="list-style-type: none"> - Revenues - Operating costs - Employee wages and benefits - Payments to providers of capital - Payments to government - Community investment 	39, 92 - 93; TNB IAR 2021: 12, 189	
		2. Financial assistance received from the government: total monetary value of financial assistance received by the organisation from any government during the reporting period.	TNB IAR 2021: 194, 277	
	Wealth creation and employment			
	Financial investment contribution	1. Total capital expenditures (CapEx) minus depreciation, supported by narrative to describe the company's investment strategy.	TNB IAR 2021: 7, 50, 297	
		2. Share buybacks plus dividend payments, supported by narrative to describe the company's strategy for returns of capital to shareholders.	TNB IAR 2021: 191, 296	
	Innovation of better products and services			
	Total R&D expenses (\$)	Total costs related to research and development.	50-51	
	Community and social vitality			
	Total tax paid	The total global tax borne by the company, including corporate income taxes, property taxes, non-creditable VAT and other sales taxes, employer-paid payroll taxes, and other taxes that constitute costs to the company, by category of taxes.	TNB IAR 2021: 294-295	

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