

# ANALYST BRIEFING 2QFY2024

2 September 2024



Our ongoing initiatives have resulted in improved performance  
while we continuously reward our shareholders

1HFY2024

**PAT**



**RM2,190.3 mil**

**+82.3%**

(Y-o-Y)

Improved financial performance

**Electricity Demand**



**8.4%**

(Y-o-Y)

From increased economic activities

**Peak Demand**



**20,066MW**

Recorded on 25 July at 2030 hrs

**Gearing**



**48.4%**

(Dec'23: 50.3%)

Efficient capital management for  
growth

**Dividend Payout**



**56.7%**

(Based on adjusted PATAMI)

Interim Dividend Per Share of  
25.0 sen

**TNB is strategically positioned in meeting the rising demand for energy, with government initiatives fostering a conducive environment for growth**

## Electricity Supply and Demand

- ✓ **To support healthy electricity demand growth:**
  - Additional RE capacity in Malaysia under various programmes

### Up to 5GW

- Large Scale Solar 5
- Corporate Renewable Energy Supply Scheme (CRESS)
  - Corporate Green Power Programme (CGPP)
- 2 PPA extensions of **~1GW** to ensure continuous security of supply

## Market Prospect

- ✓ Reaffirmed Malaysia's Sovereign Credit Ratings, Stable Outlook

**S&P Global**  
Ratings

**A-**

**FitchRatings**

**BBB+**

- ✓ Continued confidence in the country's robust and resilient growth

## Regulatory

- ✓ **Third Party Access (TPA) Framework<sup>1</sup>:** The Energy Commission (EC) has announced<sup>2</sup> the system access charge (SAC) under the Corporate Energy Supply Scheme (CRESS) for RE plants



**25 sen/kWh**

Firm Output, with BESS

**45 sen/kWh**

Non-Firm Output, without BESS

*Further details on the mechanism will be announced by regulator in due course*

- TNB supports the government's implementation of the TPA framework, which will bridge the demand-supply gap for green electricity.
- This initiative unlocks new opportunities across the entire value chain, reinforcing our pivotal role in generation, transmission, distribution, and retail services.

<sup>1</sup> Allows third-party entities to access and use the existing energy infrastructure to transmit and distribute electricity

<sup>2</sup> Announcement made by EC on 22 August 2024

## Forging ahead with growing our RE portfolio, we remain committed to driving our sustainable agenda

### Projects

### 2QFY2024 Key Highlights

#### GenCo



#### Sungai Perak Hydro Life Extension Programme

651MW

COD: 1<sup>st</sup> unit 2026 (8MW)

#### Nenggiri Hydro Project

300MW

COD: 2Q2027

#### Hybrid Hydro-Floating Solar PV (HHFS)

~2,900MWp by 2040

Phase 1 COD: 2025

➤ Chenderoh: 45MWp

➤ Temenggor: 300MWp

#### Paka Repowering

1,400MW

COD: 2030

#### New Combined Cycle Power Plant (Kapar)

2,100MW

COD: 2031

#### Co-firing of Hydrogen & Ammonia

#### Nenggiri Hydro Project

Achieved **33%** project progress  
(2024 Target: 56% project progress)



Diversion Tunnel No.1 completed

#### NED



#### Solar Greenfield Development (UK)

102MWp

COD: 4Q2024

#### Corporate Green Power Programme (CGPP)

135MWp

COD: 2025

#### Centralised Solar Park (CSP)

5 x 150MWp

COD: 2026

Project progress is on track to achieve COD

All capacity has been secured with offtakers

Preparation for lease agreement

Our CAPEX utilisation is on track and expected to be fully utilised  
as we approach the end of RP3

## 2QFY2024 Key Achievements

### 2024 CAPEX



### Regulated CAPEX

**56%**

utilisation equivalent to

**RM3.6 bil**

### ET CAPEX

**45%**

utilisation out of  
RM3.2 bil

### Key Projects



### Smart Meter Installation progress:



**85%**

Installed **509,422 units**

FY2024 Target:

**600,000 units**

Cumulative Installed to date:

**4,193,132 units**

### Distribution Automation Penetration progress:



**42%**

**1,173 substation**

FY2024 Target:

**2,812 units**

Cumulative to date:

**29,513 substations**

### Volt-Var Optimisation (VVO) progress:



**35%**

Achieved **49MVar**

FY2024 Target:

**140MVar (Revised)\***

Cumulative to date:

**798.6MVar**

*\*Reprioritisation of projects*

We have successfully delivered power at scale and speed for data centres;  
2 projects completed ahead of time in 1HFY2024

## Data Centres

### 1HFY2024 Status

#### Completed

9

Projects  
to be completed  
(ESA signed)

**~1,700MW**

Total maximum demand

7

Projects

**~1,070MW**

2 projects completed ahead of time



#### Under Construction

2

Projects

**~630MW**

### Key Recognition



In July 2024, we gained positive feedback and compliments from various DC players on TNB's commitment in facilitating DC investments in Malaysia via One-Stop-Centre (OSC) for data centres during data centre forum & industry dialogue with MDEC.

### Achievements To Date

#### Completed

26

Cumulative ESA

**~4,000MW**

Total maximum demand

16

Projects

**~1,700MW**

June 2024

**~190MW**

Load utilisation

**~RM100 mil**

Sales

#### Under Construction

2

Projects

**~630MW**

#### ESA Signed

8

Projects

**~1,670MW**

### Outlook

Supply Application Stage

21

Projects

**~3,200MW**

Total maximum demand



## GSPARX transforms consumers to prosumers through rooftop solar installations, elevating Malaysia's green energy progress

### 2QFY2024 Key Achievements

**8.8MWp**

**Paramit**  
A Tecan Group Company

#### Paramit Malaysia Sdn Bhd

- To install 707kWp rooftop solar PV at their premise in Bukit Minyak, Pulau Pinang.
- Target to be delivered by 4QFY2024.



#### Off Grid Solar, Chini

- To install 91.5kWp rooftop solar with 211.2kWp battery at a rural village in Chini, Pahang.
- Target to be delivered by 4QFY2024.

**ELEPLAS WOOD TECHNOLOGY SDN BHD**

#### Eleplas Wood Technology Sdn Bhd

- To install 719.4kWp rooftop solar PV at their plant in Kluang, Johor.
- Target to be delivered by 3QFY2025.

**LATEXX**  
A MEMBER OF THE KEMPERT GROUP

#### Latexx Manufacturing Sdn Bhd

- To install 3,859.3kWp rooftop solar PV at their plant in Kamunting, Perak.
- Target to be delivered by 4QFY2025.

**JABIL**  
GREEN POINT

#### Green Point Precision Sdn Bhd

- To install 3,416kWp rooftop solar PV at their premise in Sungai Petani, Kedah.
- Target to be delivered by 4QFY2025.

### Partnership with Sime Darby Property

**GSPARX**  
Evolve - Sustain - Value  
A subsidiary of Tenaga Nasional Berhad

**Sime Darby**  
Property

**4.4MW**  
(14 SDP sites\*)

**2024 Target Completion**  
**960kWp**  
10 sites

#### Progress

10 sites consist of Sime Darby Sales Galleries, Clubhouses and Malls: At ~40% completion.

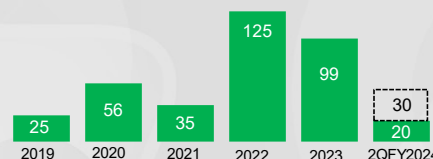
\*4 sites to be completed in 2025

### Secured Capacity

**GSPARX achievement since inception (2019)**

**2,698**  
Projects secured

**360MWp**



■ Secured Capacity (MWp)  
□ Secured post June 2024 (MWp)

#### 2QFY2024 Status



**20MWp**  
Secured Capacity



**160MWp**  
2024 Target

### NEM 3.0 NOVA

**82%**

Quota Approved

**1,100MW<sup>1</sup>**

Total Quota Allocation (2021- 2024)

<sup>1</sup> 2024 Additional quota : 300MW

## TNB is instrumental in driving Malaysia EV market by installing EV chargers and providing electricity infrastructures to Charging Point Operators (CPO)

### EV Ecosystem

#### Green Lane Supply Connections

##### Committed

 **75**  
Number of supply connections

 **16MW**  
maximum demand

##### Potential

 **147**  
Number of supply connections

 **108MW**  
maximum demand

Data since inception (November 2022)

#### YTD Electricity Sales (CPO)

 **~830MWh**

 **~RM1.0 mil**

#### Potential Demand from EV



**~142,000MWh p.a.**

For every 30,000 BEVs

### Key Highlights

#### TNB Charge Points

##### Commissioned

 **50**

Cumulative Target  
66 DC by 2024



➤ In 2QFY2024, a total of **14 charge points (CPs)\*** were energised, 8 CPs in collaboration with AEON and 6 CPs for TNB Fleet.

- **AEON** - Kota Bharu, Sri Manjung, Kinta City and Taiping.
- **TNB Fleet** - TNB Klang Meru, TNB Yard Ulu Klang, and TNB Metering PJ.

\*2CPs at each location



#### Award Recognition



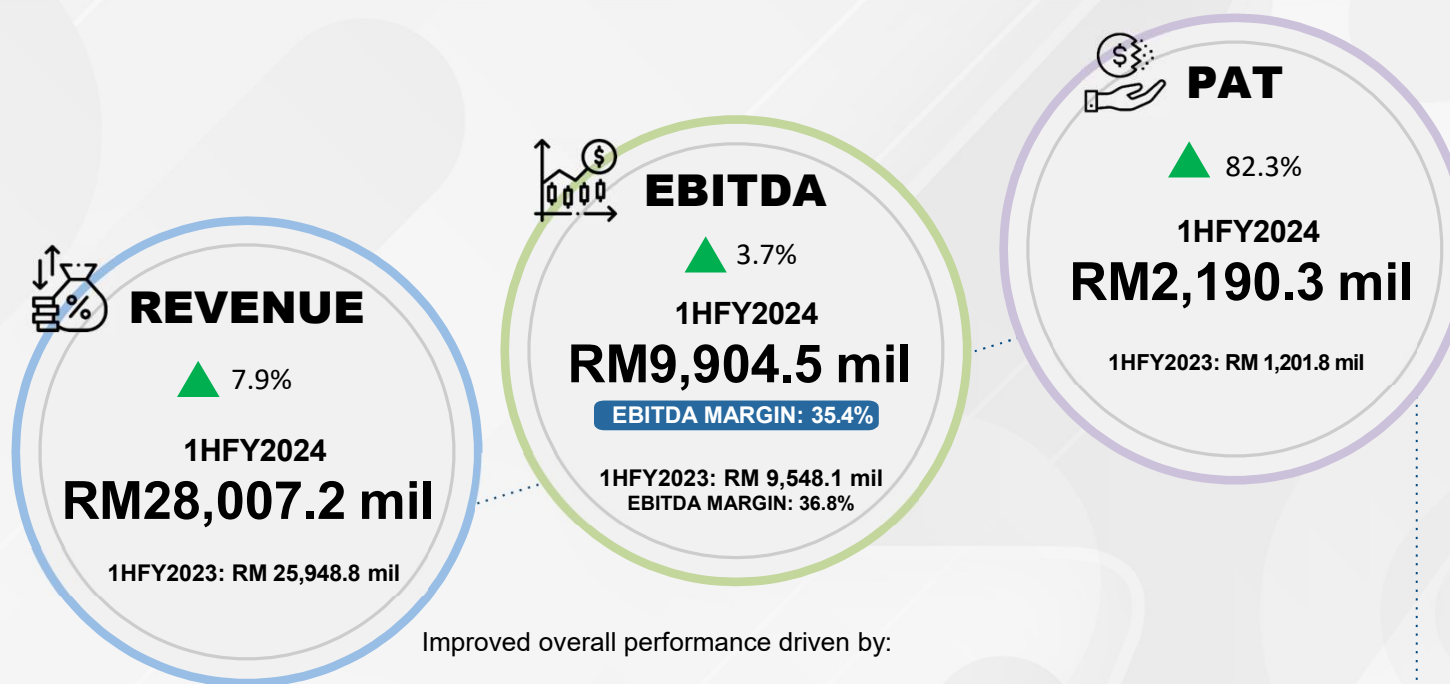
**myTNB**  
Best Public Utilities App  
(2024 PC.com Readers Choice Awards)



**~7 mil users**  
subscribed to the MyTNB app



## 1HFY2024 higher PAT was driven by improved overall performance



- i. Electricity demand growth of 8.4% (TNB 7.9%);
- ii. Higher revenue contribution from TNBI, mainly from UK operations;
- iii. Improved operational performance;
- iv. Lower negative fuel margin of RM69.8 mil (1HFY2023: RM565.7 mil);
- v. Lower forex translation loss of RM66.5 mil; and
- vi. Lower finance cost of RM2,040.9 mil due to repayment of loans.

Group earnings supported by; i. Improved generation performance  
ii. World-class network performance

Equivalent Plant  
Availability Factor, EAF  
(Generation)  
%



1HFY2024  
**78.7%**

2024 Target: 78.6%



Improved overall  
performance by power plants

System Minutes  
(Transmission)  
Minutes



1HFY2024  
**0.0001**

2024 Internal Threshold: 1.5



World class network  
performance safeguarded our  
regulated business earnings

SAIDI  
(Distribution Network)  
Minutes

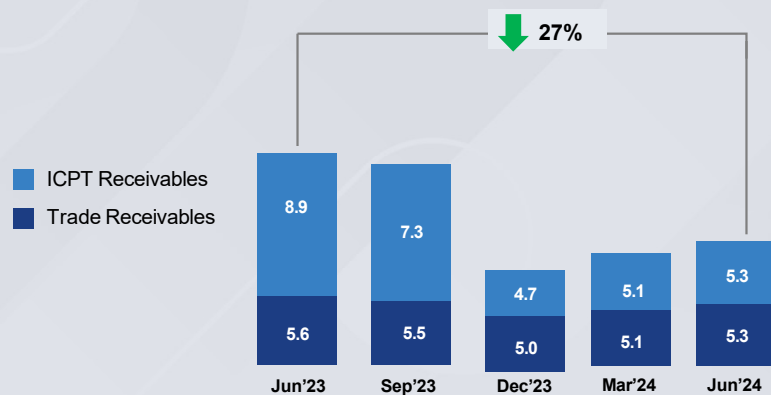


1HFY2024  
**23.92**

2024 Internal Threshold: 50.0

## Y-o-Y: Lower receivables contributed by lower ICPT and strong collection trend, strengthening our cash flow position and credit ratings

Receivables (RM bil)



- **Coal price has stabilised** at 116.6 USD/MT\* in June 2024 (112.37 USD/MT\* in June 2023).
- **2024 Outlook:** Stabilising fuel prices and strong collection trend will:
  - ✓ strengthen working capital management; and
  - ✓ provide a healthier cash flow position.

\* Source: globalCOAL Newcastle index

1

### ICPT Cost Recovery for FY2024

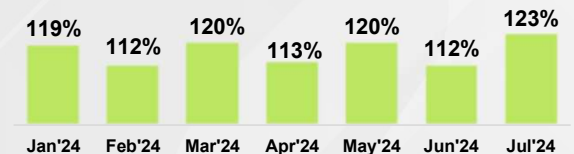
TNB will recover ICPT cost from the Government:

- RM1.4 bil for January to June 2024  
(August 2024: Received RM0.7 bil for January – March 2024); and
- RM2.0 bil for July to December 2024

2

### Strong Collection Trend

Strong collection trend with collection rate >100% since March 2022



3

S&P Global Ratings

MARC

Credit Rating **upgraded to A- (May 2024)**

Assigned **"Gold" rating** to TPGSB's Sustainability Sukuk Framework (July 2024)

Affirmed Tenaga Nasional Berhad's (TNB) corporate credit rating at **AAA with a stable outlook (August 2024)**

**Our resilient performance enables us to continue rewarding shareholders with commendable interim dividend payouts while maintaining a prudent capital structure**

### Dividend Policy

Dividend payout ratio of 30% to 60% based on the adjusted PATAMI

**Dividend Payout (%)**  
(based on Adjusted PATAMI)

**Interim Dividend**  
**Per Share (sen)**

**Dividend Payout (RM bil)**

**Dividend Yield (%)**  
*as at June 2024 & June 2023*

**56.7**

**25.0**

**1HFY24**

**1.45**

**1.8**

**49.4**

**18.0**

**1HFY23**

**1.04**

**1.8**

## We will continue to drive our strategic initiatives to pursue business growth while fulfilling our Net Zero commitments



### Electricity Demand

Demand growth is projected to be between  
**3.0% - 4.0%**



### Group CAPEX Forecast

Total Group CAPEX :  
**Up to RM13.8 bil**

Regulated capex\* : **RM6.4 bil – RM7.7 bil**

\* ET Related capex of RM3.2 bil (includes system improvement CAPEX)



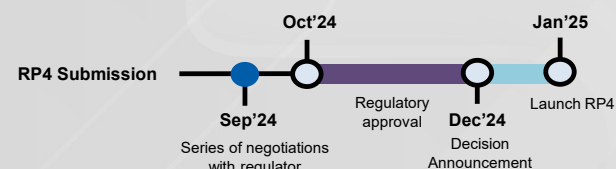
### Capital Management

- Proactive working capital management in current elevated fuel prices environment
- Active capital allocation and funding for growth



### Regulatory Period 4

RP4 proposal assessment is on track



### Delivering Value to our Shareholders

Stable performance enable us to continue rewarding and delivering value to our shareholders



### Sustainable Growth

Ensuring business growth as we progress towards supporting the NETR and becoming a leading provider of sustainable energy solutions

# Appendix

## 1HFY2024

- *Details on Financial Results*
- *Generation Business Performance*
- *International Business Performance*
- *Shareholdings*



## Y-o-Y analysis

RM mil		1HFY'24	1HFY'23	Variance	
				RM mil	%
Revenue	1	28,007.2	25,948.8	2,058.4	7.9
Imbalance Cost Pass Through (ICPT)	2	5,175.2	6,492.5	(1,317.3)	(20.3)
Operating expenses (without depreciation)	3	(23,744.6)	(23,236.3)	(508.3)	(2.2)
Net loss on impairment of financial instruments		(45.0)	(52.5)	7.5	14.3
Other operating income		511.7	395.6	116.1	29.3
<b>EBITDA</b>		<b>9,904.5</b>	<b>9,548.1</b>	<b>356.4</b>	<b>3.7</b>
EBITDA Margin (%)		35.4%	36.8%	-	(1.4)
Depreciation		(5,638.5)	(5,597.3)	(41.2)	(0.7)
<b>EBIT</b>		<b>4,266.0</b>	<b>3,950.8</b>	<b>315.2</b>	<b>8.0</b>
<b>Foreign exchange:</b>					
- Transaction		18.3	60.3	(42.0)	(69.7)
- Translation	4	(66.5)	(425.4)	358.9	84.4
Share of results of joint ventures		7.0	5.5	1.5	27.3
Share of results of associates		258.4	15.8	242.6	>100.0
<b>Profit before finance cost</b>		<b>4,483.2</b>	<b>3,607.0</b>	<b>876.2</b>	<b>24.3</b>
Fair value changes of financial instruments		39.1	46.9	(7.8)	(16.6)
Finance income		315.3	256.5	58.8	22.9
Finance cost	5	(2,040.9)	(2,266.2)	225.3	9.9
<b>Profit from ordinary activities before taxation</b>		<b>2,796.7</b>	<b>1,644.2</b>	<b>1,152.5</b>	<b>70.1</b>
<b>Taxation and Zakat:</b>					
- Company and subsidiaries		(578.7)	(426.7)	(152.0)	(35.6)
- Deferred taxation		(27.7)	(15.7)	(12.0)	(76.4)
<b>Profit for the period</b>		<b>2,190.3</b>	<b>1,201.8</b>	<b>988.5</b>	<b>82.3</b>
<b>Attributable to:</b>					
- Owners of the Company		2,159.8	1,330.2	829.6	62.4
- Non-controlling interests		30.5	(128.4)	158.9	>100.0
<b>Profit for the period</b>		<b>2,190.3</b>	<b>1,201.8</b>	<b>988.5</b>	<b>82.3</b>

Y-o-Y analysis:

- Higher Group revenue driven by sales demand growth of 8.4% and additional revenue mainly from UK operations.
- Reduction in ICPT by RM1.3 bil due to decrease in coal price.
- Refer Operating Expenses slide.
- Lower forex translation loss due to strengthening of MYR.
- Lower finance cost due to repayment of loans and interest capitalisation.

## Q-o-Q analysis

RM mil		2QFY'24	1QFY'24	Variance	
				RM mil	%
Revenue	1	14,366.8	13,640.4	726.4	5.3
Imbalance Cost Pass Through (ICPT)	2	2,822.2	2,353.0	469.2	19.9
Operating expenses (without depreciation)	3	(12,442.2)	(11,302.4)	(1,139.8)	(10.1)
Net reversal / (loss) on impairment of financial instruments		14.4	(59.4)	73.8	>100.0
Other operating income		338.3	173.4	164.9	95.1
<b>EBITDA</b>		<b>5,099.5</b>	<b>4,805.0</b>	<b>294.5</b>	<b>6.1</b>
EBITDA Margin (%)		35.5%	35.2%	-	0.3
Depreciation		(2,858.3)	(2,780.2)	(78.1)	(2.8)
<b>EBIT</b>		<b>2,241.2</b>	<b>2,024.8</b>	<b>216.4</b>	<b>10.7</b>
<b>Foreign exchange:</b>					
- Transaction		(7.1)	25.4	(32.5)	>(100.0)
- Translation	4	130.2	(196.7)	326.9	>100.0
Share of results of joint ventures		2.1	4.9	(2.8)	(57.1)
Share of results of associates		243.7	14.7	229.0	>100.0
<b>Profit before finance cost</b>		<b>2,610.1</b>	<b>1,873.1</b>	<b>737.0</b>	<b>39.3</b>
Fair value changes of financial instruments		11.5	27.6	(16.1)	(58.3)
Finance income		159.1	156.2	2.9	1.9
Finance cost		(1,013.8)	(1,027.1)	13.3	1.3
<b>Profit from ordinary activities before taxation</b>		<b>1,766.9</b>	<b>1,029.8</b>	<b>737.1</b>	<b>71.6</b>
<b>Taxation and Zakat:</b>					
- Company and subsidiaries		(320.0)	(258.7)	(61.3)	(23.7)
- Deferred taxation		65.5	(93.2)	158.7	>100.0
<b>Profit for the period</b>		<b>1,512.4</b>	<b>677.9</b>	<b>834.5</b>	<b>&gt;100.0</b>
<b>Attributable to:</b>					
- Owners of the Company		1,444.1	715.7	728.4	>100.0
- Non-controlling interests		68.3	(37.8)	106.1	>100.0
<b>Profit for the period</b>		<b>1,512.4</b>	<b>677.9</b>	<b>834.5</b>	<b>&gt;100.0</b>

Q-o-Q analysis:

- Higher Group revenue driven by sales demand growth of 4.2%.
- Higher ICPT due to higher fuel costs.
- Refer Operating Expenses slide.
- Gain in forex translation due to strengthening of MYR.

## Y-o-Y normalised EBITDA and PAT for 1HFY2024

EBITDA Components	1HFY'24 RM mil	1HFY'23 RM mil
Reported EBITDA	9,904.5	9,548.1
MFRS16 impact <sup>1</sup>	(1,976.9)	(2,130.1)
Normalised EBITDA	7,927.6	7,418.0

PAT Components	1HFY'24 RM mil	1HFY'23 RM mil
Reported PAT	2,190.3	1,201.8
Forex Translation loss	66.5	425.4
MFRS16 impact <sup>1</sup>	337.8	355.0
Normalised PAT	2,594.6	1,982.2

<sup>1</sup> MFRS16 impact:

	1HFY'24 (RM mil)	1HFY'23 (RM mil)	Variance (RM mil)
Capacity Payment	1,976.9	2,130.1	(153.2)
Depreciation	(1,642.3)	(1,759.4)	117.1
Finance Cost	(769.8)	(828.9)	59.1
Deferred Tax	97.4	103.2	(5.8)
Net Impact	<b>(337.8)</b>	<b>(355.0)</b>	<b>17.2</b>

# Higher Group revenue driven by overall healthy demand growth

	2QFY'24		1QFY'24		Variance (2QFY'24 vs 1QFY'24)		1HFY'24		1HFY'23		Variance (1HFY'24 vs 1HFY'23)	
UNITS SOLD	GWh		GWh		GWh	%	GWh		GWh		GWh	%
<b>Sales of Electricity (GWh)</b>												
- TNB	33,120.5		31,899.4		1,221.1	3.8	65,019.9		60,266.5		4,753.4	7.9
- SESB	1,707.6		1,580.1		127.5	8.1	3,287.7		2,901.9		385.8	13.3
- EGAT (Export)	0.2		0.4		(0.2)	(50.0)	0.6		0.1		0.5	>100.0
- TNBI*	307.6		228.9		78.7	34.4	536.5		340.6		195.9	57.5
<b>Total Units Sold (GWh)</b>	<b>35,135.9</b>		<b>33,708.8</b>		<b>1,427.1</b>	<b>4.2</b>	<b>68,844.7</b>		<b>63,509.1</b>		<b>5,335.6</b>	<b>8.4</b>
<b>REVENUE</b>	<b>RM mil</b>	<b>sen/ kWh</b>	<b>RM mil</b>	<b>sen/ kWh</b>	<b>RM mil</b>	<b>%</b>	<b>RM mil</b>	<b>sen/ kWh</b>	<b>RM mil</b>	<b>sen/ kWh</b>	<b>RM mil</b>	<b>%</b>
<b>Sales of Electricity (RM)</b>												
- TNB	13,587.1	40.65	12,648.2	40.31	938.9	7.4	26,235.3	40.49	24,061.9	40.21	2,173.4	9.0
- SESB	595.9	34.87	549.2	34.39	46.7	8.5	1,145.1	34.64	1,008.5	35.20	136.6	13.5
- Accrued Revenue	(122.5)	-	205.0	-	(327.5)	>(100.0)	82.5	-	183.1	-	(100.6)	(54.9)
- EGAT (Export)	0.1	50.00	0.3	75.00	(0.2)	(66.7)	0.4	66.67	0.1	100.00	0.3	>100.0
- TNBI	273.0	88.75	202.4	88.42	70.6	34.9	475.4	88.61	363.7	106.78	111.7	30.7
<b>Sales of Electricity</b>	<b>14,333.6</b>	<b>40.79</b>	<b>13,605.1</b>	<b>40.36</b>	<b>728.5</b>	<b>5.4</b>	<b>27,938.7</b>	<b>40.58</b>	<b>25,617.3</b>	<b>40.34</b>	<b>2,321.4</b>	<b>9.1</b>
Other Regulatory Adjustment	(739.2)		(468.4)		(270.8)	(57.8)	(1,207.6)		(571.1)		(636.5)	>(100.0)
SESB Tariff Support Subsidy	79.3		74.0		5.3	7.2	153.3		135.8		17.5	12.9
Fuel Subsidy - SESB	79.6		73.2		6.4	8.7	152.8		134.5		18.3	13.6
<b>Total Sales of Electricity</b>	<b>13,753.3</b>		<b>13,283.9</b>		<b>469.4</b>	<b>3.5</b>	<b>27,037.2</b>		<b>25,316.5</b>		<b>1,720.7</b>	<b>6.8</b>
Goods & Services	464.6		200.7		263.9	>100.0	665.3		314.9		350.4	>100.0
Construction contracts	27.3		34.5		(7.2)	(20.9)	61.8		83.9		(22.1)	(26.3)
Insurance contract revenue	49.3		49.0		0.3	0.6	98.3		92.9		5.4	5.8
Customers' contribution	72.3		72.3		-	-	144.6		140.6		4.0	2.8
<b>Total Revenue</b>	<b>14,366.8</b>		<b>13,640.4</b>		<b>726.4</b>	<b>5.3</b>	<b>28,007.2</b>		<b>25,948.8</b>		<b>2,058.4</b>	<b>7.9</b>

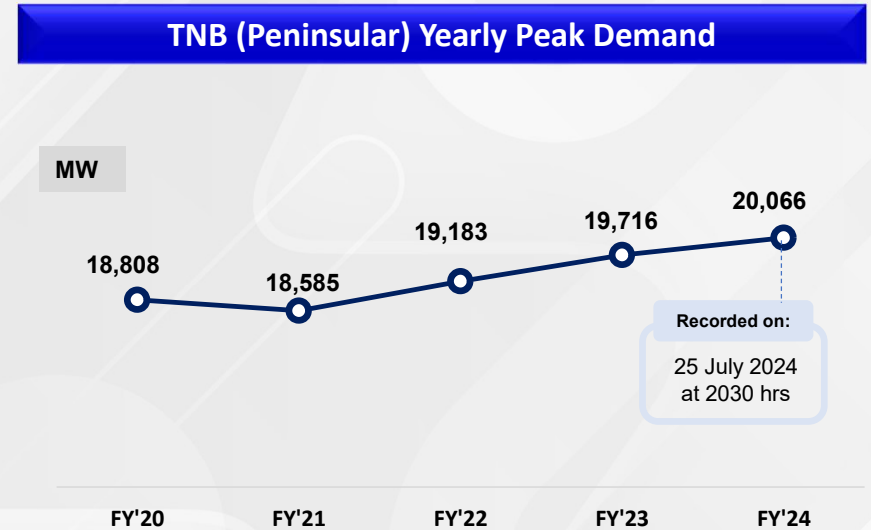
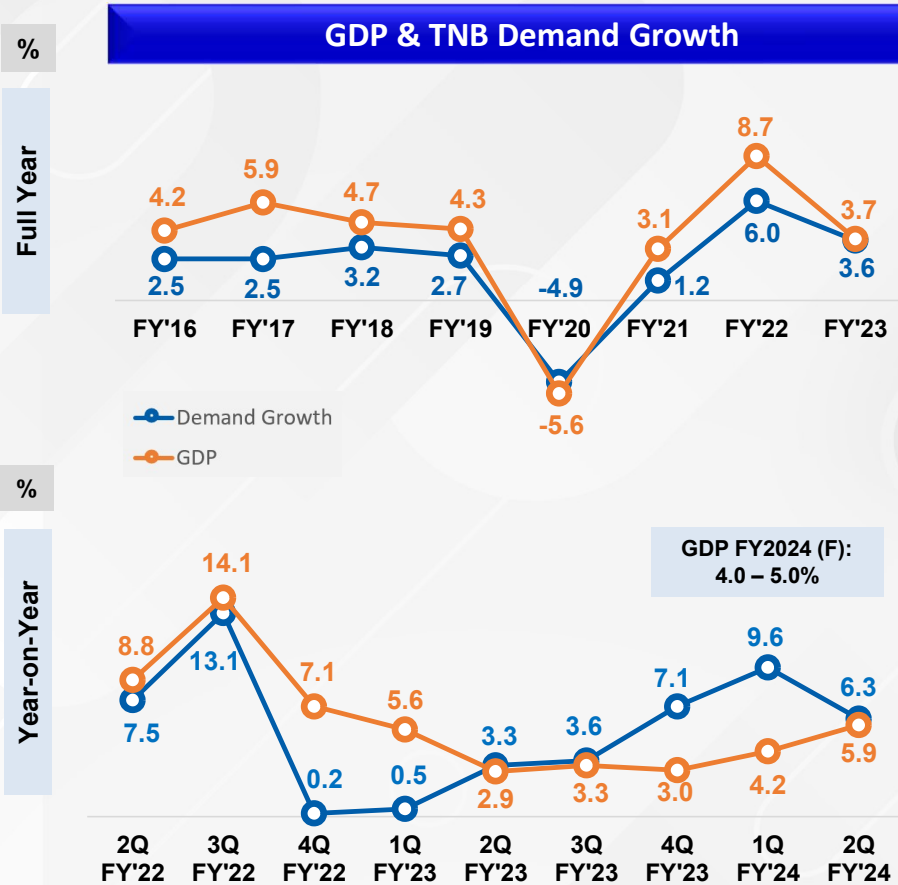
**1** Higher revenue driven by higher demand growth across all business units.

**2** Refer Other Regulatory Adjustment slide.

**3** Higher revenue recorded by subsidiaries.

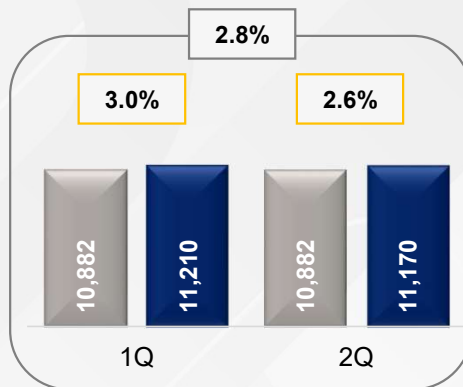
\*Refer International Investments slide for details

## Y-o-Y electricity demand grew in tandem with GDP



# Increased demand across all sectors mainly contributed by commercial and domestic

## Industrial



1HFY'24 main contributors for the increase in industrial & commercial sectors:

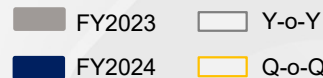
### Industrial

- Utility electrical, iron & steel and miscellaneous consumer products

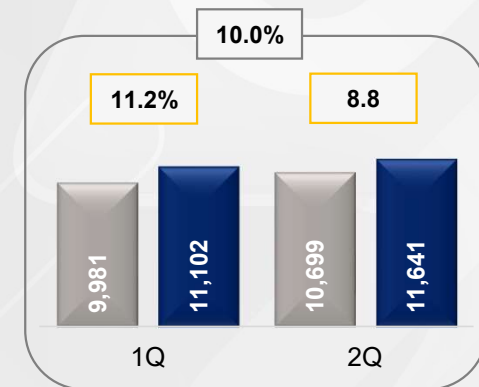
### Commercial

- Retails, business services and miscellaneous consumer products

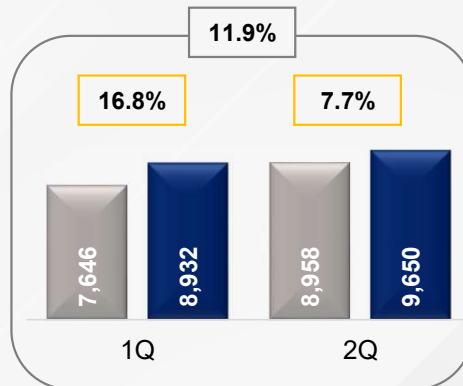
Unit Sales (GWh) Growth



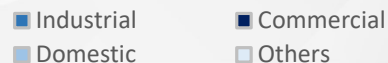
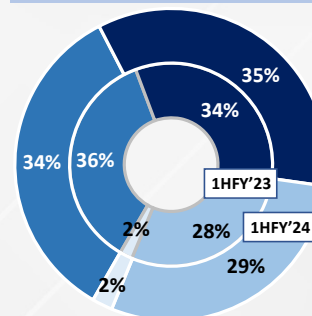
## Commercial



## Domestic

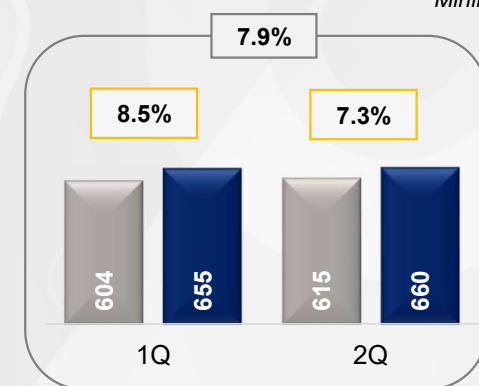


## Sector Mix (%) 1HFY'24 vs 1HFY'23



## Others\*

\*includes Agriculture, Mining & Public Lighting





## As at 1HFY2024, other regulatory adjustment of RM1,207.6 mil to be returned

### Components of Other Regulatory Adjustment

Revenue Adjustment for Revenue Cap & Price Cap  
Refund Related to Regulated Business  
Regulatory Adjustment for SESB\*

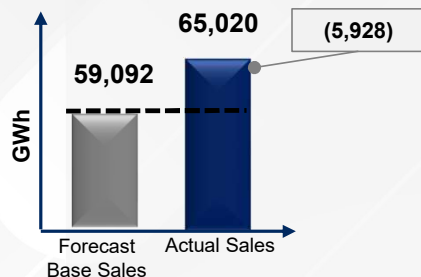
#### TOTAL

1QFY'24 RM mil	2QFY'24 RM mil	1HFY'24 RM mil	1HFY'23 RM mil
(412.4)	(684.1)	1 (1,096.5)	(419.5)
(66.7)	(52.2)	(118.9)	(138.9)
10.7	(2.9)	7.8	(12.7)
<b>(468.4)</b>	<b>(739.2)</b>	<b>(1,207.6)</b>	<b>(571.1)</b>

\*SESB has implemented IBR framework starting 1 January 2022

### Revenue Cap

1HFY'24 Variation in Sales (in GWh)



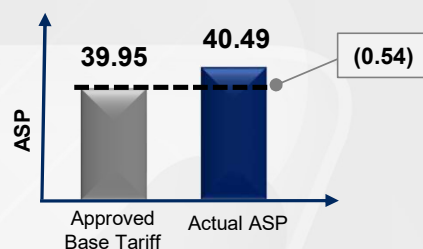
- The allowed annual revenue for revenue cap entities is based on 118.1TWh full year demand growth. Any excess/shortfall is adjusted through revenue adjustment mechanism.
- For 1HFY'24, higher actual sales has led to amount to be returned via revenue adjustment mechanism.

Business Entities	Allowed Tariff (sen/kWh)	Variation in Sales (GWh)	Adjustment (RM mil)
Revenue Cap Entities	12.60	(5,928)	(745.8)

Numbers manually computed will not match due to decimal variance

### Price Cap

1HFY'24 Variation in ASP (sen/kWh)



- Any excess/shortfall of revenue earned due to higher/lower Average Selling Price (ASP) compared to Base Tariff is adjusted through revenue adjustment mechanism.
- For 1HFY'24, the ASP recorded was higher than the Base Tariff, thus the amount is to be returned via revenue adjustment mechanism.

Business Entities	Actual Sales (GWh)	Variation in ASP (sen/kWh)	Adjustment (RM mil)
Price Cap Entity	65,020	(0.54)	(350.7)

## Higher Y-o-Y operating expenses due to higher OPEX Non-Fuel

	2QFY'24	1QFY'24	Variance (2QFY'24 vs 1QFY'24)		1HFY'24	1HFY'23	Variance (1HFY'24 vs 1HFY'23)	
	(RM mil)	(RM mil)	RM mil	%	(RM mil)	(RM mil)	RM mil	%
<b>Non-TNB IPPs Costs</b>	<b>4,694.8</b>	<b>4,233.4</b>	<b>461.4</b>	<b>10.9</b>	<b>8,928.2</b>	<b>7,709.3</b>	<b>1,218.9</b>	<b>15.8</b>
Capacity Payment	36.7	41.3	(4.6)	(11.1)	78.0	(91.4)	169.4	>100.0
Energy Payment	4,658.1	4,192.1	466.0	11.1	8,850.2	7,800.7	1,049.5	13.5
<b>TNB Fuel Costs</b>	<b>4,552.9</b>	<b>4,334.9</b>	<b>218.0</b>	<b>5.0</b>	<b>8,887.8</b>	<b>10,558.2</b>	<b>(1,670.4)</b>	<b>(15.8)</b>
Fuel Costs	4,514.5	4,351.4	163.1	3.7	8,865.9	11,188.5	(2,322.6)	(20.8)
Fuel Price Adjustment	38.4	(16.5)	54.9	>100.0	21.9	(630.3)	652.2	>100.0
<b>Total OPEX - Fuel and Power Purchase</b>	<b>9,247.7</b>	<b>8,568.3</b>	<b>1</b>	<b>7.9</b>	<b>17,816.0</b>	<b>18,267.5</b>	<b>2</b>	<b>(451.5)</b>
<b>Staff Costs</b>	<b>966.5</b>	<b>952.0</b>	<b>14.5</b>	<b>1.5</b>	<b>1,918.5</b>	<b>1,940.7</b>	<b>(22.2)</b>	<b>(1.1)</b>
<b>Repair &amp; Maintenance</b>	<b>801.0</b>	<b>692.2</b>	<b>108.8</b>	<b>15.7</b>	<b>1,493.2</b>	<b>1,345.5</b>	<b>147.7</b>	<b>11.0</b>
<b>TNB General Expenses</b>	<b>434.2</b>	<b>429.1</b>	<b>5.1</b>	<b>1.2</b>	<b>863.3</b>	<b>789.3</b>	<b>74.0</b>	<b>9.4</b>
<b>Subs. General Expenses</b>	<b>992.8</b>	<b>660.8</b>	<b>3</b>	<b>50.2</b>	<b>1,653.6</b>	<b>893.3</b>	<b>3</b>	<b>760.3</b>
<b>Total OPEX - Non Fuel</b>	<b>3,194.5</b>	<b>2,734.1</b>	<b>460.4</b>	<b>16.8</b>	<b>5,928.6</b>	<b>4,968.8</b>	<b>959.8</b>	<b>19.3</b>
<b>Total Operating Expenses (without Depreciation)</b>	<b>12,442.2</b>	<b>11,302.4</b>	<b>1,139.8</b>	<b>10.1</b>	<b>23,744.6</b>	<b>23,236.3</b>	<b>508.3</b>	<b>2.2</b>
<b>Depreciation &amp; Amortisation</b>	<b>2,858.3</b>	<b>2,780.2</b>	<b>78.1</b>	<b>2.8</b>	<b>5,638.5</b>	<b>5,597.3</b>	<b>41.2</b>	<b>0.7</b>
<b>Total Operating Expenses</b>	<b>15,300.5</b>	<b>14,082.6</b>	<b>1,217.9</b>	<b>8.6</b>	<b>29,383.1</b>	<b>28,833.6</b>	<b>549.5</b>	<b>1.9</b>

**1** 2QFY'24 vs 1QFY'24: Higher fuel and power purchase cost due to higher coal consumption (refer Fuel Cost slide).

**2** 1HFY'24 vs 1HFY'23: Lower fuel and power purchase cost due to lower coal price (refer Fuel Cost slide).

**3** Higher subsidiaries general expenses to reflect the higher revenue recorded.

# Lower overall fuel costs due to lower coal price in 1HFY2024

**Table A – TNB & IPP Fuel Costs for Peninsular (RM mil)**

Fuel Type	1HFY'24		1HFY'23		Variance	
					RM mil	%
Coal	8,807.1		11,230.2		(2,423.2)	(21.6)
Gas	6,248.5		5,436.6		811.9	14.9
Distillate	77.7		118.6		(40.9)	(34.5)
Oil	23.9		11.8		12.1	>100.0
<b>Total *</b>	<b>15,157.2</b>		<b>16,797.2</b>		<b>(1,640.0)</b>	<b>(9.8)</b>

\*Comprises TNB Fuel Costs & fuel payments to IPPs (part of Energy Payment), exclude solar.

**Table C – Fuel Costs Related Data**

Fuel statistics	1HFY'24	1HFY'23
Average Coal Price Delivered (USD/MT)(CIF)	112.9	156.4
Average Coal Price Delivered (RM/MT)(CIF)	533.4	697.4
Coal Consumption (mil MT)	16.4	16.4
	1QFY'24	1QFY'23
Gas Reference Market Price (RM/mmbtu)	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 44.7	Tier 2 : 62.1
	2QFY'24	2QFY'23
	Tier 1 : 35.0	Tier 1 : 30.0
	Tier 2 : 47.4	Tier 2 : 51.7
Daily Average Piped Gas Volume (mmscfd)	998	873

**Table B – TNB & IPP Units Generated for Peninsular (GWh)**

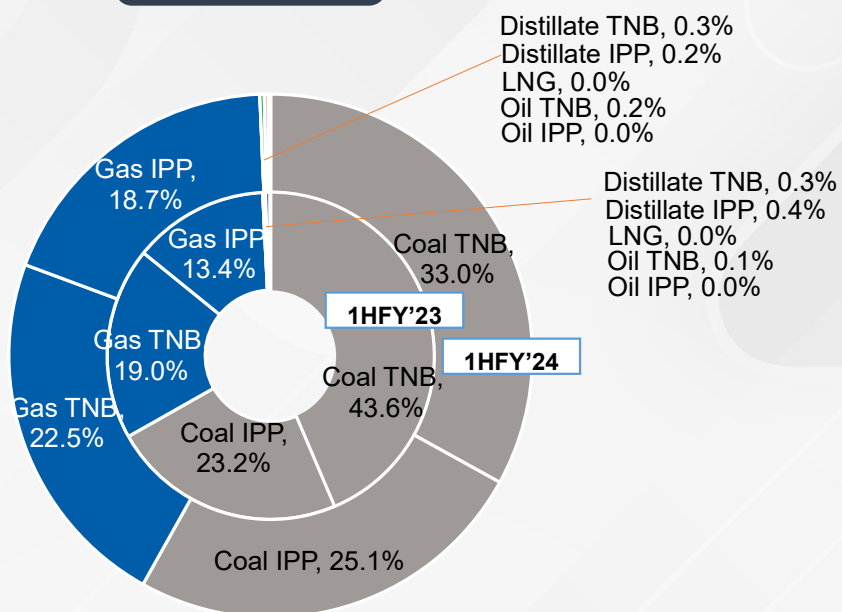
Fuel Type	1HFY'24		1HFY'23		Variance	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	38,702.3	54.9%	37,385.1	57.0%	1,317.2	3.5
Gas & LNG	26,976.0	38.3%	24,039.0	36.7%	2,937.0	12.2
Distillate	45.7	0.1%	99.5	0.2%	(53.8)	(54.1)
Hydro	3,345.9	4.7%	2,953.2	4.5%	392.7	13.3
Solar	1,390.6	2.0%	1,071.3	1.6%	319.4	29.8
<b>Total</b>	<b>70,460.6</b>	<b>100.0%</b>	<b>65,548.1</b>	<b>100.0%</b>	<b>4,912.5</b>	<b>7.5</b>

**Table D – Average Coal Price Delivered (USD/MT)**

	1HFY'24	1HFY'23	Variance	
			USD/MT	%
FOB	103.2	146.5	(43.2)	(29.5)
Freight	9.2	9.5	(0.2)	(2.3)
Others	0.4	0.5	(0.1)	(12.8)
<b>CIF</b>	<b>112.9</b>	<b>156.4</b>	<b>(43.5)</b>	<b>(27.8)</b>

# Fuel Costs & Units Generated (TNB & IPPs – Peninsular) in 1HFY2024

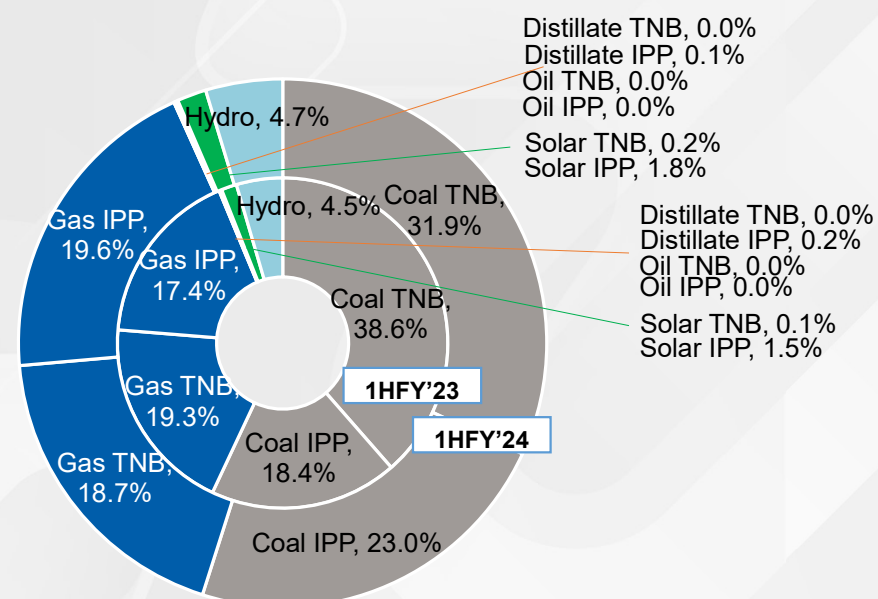
## Fuel Costs



% indicates generation market share

■ Gas ■ Coal ■ Oil & Distillate ■ Hydro ■ Solar

## Units Generated



Note: Fuel Costs exclude solar and hydro

# Higher Q-o-Q fuel costs mainly due to higher coal consumption

**Table A – TNB & IPP Fuel Costs for Peninsular (RM mil)**

Fuel Type	2QFY'24		1QFY'24		Variance 2QFY'24 vs 1QFY'24	
	GWh	Gen. Mix	GWh	Gen. Mix	RM mil	%
Coal	20,505.7	57.2%	18,196.6	52.6%	2,309.1	12.7
Gas	13,341.0	37.3%	13,635.0	39.4%	(294.0)	(2.2)
Distillate	-	0.0%	45.7	0.1%	(45.7)	>(100.0)
Hydro	1,289.6	3.6%	2,056.4	5.9%	(766.8)	(37.3)
Solar	692.2	1.9%	698.4	2.0%	(6.2)	(0.9)
<b>Total</b>	<b>35,828.5</b>	<b>100.0%</b>	<b>34,632.1</b>	<b>100.0%</b>	<b>1,196.4</b>	<b>3.5</b>

Note: Comprise TNB Fuel Costs & fuel payments to IPPs (part of Energy Payment), exclude solar.

**Table B – TNB & IPP Units Generated for Peninsular (GWh)**

Fuel Type	2QFY'24		1QFY'24		Variance 2QFY'24 vs 1QFY'24	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	20,505.7	57.2%	18,196.6	52.6%	2,309.1	12.7
Gas & LNG	13,341.0	37.3%	13,635.0	39.4%	(294.0)	(2.2)
Distillate	-	0.0%	45.7	0.1%	(45.7)	>(100.0)
Hydro	1,289.6	3.6%	2,056.4	5.9%	(766.8)	(37.3)
Solar	692.2	1.9%	698.4	2.0%	(6.2)	(0.9)
<b>Total</b>	<b>35,828.5</b>	<b>100.0%</b>	<b>34,632.1</b>	<b>100.0%</b>	<b>1,196.4</b>	<b>3.5</b>

**Table C – Fuel Costs Related Data**

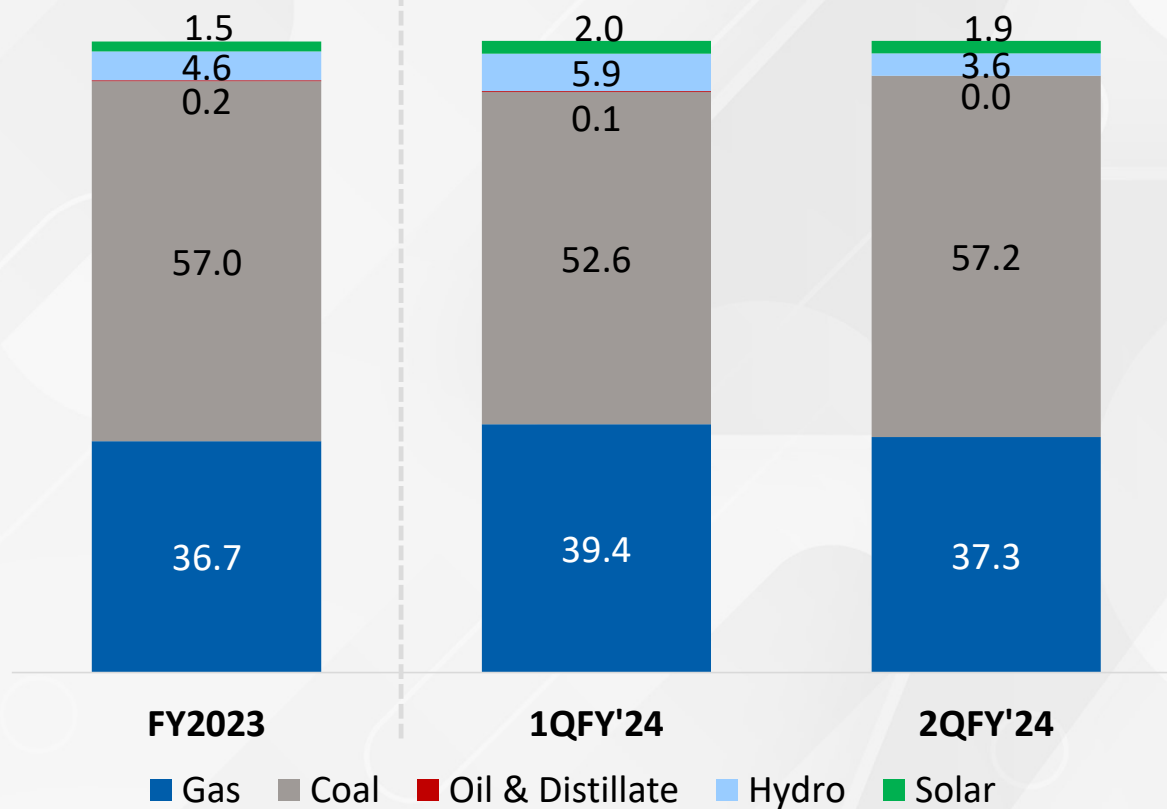
Fuel statistics	2QFY'24	1QFY'24
Average Coal Price Delivered (USD/MT)(CIF)	112.1	113.7
Average Coal Price Delivered (RM/MT)(CIF)	530.5	536.3
Coal Consumption (mil MT)	8.7	7.7
	2QFY'24	1QFY'24
Gas Reference Market Price (RM/mmbtu)	Tier 1 : 35.0	Tier 1 : 30.0
	Tier 2 : 47.4	Tier 2 : 44.7
Daily Average Piped Gas Volume (mmscfd)	978	1017

**Table D – Average Coal Price Delivered (USD/MT)**

	2QFY'24		1QFY'24		Variance 2QFY'24 vs 1QFY'24	
	USD/MT	%	USD/MT	%	USD/MT	%
FOB	101.9		104.5		(2.6)	(2.5)
Freight	9.7		8.7		1.0	11.5
Others	0.5		0.5		(0.0)	(0.0)
<b>CIF</b>	<b>112.1</b>		<b>113.7</b>		<b>(1.6)</b>	<b>(1.4)</b>

## Q-o-Q: Higher generation from coal in 2QFY2024

Generation Mix for Industry (%)



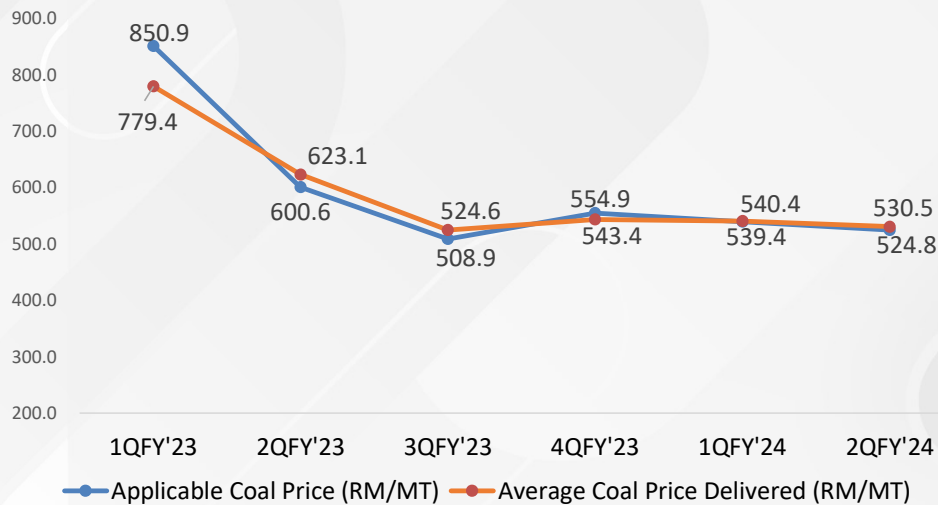


## TNB is neutral to volatility in fuel costs under the ICPT framework

	3QFY'23 (RM mil)	4QFY'23 (RM mil)	1QFY'24 (RM mil)	2QFY'24 (RM mil)
Single Buyer Actual Generation Costs: <b>(A)</b>	10,238.5	10,357.3	10,710.6	11,499.8
<i>Actual Sales (GWh)</i>	31,448.1	31,491.4	31,899.4	33,120.6
<i>Single Buyer Tariff (RM/kWh)</i>	0.2620	0.2620	0.2620	0.2620
Actual Gen Cost Recovered (RM mil) <b>(B)</b>	8,239.4	8,250.7	8,357.6	8,677.6
<b>ICPT Surcharge / (Rebate) (C)</b> <b>(C = A – B)</b>	<b>1,999.1</b>	<b>2,106.6</b>	<b>2,353.0</b>	<b>2,822.2</b>

Note: Numbers manually computed will not match due to decimal variance

## Coal Price Trending



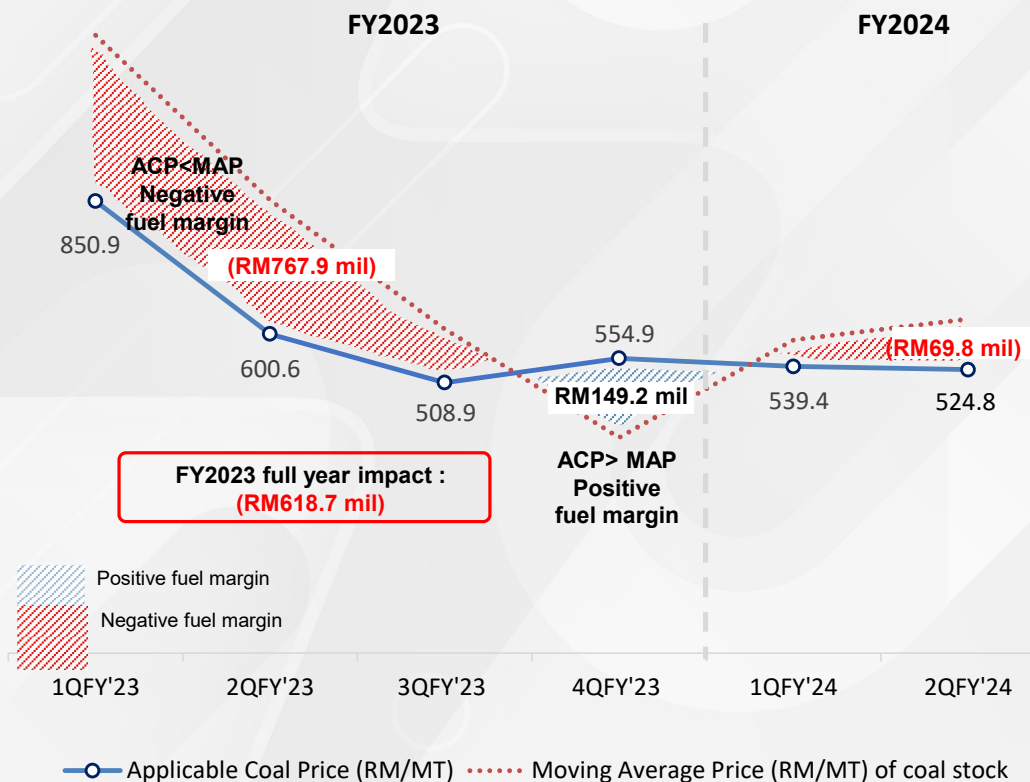
### Coal Price & Applicable Coal Price (ACP) comparison

	1QFY'23	2QFY'23	3QFY'23	4QFY'23	1QFY'24	2QFY'24
Average Coal Price Delivered (RM/mmbtu) *	35.85	29.43	24.31	24.36	24.81	24.23
ACP (RM/mmbtu)	38.77	27.52	23.32	25.42	24.73	24.13

\* Based on internal conversion

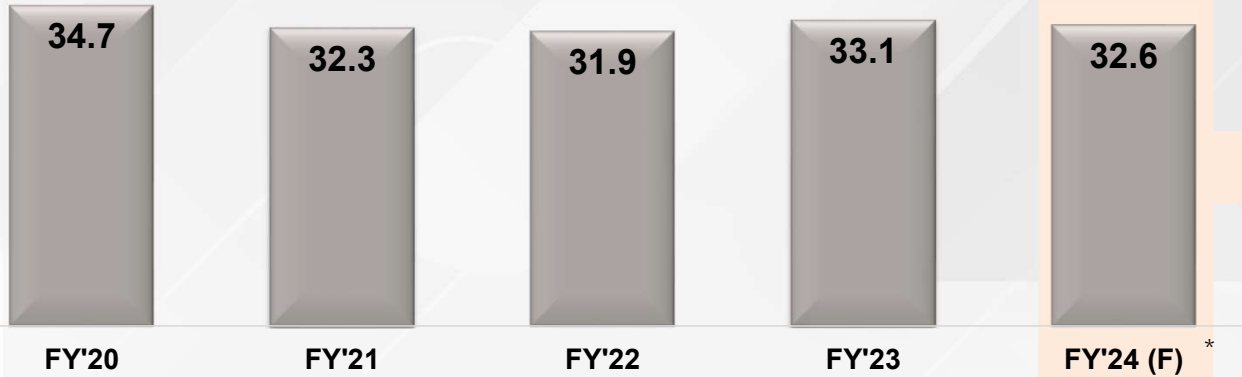
- Fuel Price Adjustment (FPA)** is the difference between the Applicable Coal Price (ACP) billed to generators and the actual coal price paid to supplier (delivered) by TNBF. The difference is caused by higher or lower coal price or due to currency exchange.
- ACP is set by Energy Commission on a monthly basis starting from August 2022.
- In 2QFY'24, the base ACP (RM24.13/mmbtu) used for billing the generators was lower than the coal price paid to supplier (RM24.23/mmbtu).

## Fuel Margin: Applicable Coal Price (ACP) vs Moving Average Price (MAP)



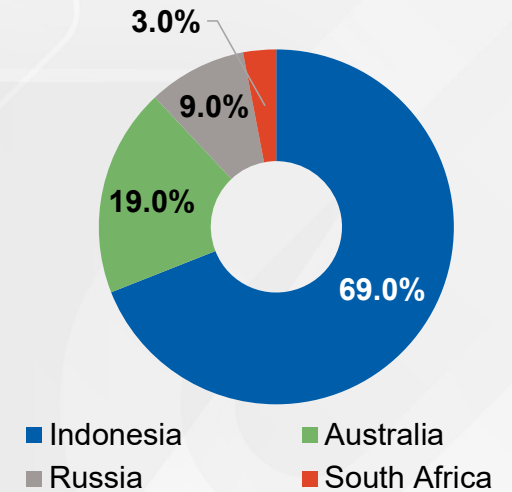
# Industry coal requirement forecast for FY2024

## Coal Consumption (mil MT)



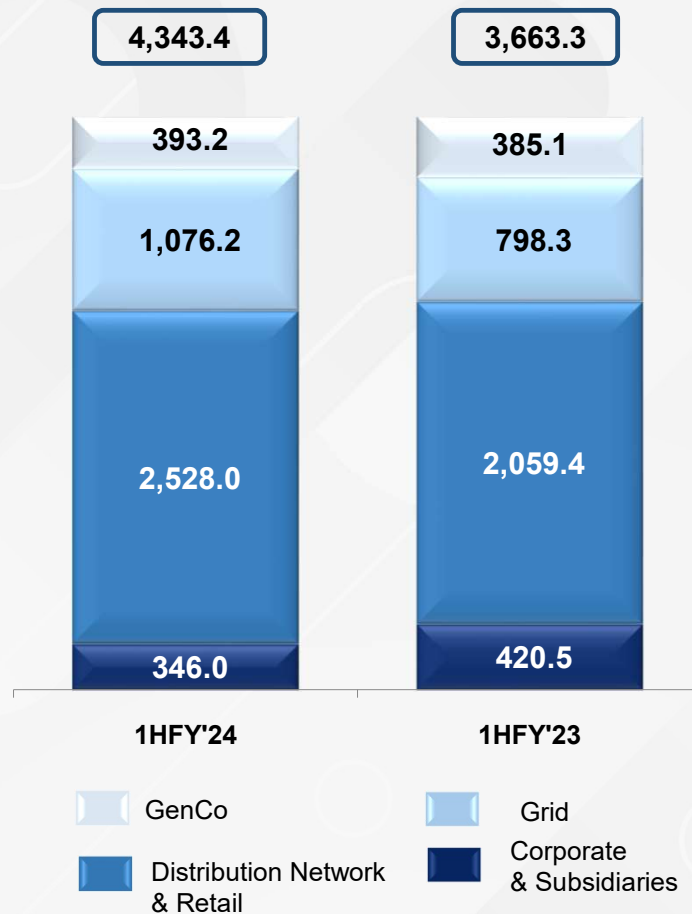
\* Based on tonnage planned for delivery in FY2024

## Source Country Mix



## Group CAPEX

RM mil



## Regulated CAPEX and Regulated Asset Base (RAB)

FY	RP3 REGULATED ENTITIES CAPEX		
	IBR Approved RM mil	Actual YTD RM mil	Utilisation (%)
2024	6,413.3	3,606.3	56.2

Total RAB (RM mil)	
Actual As at 30 June 2024	Approved FY2024
66,155.6	66,603.6
Regulatory net returns: RM2,252.3 mil	

Note: Numbers manually computed will not match due to decimal variance

# Gearing improved to 48.4% as at 1HFY2024

	30 Jun'24	31 Dec'23
Total Debt (RM bil)	57.7	61.8
Net Debt* (RM bil)	39.4	40.8
Gearing (%)	48.4	50.3
Net Gearing (%)	33.0	33.2



**4.84%**

(FY'23: 4.75%)

**Effective Average  
Cost of Borrowing\*\***



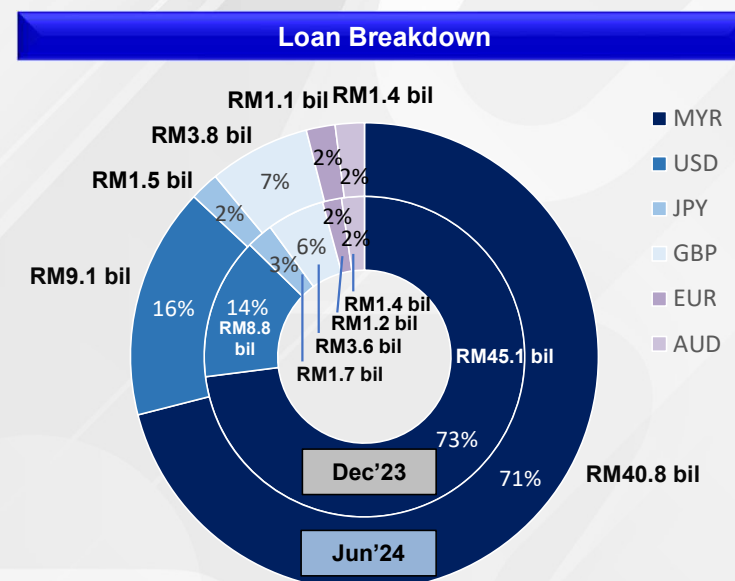
**93:7**

(FY'23: 95:5)

**Fixed : Floating  
Final Exposure**

\* Net Debt excludes deposits, bank and cash balances and investment in UTF  
\*\* Inclusive of interest rate swap

Note:  
Debt consists of Principal + Accrued Interest



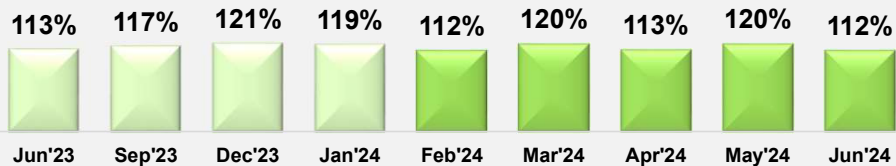
Closing FOREX	30 Jun'24	31 Dec'23
USD/RM	4.719	4.593
100YEN/RM	2.932	3.246
GBP/RM	5.960	5.854
AUD/RM	3.127	3.141
EUR/RM	5.045	5.083

# Trade receivables as at 1HFY2024

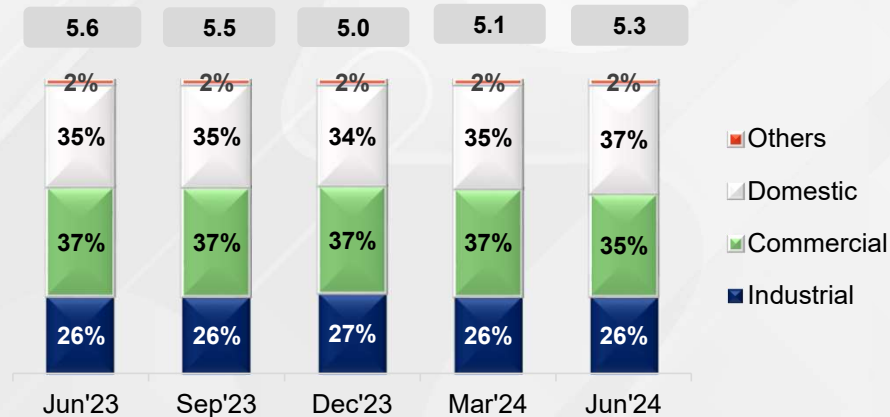
## Trade Debtors Ageing (RM bil)



## Strong collection trend



## Trade Receivables By Sectors (RM bil)



## Cash flow

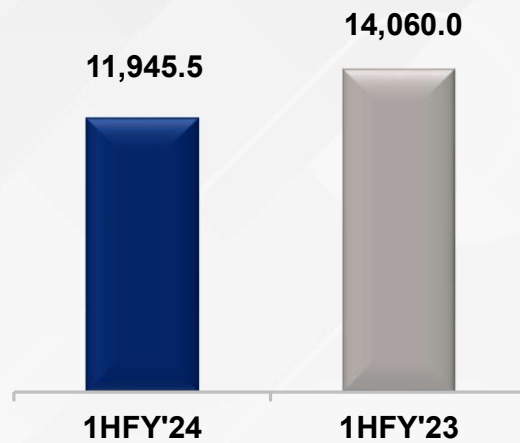
- We continuously monitor our cash flow position on a daily basis and remain prudent on our working capital management.
- **S&P: Credit Rating upgraded to A- (May'24)**
- **MARC: Affirmed TNB corporate credit rating at AAA with a stable outlook (Aug'24)**

# Domestic generation business performance

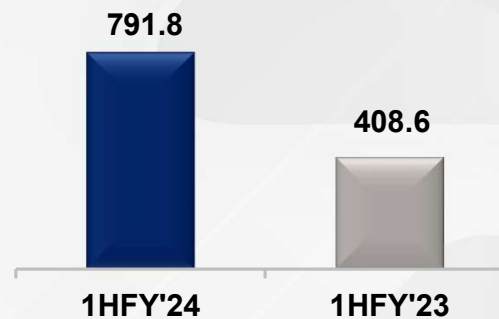
Overall improved performance by power plants

RM mil

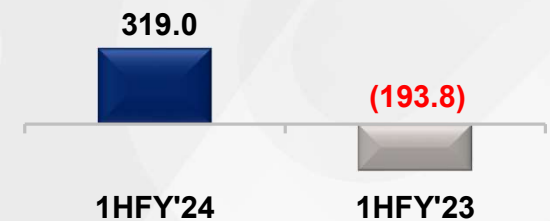
## REVENUE



## EBIT



## PROFIT AFTER TAX

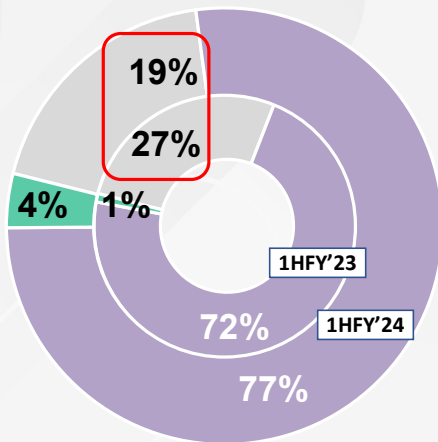


Note: Includes generation related subsidiaries



## Revenue from coal recorded below 25% due to M4 outage

Actual Group Revenue\*



■ RE ■ Coal ■ Others \*\*

\* Total revenue includes ICPT

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



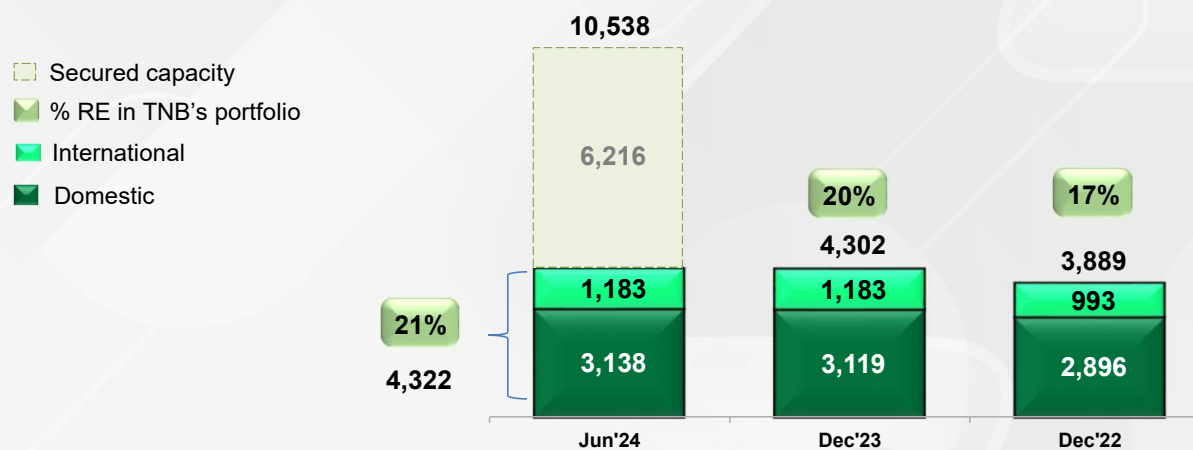
**Long-term aspiration:  
To be coal-free by 2050**

- No new coal plant investment
- Reduction of coal capacity by 50% by 2035 and coal-free by 2050

## Our RE journey is progressing well

### TNB RE Portfolio

Renewable capacity (MW)



Note:

- Gross RE Capacity includes large hydro
- Solar capacity is quoted in MWp starting from 2QFY'23
- Secured capacity includes in construction and development stages
- Exclude SESB

# International Investments: Renewable Energy (RE)

## TNB International Sdn Bhd (TNBI)

### Vantage RE



### Spark Renewables



### Technology Focus:



TNBI is a TNB wholly owned subsidiary incorporated under the laws of Malaysia.

TNBI is a platform focused on capturing global renewable energy opportunities, diversifying TNB's portfolio and spearheading TNB's Energy Transition initiative, contributing towards supporting key milestones in TNB's Net Zero 2050 journey.

TNBI is anchored by Vantage RE with ~1GW RE portfolio (operational and under construction) and Spark Renewables.

### Financial Performance

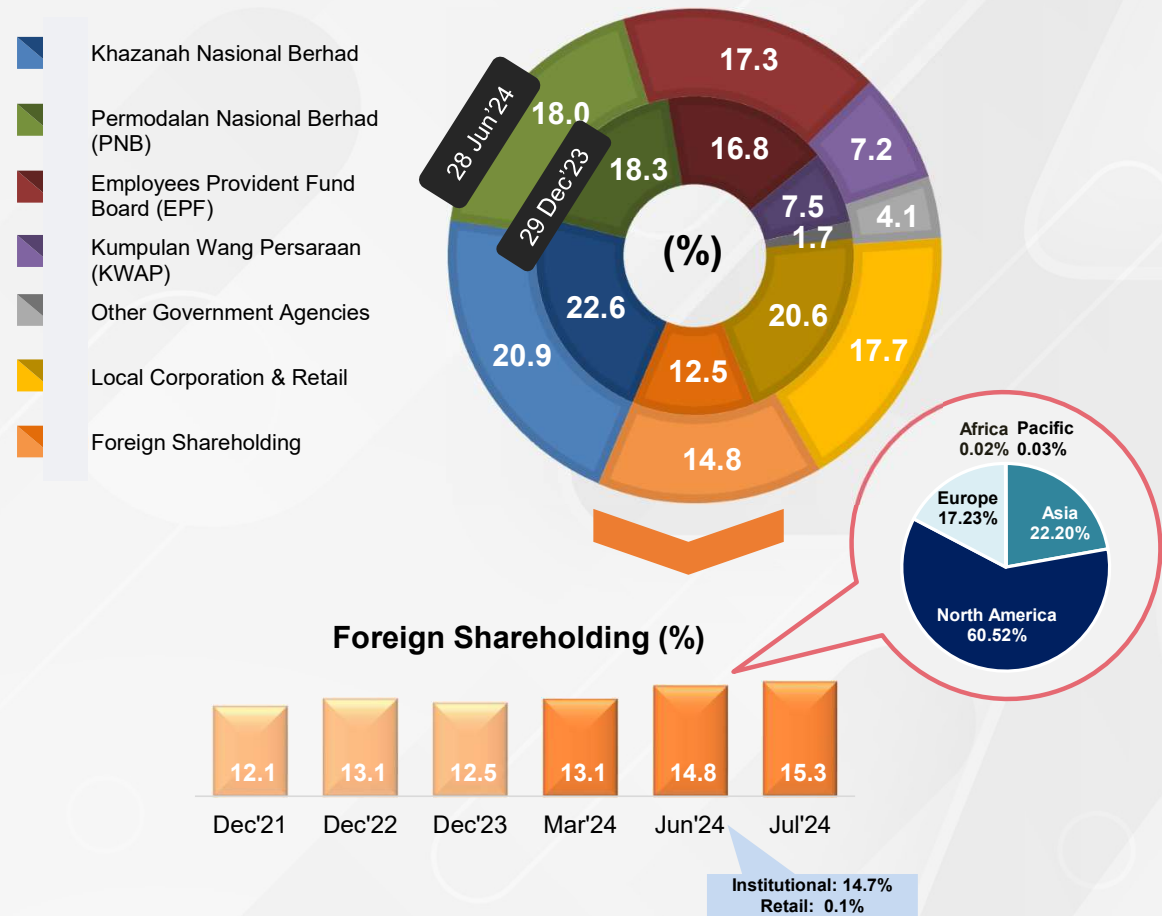
Higher EBITDA Y-o-Y from:

- Additional contribution from newly acquired solar portfolio in the Ireland (276MW) in December 2023 and higher generation from the wind assets due to higher wind speeds.

### Outlook

- TNB is committed to grow its presence in RE market and the current focus is on converting development pipelines into operational assets.
- In addition, TNB's international RE platforms are also exploring alternative revenue mechanisms, such as Contract-for-Difference (CfD) scheme, Corporate Power Purchase Agreements (PPAs) and Battery Energy Storage System (BESS) based opportunities.
- This strategy will be supported by leveraging on TNB's extensive experience in developing power projects in both international and domestic markets, along with knowledge and technology transfer within TNB Group.
- TNBI will also be looking to increase in-house EPC capabilities to enhance the development of greenfield projects, maximising efficiency and control throughout the project lifecycle.

# Shareholdings



Foreign Shareholding (%)

12.1

13.1

12.5

13.1

14.8

15.3

Dec'21

Dec'22

Dec'23

Mar'24

Jun'24

Jul'24

Institutional: 14.7%

Retail: 0.1%

Source: Share Registrar, Bloomberg and IR Internal Analysis

## Disclaimer

This presentation and discussion may contain forward looking statements by Tenaga Nasional Berhad related to financial trends for future periods. Some of the statements contained in this presentation or arising from this discussion which are not of historical facts are statements of future expectations with respect to financial conditions, results of operations and businesses, and related plans and objectives. Such forward looking statements are based on Tenaga Nasional Berhad's current views and assumptions including, but not limited to, prevailing economic and market conditions and currently available information. These statements involve known and unknown risks and uncertainties that could cause actual results, performance or achievements to differ materially from those in the forward-looking statements. Such statements are not and, should not be construed, as a representation as to future performance or achievements of Tenaga Nasional Berhad. It should be noted that the actual performance or achievements of Tenaga Nasional Berhad may vary significantly from such statements.

All information contained herein is meant strictly for the use of this presentation only and should not be used or relied on by any party for any other purpose and without the prior written approval of Tenaga Nasional Berhad. The information contained herein is the property of Tenaga Nasional Berhad and it is privileged and confidential in nature. Tenaga Nasional Berhad has the sole copyright to such information, and you are prohibited from disseminating, distributing, copying, reproducing, using and/or disclosing this information.

# Thank you

## INVESTOR RELATIONS GROUP FINANCE DIVISION

Tenaga Nasional Berhad  
Level 12, Tower A, TNB Platinum  
No. 3, Jalan Bukit Pantai, Bangsar  
59100 Kuala Lumpur

Tel : +603 2108 2128

Fax : +603 2108 2034

Email : [tenaga\\_ird@tnb.com.my](mailto:tenaga_ird@tnb.com.my)

Website : [www.tnb.com.my](http://www.tnb.com.my)

## IR OFFICERS:

✉ **Sarah Keok**  
[sarahk@tnb.com.my](mailto:sarahk@tnb.com.my)

✉ **Hasniza Harun**  
[hasniza@tnb.com.my](mailto:hasniza@tnb.com.my)

✉ **Intan Nur Najihah Basiron**  
[najihah.basiron@tnb.com.my](mailto:najihah.basiron@tnb.com.my)

✉ **Durga Vinasini Sivanesan**  
[durga.sivanesan@tnb.com.my](mailto:durga.sivanesan@tnb.com.my)