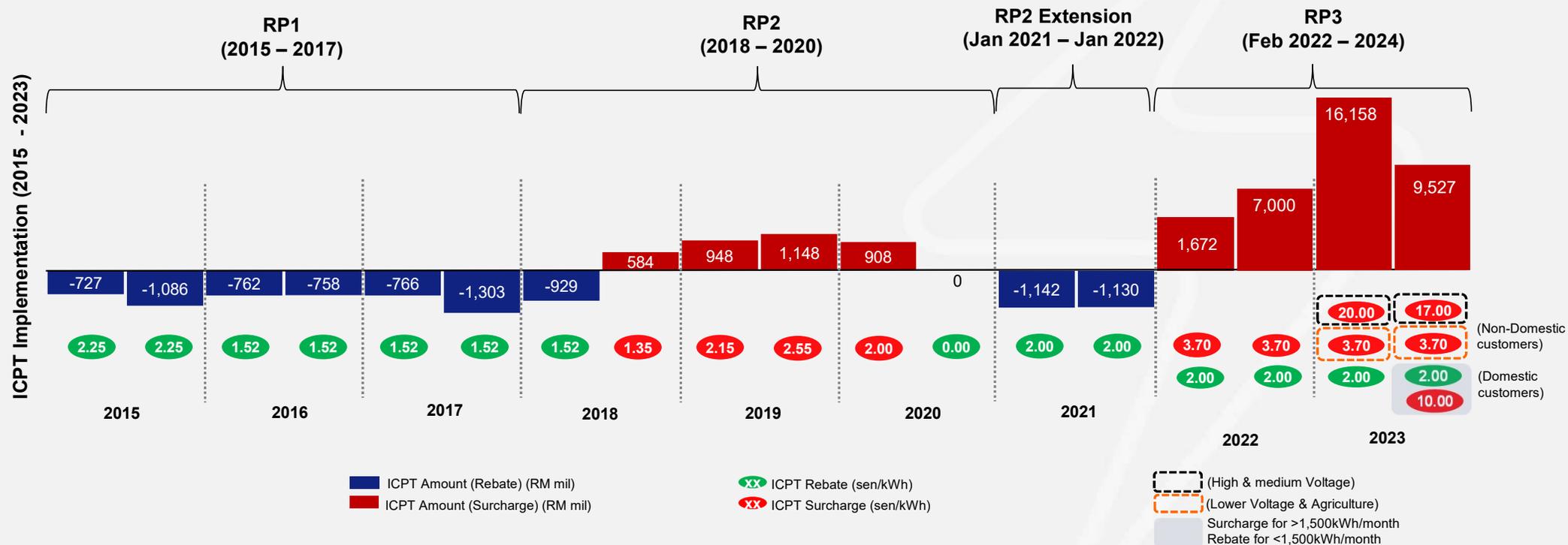


# Analyst Briefing

## 2QFY23

4 September 2023

## Regulatory certainty; the Government has successfully managed the impact of fuel prices volatility for the past 18 ICPT cycles since 2015



ICPT mechanism remained intact; ICPT receivables is expected to trend lower amid moderating coal prices, relieving working capital pressure with positive improvements in our cash flow position and gearing levels.

## Energy Transition Plan: Three (3) Strategic Focus Areas that consider both cross-sector and cross-border solutions

**A Accelerate generation decarbonisation**



- 1 Decarbonise coal plants while ensuring security of supply
- 2 Deploy RE at scale (e.g., hydropower plants, floating solar) - **Development of 2.5GW HHFS**
- 3 Invest in clean tech at scale (e.g., hydrogen, ammonia co-firing, CCUS) - **Partnerships with Petronas (hydrogen) and Mitsui & Chugoku (ammonia/biomass)**
- 4 Expand RE generation focus markets (e.g., APAC region, asset development)

**B Develop flexible and cross-border grid**



- 1 Enhance Smart & Autonomous Grid & Distribution Network (e.g., DER integration, self-healing grid)
- 2 Launch flexible solutions (e.g., grid-scale storage, community storage)
- 3 Deliver Renewable Energy Zones - **Solar Parks 5 X 100MW**
- 4 Catalyse ASEAN Power Grid build (e.g., 6 MoUs signed, 2 feasibility studies planned)

**C Empower cross-sector electrification and prosumers**



- 1 Electrify mobility through grid upgrades, charging station build
- 2 Scale industrial electrification solutions
- 3 Power rapid data centre growth
- 4 Support power-intensive hydrogen economy
- 5 Unlock energy management solutions for prosumers (e.g., rooftop PV, EE)



TNB's flagship projects under NETR Phase 1: (i) Solar parks, (ii) Hybrid Hydro-Floating Solar PV (HHFS) and (iii) Co-firing with Hydrogen and Ammonia.

## Intensified efforts in executing Energy Transition Plan; demonstrating our strong commitments



### RE expansion supports ET objectives

- Minister of NRECC commended TNB for its **remarkable achievement in leading Malaysia's ET**, reducing its carbon footprint, and embracing renewable energy both in Malaysia and overseas.

TNB Group RE Capacity (GW)



Achieved **48% of target capacity** of 8.3GW by 2025

**+1.2GW** Additional domestic capacity by 2025

**Domestic RE >50%**

of total RE capacity



### 'Happy Deal' strategic partnership

- GSPARX has signed up with McDonald's Malaysia to **install solar Photovoltaic (PV) facilities at 100 McDonald's drive-thru restaurants by Dec'24**.
- EV charging stations** will be installed at their restaurants to promote the adoption of clean energy solutions.

### Progress & Outlook



GSPARX

**294MWp**

Capacity Secured  
(Target FY2023: 386MWp)



EV Chargers Installation

**27**

Chargers Installed

**66**

Chargers Installed by 2024



### 'Pakej RAHMAH' by Allo

- Launched Rahmah Package Internet plan, the **lowest-priced 100Mbps** fixed broadband plan in the country.
- This collaboration ensures that rakyat has access to the necessity of connection under **SDG11** in making cities and human settlements inclusive, safe, resilient and sustainable.



### Connectivity Services

**2 Major Government Projects**

over next 3 years

## TNB's Green Lane Pathway marks a remarkable milestone in Malaysia's journey towards becoming a digital and manufacturing powerhouse in the region



- Fast track green lane supply offerings for data centres to deliver **timely and reliable electricity supply with high voltage demand of 132/275kV**.
- **One-Stop-Centre (OSC)** is introduced as a two-way communication channel to facilitate relations and dealings between data centre investors and TNB.
- **5 data centre investors** are among the first customers to enjoy the exclusive Green Lane Pathway.

### KEY PARTNERSHIPS

Electricity Supply Agreements (ESA)



**1,500MW**  
total amount of energy

Memorandum of Understanding (MoU)



### OUTLOOK

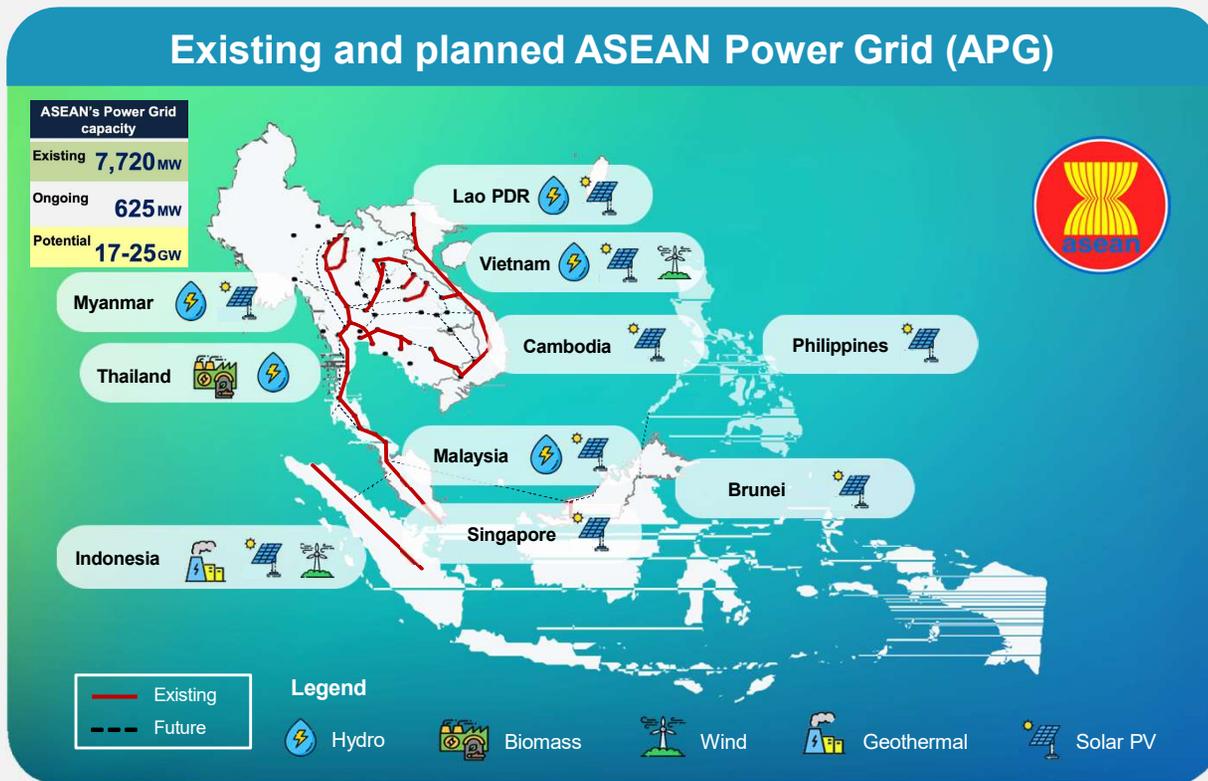
Potential Demand

**>4,300MW**  
by 2035

Pipeline Data Centres

**5**  
data centres  
**~2,000MW**  
Total amount of energy

## TNB has been pursuing our responsible energy transition agenda via collaborations with other ASEAN countries



#### Boosting cross-border RE trade from Laos

- To form a Joint Collaboration Committee in exploring opportunities in the energy sector, with a focus on cross-border power trade and human capital development.
- TNB Genco and Electricite Du Laos (EDL) have inked an MoU to explore potential investment in energy projects in Laos for export.

#### Business growth opportunities from APG

##### Laos - Potential energy trade value

**2025**  
**200MW**  
(~RM460 mil p.a.)

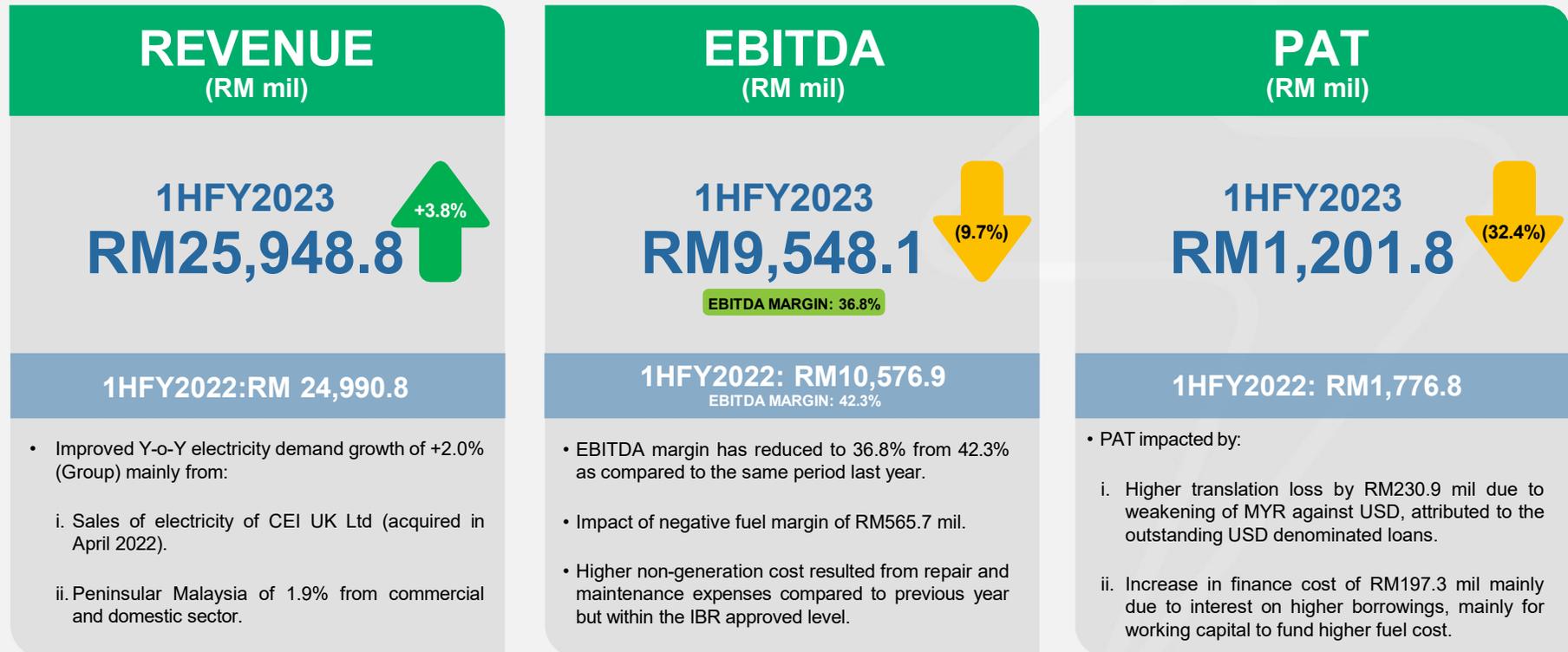
**> 2030**  
**1,000MW**  
(up to ~RM2.3 bil p.a.)

##### Singapore – Electricity Import

The Energy Market Authority (EMA), Singapore is aiming to import a total of 4GW of low-carbon electricity into Singapore by 2035.

# PERFORMANCE UPDATES

## Amid a challenging environment, our PAT was impacted by negative fuel margin and forex volatility



Group earnings supported by; (i) Improved generation business  
(ii) World-class network performance



Equivalent Plant  
Availability Factor, EAF  
(Generation)  
%



1HFY2023  
**84.9%**

1HFY2022: 82.5%

2023 Target: 81.80%



EAF performance secured  
**generation assets'**  
capacity revenue



System Minutes  
(Transmission)  
Minutes



1HFY2023  
**0.41**

1HFY2022: 0.01

2023 Internal Threshold: 2.00



World class network  
performance safeguarded our  
regulated business earnings



SAIDI  
(Distribution Network)  
Minutes



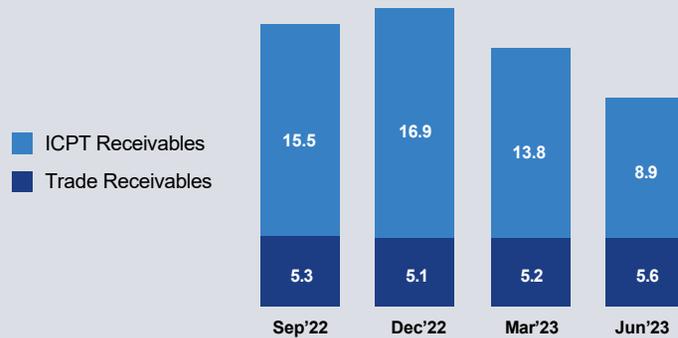
1HFY2023  
**22.9**

1HFY2022: 22.01

2023 Internal Threshold: 53.0

## Effective working capital management alleviates pressures from high fuel prices; whilst improvement in collection strengthened cash flow position and gearing level

Receivables (RM bil)



- TNB has **fully recovered the RM10.4 bil of ICPT cost for January to June 2023** (last payment of RM1.28 bil received on 14 July 2023).
- Going forward, pressure on ICPT receivables is expected to ease given current fuel price trends and Government upholding the IBR framework.
- **Coal price has moderated** from 345.93 USD/MT\* in June 2022 to 112.37 USD/MT\* in June 2023.
- Easing coal prices, improved collection and the ability to draw down on a RM6 bil government-guaranteed loan for working capital will leave TNB in a stronger cash-flow position for 2023.

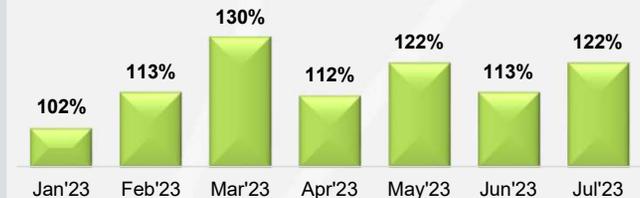
\* Source: globalCOAL Newcastle index

### 1 ICPT Cost Recovery for 2HFY2023 RM4.7 bil

- TNB will recover from the Government RM4.7 bil of ICPT cost for July to December 2023 in equal installments.
- This is the first cycle where domestic customers (>1,500 kWh) are imposed with a surcharge of 10 sen/kWh.

### 2 Improvement in Collection

- Improvement in collection, recording strong collection trend (collection rate >100%).



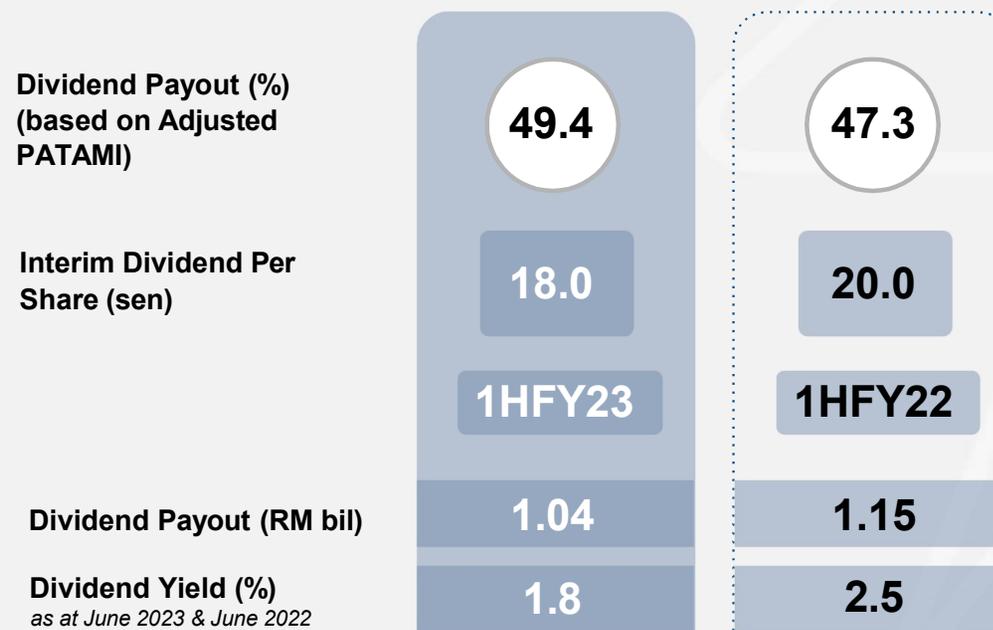
### 3 ICPT Outlook ~RM7.0 bil

- ICPT to be recovered in 1HFY2024 is forecasted to be around RM7.0 bil given the current fuel price trends.
- ICPT mechanism is intact & TNB remains neutral.

## Dividends declared reflect prudent capital management while we continue to reward our shareholders

### Dividend Policy

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



## Year 2023 stands as a significant year as we advance towards achieving our Net Zero 2050 aspirations

 <b>Electricity Demand</b>	<p>Latest demand growth is 1.7% (120,933 GWh)*</p> <p>(IBR reference: 116,367 GWh)</p>
 <b>Group CAPEX Forecast</b>	<p>Total Group CAPEX : <b>RM12.8 bil</b></p> <p>Regulated capex* : <b>RM7.0 bil</b></p> <p>Others** : <b>RM5.8 bil</b></p> <p><small>* ET Related capex of RM2.99 bil (includes system improvement CAPEX)</small></p> <p><small>** Major projects, subsidiaries and corporate</small></p>
 <b>Capital Management</b>	<ul style="list-style-type: none"> <li>• Proactive working capital management in current high fuel prices environment</li> <li>• Funding for growth</li> </ul>



### Delivering Value to our Shareholders

We will continue to honour our dividend policy of 30% - 60% dividend payout ratio, based on adjusted PATAMI



### Sustainable Growth

Ensuring business growth as we progress towards being a leading provider of sustainable energy solutions

\* Source: Planning and Implementation Committee for Electricity Supply and Tariff (March 2021)

# STRATEGY DEPLOYMENT



# TNB transitioning into green entity with a strong ~7,800MW pipeline ready to be explored

TNB pledge for no more coal plants. We will replace retiring coal plants with green pipeline projects.

## GenCo

	<b>Electricity Export to Singapore</b> Finalising relevant agreements and licensing	<b>100MW</b> COD: 3Q2023
	<b>Sungai Perak Hydro Life Extension Programme</b> Finalised new PPA	<b>650.8MW</b> COD: 2025
	<b>Nenggiri Hydro Project</b> Physical progress as of June 2023 is 29%	<b>300MW</b> COD: 2Q2027
	<b>Paka Repowering</b> Establishment of Feasibility Study	<b>1,400MW</b> COD: 2030
	<b>New Combined Cycle Power Plant (Kapar)</b> Establishment of Feasibility Study	<b>2,100MW</b> COD: 2031

## New Energy Division (NED)

	<b>TNB Bukit Selambau Solar 2</b> Physical progress as of July 2023 is 68%	<b>50MW</b> COD: 4Q2023
	<b>Solar Greenfield Development (UK)</b> Discharging all pre-construction planning conditions	<b>102MW</b> COD: 2024
	<b>Corporate Green Power Programme (CGPP)</b>	<b>90MWac<sup>1</sup></b> COD: 2025

<sup>1</sup>Effective ownership of 48MWac/72MWp

### New Projects under NETR

	<b>Large-Scale Solar Parks</b>	<b>5 x 100MW</b>
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### New Projects under NETR

	<b>Hybrid Hydro-Floating Solar PV (HHFS) ~2,500MW by 2040</b>	
	<b>Phase 1</b> 230MW COD: 2025	<b>Phase 3</b> 800MW COD: 2035
	<b>Phase 2</b> 470MW COD: 2028	<b>Phase 4</b> 924MW COD: 2040



## Championing green capacity growth through first hybrid hydro-solar project; expediting the Malaysia's Energy Transition journey

### Pilot Projects

#### Floating Solar in Manjung

- **A mini operational floating solar asset in its ash pool in Manjung, with a capacity of 105kWp.**
- The electricity generated through this system can meet the needs of 30 houses (currently for self-consumption).

**Emission avoidance:** Reduction of 7.9 tonnes of carbon emissions per month or carbon dioxide absorption of 409 trees.

**COD: August 2019**

#### Offshore floating solar plant

- TNB Renewables (TRe) and TNB Research (TNBR) **signed LOI with SolarDuck and Hydro Extrusion Norway to develop 780kWp offshore floating solar (OFS) plant in Tioman island.**
- A research project to assess technical and economic feasibility of OFS in Malaysia.

**Funding:**

- TNB - Technology fund.
- SolarDuck - Matching fund from Innovation Norway.

**Emission avoidance:** Reduction of 54.5 tonnes of carbon emissions per month or carbon dioxide absorption of 2,180 trees.

**COD: 2025**

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

- The HHFS projects will be developed in **4 phases from 2023 to 2040 with potential capacity of 2,500MW** at TNB hydro dam reservoirs.
- For Phase 1, Genco is looking at **230MW capacity at Temengor and Chenderoh hydro plant.**
- Current progress: Close engagement and liaison with regulator and stakeholders from both federal and states governments.

**Emission avoidance:** Reduction of around 193k tonnes of carbon emission per month or carbon dioxide absorption of 92,267,019 trees.

**COD: 2025 (Phase 1)**



## Establishing partnerships to unlock inventive solutions and sustainable approaches to accelerate our business growth

### Ammonia and Hydrogen Studies

#### Co-Firing Ammonia in Coal Fired Boiler



- Completed Phase 1 of feasibility studies.
- TNBR has conducted actual co-firing using 3 types of coal used in GenCo fleet. **Results verified reduction of CO2 and SO2 emissions when co-firing at 60:40 coal:ammonia ratio.**



To complete Front End Engineering Design (FEED)\* basic design for small scale co-firing by 2023 in JEP, Manjung 1 and Manjung 4.

	3QFY2023	2024	2025
Perform FEED for small scale firing			
Commence EPC for small scale co-firing			

*\*FEED will be the pre-requisite activity for co-firing implementation as early as 2024 at selected coal assets*

#### Co-Firing of Hydrogen and ammonia



- Signed definitive Joint Feasibility Study Agreement (JFSA) to advance the studies for hydrogen business development in Malaysia.
- Feasibility studies and business case for developing hydrogen are also being conducted. Expected timeline for completion of project is 2 years.



- Completed Phase 1 of feasibility studies. Currently embarking on Phase 2 which is to implement actual small-scale ammonia/biomass co-firing. Expected implementation after 2025.
- **Status: Preparing the commercial proposal and seeking Government & related authorities' approvals.**



## 12-month fast-track supply propels Malaysia as a central Hub for regional data centres

### Data Centre



### Green Lane Pathway

An exclusive pathway and strategic offering designed for Malaysia's data centre market which provides efficient and environmentally responsible solutions.

#### Objectives

- To **streamline** the on-boarding process,
- **Expedite approvals**, and
- **Facilitate a smooth setup** of data centre operations.

#### Features:

- Fast-track supply offerings for electricity; to be **connected three times faster than the normal delivery time, reducing implementation period from 36-48 months to just 12 months.**
- **Establishment of the One-Stop-Centre (OSC)** will fulfil all data centres' requirements.



### Key Partnerships

 Yellowwood Properties (Yondr)	 SIPP Power	<b>Electricity Supply Agreements (ESA)</b>  <b>1,500MW</b>  <b>Total amount of energy</b>
 AirTrunk Malaysia	 GDS IDC Malaysia	

 MRANTI Corporation	<b>Signed Memorandum of Understanding</b>
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### Outlook

<b>2023 Pipeline Data Centres</b>  <b>5</b> companies amounting to <b>~2,000MW</b> <b>Total amount of energy</b>
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<b>Potential Demand</b>  <b>&gt;4,300MW</b> by 2035
--



## GSPARX is well positioned to lead rooftop solar business; bolstering TNB's revenue growth

### GSPARX

#### Recent Government Announcements

- i. Relaxation of capacity limit for each household applying for the NEM Rakyat Programme (previous limit of 4kW for single-phase installations and 10kW for three-phase).
- ii. **Allowable capacity** for solar PV systems under the **NEM NOVA Programme and SelCo Programme has been increased from 75% to 85%.**
- iii. **SelCo Programme** is now **open for applications and participation by high-voltage (HV) consumers.**

#### National Energy Transition Roadmap (NETR)



**4.5MW**

Solar capacity across 450 homes in City of Elmina

- On 29 August 2023, MoU has been signed with Sime Darby Property.

#### Key Achievements



- GSPARX has completed installing solar panels at Unilin's manufacturing plant in Sungai Petani to generate 2,830.73kWp of solar capacity.
- Emission avoidance of carbon dioxide (CO<sub>2</sub>) in the quantum of 1,348 metric tonnes per year, equivalent to planting over 20,000 saplings.

#### McDonald's



- McDonald's Malaysia has partnered GSPARX to install 2.5MWp rooftop solar PV facilities at 100 Drive-Thru restaurants and expected to be completed in phases by December 2024.

#### Central Medicare (CMSB)



HARPS

- GSPARX collaborates with Central Medicare to install 6.039MWp of solar capacity at CMSB factory and hostel sites in Teluk Intan, Perak.
- This energy transition initiative can reduce over 5,000 metric tonnes of CO<sub>2</sub> per year.

#### GSPARX Progress

**2,439**  
Projects secured

**294**  
MWp capacity secured  
Target FY2023: 386MWp

Data as of June 2023

#### GSPARX Revenue (RM mil)





## Energy Usage

TNB is committed to strategically strengthen the nation's EV ecosystem to alleviate range anxiety and promote the widespread adoption of EVs

### Electric Vehicle (EV)

#### ELECTRON CHARGING CONNECTIVITY



In planning  
 Chargers commissioned

TNB to invest ~RM31 million in 2023 to spur the development of EV ecosystem and fleet electrification

#### Key Achievements:



TNB & Plus

• 3 electron charging stations commissioned this year (Ayer Keroh, Paka & Tapah).

• Physical progress at 7 R&R locations and has achieved an average of 40-50% progress.



TNB & Petrol Stations

• 9 locations have been identified at trunk road on 5 routes.



TNB & Gamuda

• The location and scope are under discussion, starting with standalone chargers and then transitioning to a hub.

#### Progress & Outlook:

27

Chargers Installed as of Jun'23

66

Chargers Installed by 2024

40  
Direct-current Fast Charger (DCFC)

26  
Alternating Current Charger (AC)

# Analyst Briefing

2QFY23

4 September 2023

# Appendix

## 1H FY2023

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

## Year-on-Year (Y-o-Y) analysis

RM mil		1HFY23	1HFY22	Variance	
				RM mil	%
Revenue	1	25,948.8	24,990.8	958.0	3.8
Imbalance Cost Pass-Through (ICPT)		6,492.5	9,808.0	(3,315.5)	(33.8)
Operating expenses (without depreciation)	2	(23,236.3)	(24,571.4)	1,335.1	(5.4)
Net loss on impairment of financial instruments	3	(52.5)	(80.2)	27.7	(34.5)
Other operating income		395.6	429.7	(34.1)	(7.9)
<b>EBITDA</b>		<b>9,548.1</b>	<b>10,576.9</b>	<b>(1,028.8)</b>	<b>(9.7)</b>
EBITDA Margin (%)		36.8%	42.3%	-	(5.5)
Depreciation		(5,597.3)	(5,579.0)	(18.3)	0.3
<b>EBIT</b>		<b>3,950.8</b>	<b>4,997.9</b>	<b>(1,047.1)</b>	<b>(21.0)</b>
<b>Foreign exchange:</b>					
- Transaction gain		60.3	10.9	49.4	>100.0
- Translation loss	4	(425.4)	(194.5)	(230.9)	>100.0
Share of results of joint ventures		5.5	10.8	(5.3)	(49.1)
Share of results of associates		15.8	60.3	(44.5)	(73.8)
<b>Profit before finance cost</b>		<b>3,607.0</b>	<b>4,885.4</b>	<b>(1,278.4)</b>	<b>(26.2)</b>
Fair value changes of financial instrument		46.9	58.7	(11.8)	(20.1)
Finance income		256.5	122.5	134.0	>100.0
Finance cost	5	(2,266.2)	(2,068.9)	(197.3)	9.5
<b>Profit from ordinary activities before taxation</b>		<b>1,644.2</b>	<b>2,997.7</b>	<b>(1,353.5)</b>	<b>(45.2)</b>
<b>Taxation and Zakat:</b>					
- Company and subsidiaries	6	(426.7)	(1,145.8)	719.1	(62.8)
- Deferred taxation	7	(15.7)	(75.1)	59.4	(79.1)
<b>Profit for the period</b>		<b>1,201.8</b>	<b>1,776.8</b>	<b>(575.0)</b>	<b>(32.4)</b>
<b>Attributable to:</b>					
- Owners of the Company		1,330.2	1,765.3	(435.1)	(24.6)
- Non-controlling interests		(128.4)	11.5	(139.9)	>(100.0)
<b>Profit for the period</b>		<b>1,201.8</b>	<b>1,776.8</b>	<b>(575.0)</b>	<b>(32.4)</b>

Y-o-Y analysis:

- Higher Group revenue driven by sales demand growth of 2.0% including the sales of electricity of CEI UK Ltd (acquired in April 2022).
- Reduction in operating expenses was mainly due to lower generation cost.
- Includes lower allowance for doubtful debts (ADD) of RM31.5 mil (1HFY22 ADD of RM75.4 mil).
- Higher translation loss due to weakening of MYR against USD, attributed to the outstanding USD denominated loans.
- Higher finance cost due to interest on higher borrowings, mainly for working capital to fund higher fuel cost.
- Lower tax expense in 1HFY23 due to higher reinvestment allowance (RA) claim (vs one-off Prosperity Tax impact in 1HFY22).
- Deferred tax movement resulted from decrease in capital allowances and increase in accrued revenue.

## Quarter vs previous quarter (2QFY23 vs 1QFY23) analysis

RM mil		2QFY23	1QFY23	Variance	
				RM mil	%
Revenue	1	13,323.2	12,625.6	697.6	5.5
Imbalance Cost Pass Through (ICPT)	2	2,860.2	3,632.3	(772.1)	(21.3)
Operating expenses (without depreciation)		(11,594.8)	(11,641.5)	46.7	(0.4)
Net gain / (loss) on impairment of financial instruments		(101.2)	48.7	(149.9)	>(100.0)
Other operating income		177.0	218.6	(41.6)	(19.0)
<b>EBITDA</b>		<b>4,664.4</b>	<b>4,883.7</b>	<b>(219.3)</b>	<b>(4.5)</b>
EBITDA Margin (%)		35.0%	38.7%		(3.7)
Depreciation		(2,795.7)	(2,801.6)	5.9	(0.2)
<b>EBIT</b>		<b>1,868.7</b>	<b>2,082.1</b>	<b>(213.4)</b>	<b>(10.2)</b>
<b>Foreign exchange:</b>					
- Transaction gain / (loss)		61.8	(1.5)	63.3	>(100.0)
- Translation (loss) / gain	3	(453.5)	28.1	(481.6)	>(100.0)
Share of results of joint ventures		4.6	0.9	3.7	>100.0
Share of results of associates		(6.3)	22.1	(28.4)	>(100.0)
<b>Profit before finance cost</b>		<b>1,475.3</b>	<b>2,131.7</b>	<b>(656.4)</b>	<b>(30.8)</b>
Fair value changes of financial instrument		54.9	(8.0)	62.9	>(100.0)
Finance income		157.9	98.6	59.3	60.1
Finance cost		(1,146.6)	(1,119.6)	(27.0)	2.4
<b>Profit from ordinary activities before taxation</b>		<b>541.5</b>	<b>1,102.7</b>	<b>(561.2)</b>	<b>(50.9)</b>
<b>Taxation and Zakat:</b>					
- Company and subsidiaries	4	(276.3)	(150.4)	(125.9)	83.7
- Deferred taxation		5.7	(21.4)	27.1	>(100.0)
<b>Profit for the period</b>		<b>270.9</b>	<b>930.9</b>	<b>(660.0)</b>	<b>(70.9)</b>
<b>Attributable to:</b>					
- Owners of the Company		327.9	1,002.3	(674.4)	(67.3)
- Non-controlling interests		(57.0)	(71.4)	14.4	(20.2)
<b>Profit for the period</b>		<b>270.9</b>	<b>930.9</b>	<b>(660.0)</b>	<b>(70.9)</b>

Q-o-PrevQ analysis:

- 1 Higher revenue mainly due to higher Group's sales of electricity.
- 2 Lower ICPT surcharge due to lower coal price.
- 3 Translation loss in 2QFY23 due to weakening of MYR against USD.
- 4 Higher tax expense in 2QFY23 due to higher forex loss and interest restriction in the quarter.

## Y-o-Y normalised EBITDA & PAT for 1HFY23

EBITDA Components	1HFY23 RM mil	1HFY22 RM mil
Reported EBITDA	9,548.1	10,576.9
MFRS16 impact	1 (2,130.1)	(2,203.0)
Normalised EBITDA	7,418.0	8,373.9

PAT Components	1HFY23 RM mil	1HFY22 RM mil
Reported PAT	1,201.8	1,776.8
Forex Translation loss	425.4	194.5
MFRS16 impact	1 355.0	474.1
Normalised PAT	1,982.2	2,445.4

### 1 MFRS16 impact:

	1HFY23 (RM mil)	1HFY22 (RM mil)	Variance (RM mil)
Capacity Payment	2,130.1	2,203.0	(72.9)
Depreciation	(1,759.4)	(1,928.7)	169.3
Finance Cost	(828.9)	(887.8)	58.9
Deferred Tax	103.2	139.4	(36.2)
Net Impact	<b>(355.0)</b>	<b>(474.1)</b>	<b>119.1</b>

# Higher Y-o-Y sales of electricity for the Group mainly driven by stronger economic growth and CEI UK acquisition

UNITS SOLD	2QFY23		1QFY23		Variance (2QFY23 vs 1QFY23)		1HFY23		1HFY22		Variance (1HFY23 vs 1HFY22)			
	GWh		GWh		GWh	%	GWh		GWh		GWh	%		
<b>Sales of Electricity (GWh)</b>														
- TNB	31,153.3		29,113.2		1	2,040.1	7.0	60,266.5		59,119.0	1	1,147.5	1.9	
- SESB	1,499.9		1,402.0			97.9	7.0	2,901.9		2,829.5		72.4	2.6	
- EGAT (Export)	-		0.1			(0.1)	-	0.1		0.3		(0.2)	(66.7)	
- TNBI (UK Wind)	13.2		24.1			(10.9)	(45.2)	37.3		44.5	2	(7.2)	(16.2)	
- TNBI (Vortex)	145.8		47.7			98.1	>100.0	193.5		200.4	2	(6.9)	(3.4)	
- TNBI (CEI UK LTD)	33.5		76.3			(42.8)	(56.1)	109.8		52.9	3	56.9	>100.0	
<b>Total Units Sold (GWh)</b>	<b>32,845.7</b>		<b>30,663.4</b>			<b>2,182.3</b>	<b>7.1</b>	<b>63,509.1</b>		<b>62,246.6</b>		<b>1,262.5</b>	<b>2.0</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	12,618.3	41.10	11,443.6	39.24	1	1,174.7	10.3	24,061.9	40.23	23,500.4	40.30	1	561.5	2.4
- Sales Discount	-		-			-	-	-		(2.2)			2.2	(100.0)
- SESB	529.7	36.18	478.8	34.17		50.9	10.6	1,008.5	35.20	965.5	34.55		43.0	4.5
- Accrued Revenue	(14.7)		197.8			(212.5)	>(100.0)	183.1		72.0			111.1	154.3
- EGAT (Export)	-		0.1			(0.1)	(100.0)	0.1		0.3			(0.2)	(66.7)
- TNBI (UK Wind)	26.6	201.52	35.5	147.30		(8.9)	(25.1)	62.1	166.49	62.5	140.45		(0.4)	(0.6)
- TNBI (Vortex)	165.9	113.79	34.8	72.96		131.1	>100.0	200.7	103.72	157.0	78.34		43.7	27.8
- TNBI (CEI UK LTD)	36.0	107.46	64.9	85.06		(28.9)	(44.5)	100.9	91.89	37.6	-		63.3	>100.0
<b>Sales of Electricity</b>	<b>13,361.8</b>	<b>40.68</b>	<b>12,255.5</b>	<b>39.97</b>		<b>1,106.3</b>	<b>9.0</b>	<b>25,617.3</b>	<b>40.34</b>	<b>24,793.1</b>	<b>39.83</b>		<b>824.2</b>	<b>3.3</b>
Other Regulatory Adjustment	(495.3)		(75.8)			(419.5)	>100.0	(571.1)		(451.4)		4	(119.7)	26.5
Relief Package from Government	-		-			-	-	-		0.6			(0.6)	(100.0)
SESB Tariff Support Subsidy	71.5		64.3			7.2	11.2	135.8		132.1			3.7	2.8
Fuel Subsidy - SESB	69.5		65.0			4.5	6.9	134.5		-		5	134.5	100.0
<b>Total Sales of Electricity</b>	<b>13,007.5</b>		<b>12,309.0</b>			<b>698.5</b>	<b>5.7</b>	<b>25,316.5</b>		<b>24,474.4</b>			<b>842.1</b>	<b>3.4</b>
Goods & Services	203.2		204.6			(1.4)	(0.7)	407.8		313.2		6	94.6	30.2
Construction contracts	43.2		40.7			2.5	6.1	83.9		67.3			16.6	24.7
Customers' Contribution	69.3		71.3			(2.0)	(2.8)	140.6		135.9			4.7	3.5
<b>Total Revenue</b>	<b>13,323.2</b>		<b>12,625.6</b>			<b>697.6</b>	<b>5.5</b>	<b>25,948.8</b>		<b>24,990.8</b>			<b>958.0</b>	<b>3.8</b>

1 Higher units sold and sales of electricity from commercial and domestic sectors.

2 1HFY23 vs 1HFY22: Lower generation mainly due to lower irradiance and lower wind speed.

3 1HFY23 vs 1HFY22: Acquisition of 97.3MW onshore wind portfolio (UK) in April 2022.

4 Refer Other Regulatory Adjustment slide.

5 1HFY23 vs 1HFY22: Reported as Revenue starting from 4QFY22 due to IBR implementation in SESB.

6 Higher revenue recorded by subsidiaries.

# As at 1HFY23, other regulatory adjustment of RM571.1 mil to be returned

## Components of Other Regulatory Adjustment

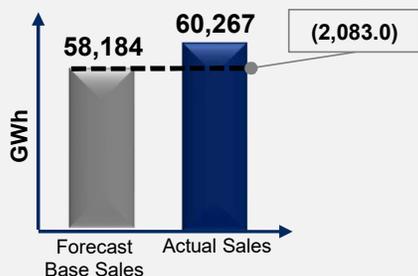
Revenue Adjustment for Revenue Cap & Price Cap
Refund Related to Regulated Business
Regulatory Adjustment for SESB*
<b>TOTAL</b>

1QFY23 (RM mil)	2QFY23 (RM mil)	1HFY23 (RM mil)	1HFY22 (RM mil)
(1.4)	(418.1)	1 (419.5)	(283.6)
(71.1)	(67.8)	(138.9)	(177.0)
(3.2)	(9.5)	(12.7)	9.2
<b>(75.8)</b>	<b>(495.3)</b>	<b>(571.1)</b>	<b>(451.4)</b>

\*SESB has implemented IBR framework starting 1 January 2022

## Revenue Cap

1HFY23 Variation in Sales (in GWh)

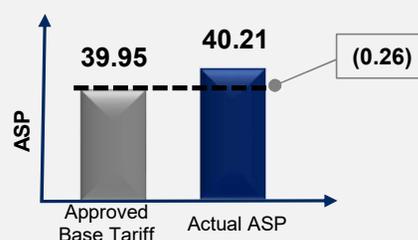


- The allowed annual revenue for revenue cap entities is based on 58.2TWh demand growth. Any excess/shortfall is adjusted through revenue adjustment mechanism.
- For 1HFY23, higher actual sales has led to amount to be returned via revenue adjustment mechanism.

Business Entities	Allowed Tariff (sen/kWh)	Variation in Sales (GWh)	Adjustment (RM mil)
Revenue Cap Entities	12.60	(2,083.0)	(262.1)*

## Price Cap

1HFY23 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 1HFY23, 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	60,267	0.26	(157.4)*

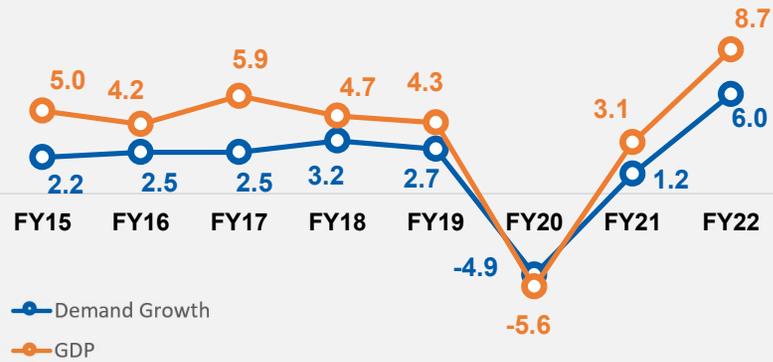
\* Numbers manually computed will not match due to decimal variance

# New peak demand recorded in 2QFY23

## GDP & TNB Demand Growth

%

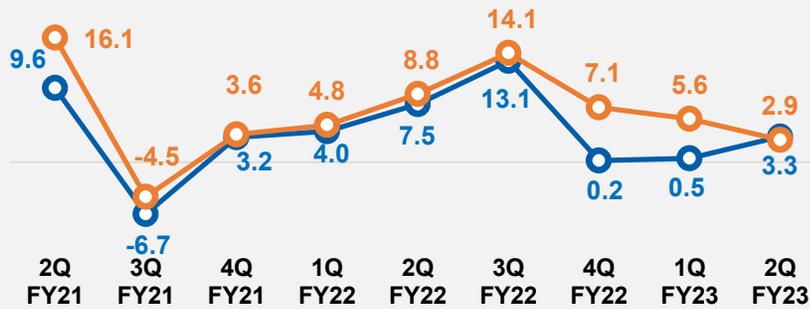
Full Year



%

Year-on-Year

\*GDP FY2023 (F): 4.0-5.0%



## TNB (Peninsular) Yearly Peak Demand

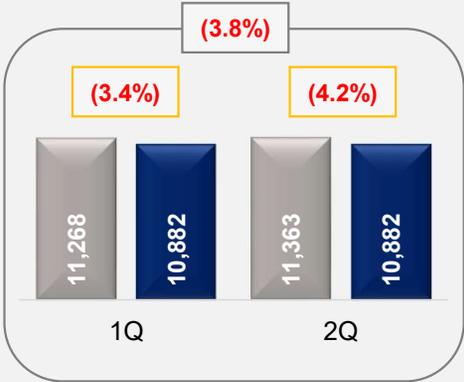
MW



\*Source : Economic and Financial Developments in Malaysia in the Second Quarter of 2023, BNM

# Improved Y-o-Y electricity demand mainly contributed by commercial and domestic sectors

## Industrial



1HFY23 main contributors for the increase in commercial sector:

- Retails, business services and accommodation services

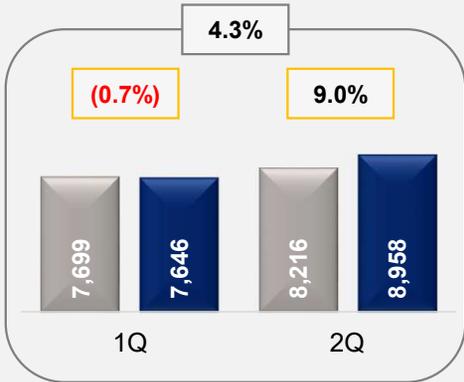
Unit Sales (GWh) Growth



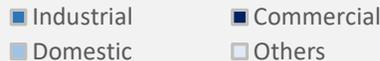
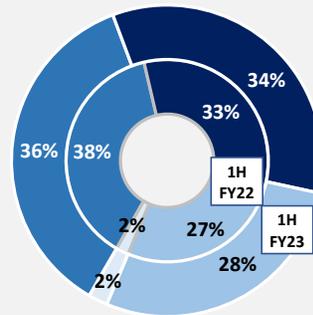
## Commercial



## Domestic

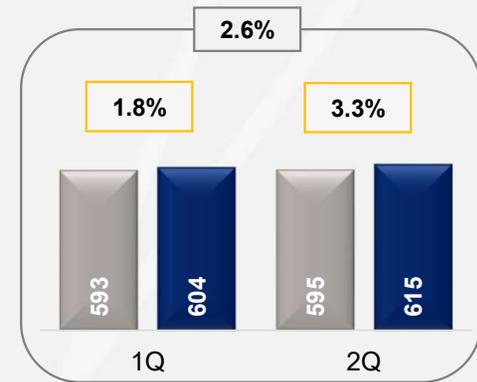


## Sector Mix (%) 1HFY23 vs 1HFY22



## Others\*

\*includes Agriculture, Mining & Public Lighting



## Lower Y-o-Y operating expenses due to reduction in generation cost

	2QFY23 (RM mil)	1QFY23 (RM mil)	Variance (2QFY23 vs 1QFY23)		1HFY23 (RM mil)	1HFY22 (RM mil)	Variance (1HFY23 vs 1HFY22)	
			RM mil	%			RM mil	%
<b>Non-TNB IPPs Costs</b>	<b>4,001.0</b>	<b>3,708.3</b>	<b>292.7</b>	<b>7.9</b>	<b>7,709.3</b>	<b>7,564.3</b>	<b>145.0</b>	<b>1.9</b>
Capacity Payment	14.9	(106.3)	121.2	>(100.0)	(91.4)	(188.4)	97.0	(51.5)
Energy Payment	3,986.1	3,814.6	171.5	4.5	7,800.7	7,752.7	48.0	0.6
<b>TNB Fuel Costs</b>	<b>5,067.1</b>	<b>5,491.1</b>	<b>(424.0)</b>	<b>(7.7)</b>	<b>10,558.2</b>	<b>12,437.4</b>	<b>(1,879.2)</b>	<b>(15.1)</b>
Fuel Costs	5,046.8	6,141.7	(1,094.9)	(17.8)	11,188.5	8,711.8	2,476.7	28.4
Fuel Price Adjustment	20.3	(650.6)	670.9	>(100.0)	(630.3)	4,104.0	(4,734.3)	>(100.0)
Fuel Subsidy - SESB	0.0	0.0	0.0	>(100.0)	0.0	(378.4)	378.4	(100.0)
<b>Total Cost of Generation</b>	<b>9,068.1</b>	<b>9,199.4</b>	<b>(131.3)</b>	<b>(1.4)</b>	<b>18,267.5</b>	<b>20,001.7</b>	<b>(1,734.2)</b>	<b>(8.7)</b>
<b>Staff Costs</b>	<b>1,002.4</b>	<b>938.3</b>	<b>64.1</b>	<b>6.8</b>	<b>1,940.7</b>	<b>1,871.9</b>	<b>68.8</b>	<b>3.7</b>
<b>Repair &amp; Maintenance</b>	<b>724.4</b>	<b>621.1</b>	<b>103.3</b>	<b>16.6</b>	<b>1,345.5</b>	<b>1,014.9</b>	<b>330.6</b>	<b>32.6</b>
<b>TNB General Expenses</b>	<b>376.9</b>	<b>412.4</b>	<b>(35.5)</b>	<b>(8.6)</b>	<b>789.3</b>	<b>810.0</b>	<b>(20.7)</b>	<b>(2.6)</b>
<b>Subs. General Expenses</b>	<b>423.0</b>	<b>470.3</b>	<b>(47.3)</b>	<b>(10.1)</b>	<b>893.3</b>	<b>872.9</b>	<b>20.4</b>	<b>2.3</b>
<b>Total Non-Generation Cost</b>	<b>2,526.7</b>	<b>2,442.1</b>	<b>84.6</b>	<b>3.5</b>	<b>4,968.8</b>	<b>4,569.7</b>	<b>399.1</b>	<b>8.7</b>
<b>Total Operating Expenses (without Depreciation)</b>	<b>11,594.8</b>	<b>11,641.5</b>	<b>(46.7)</b>	<b>(0.4)</b>	<b>23,236.3</b>	<b>24,571.4</b>	<b>(1,335.1)</b>	<b>(5.4)</b>
<b>Depreciation &amp; Amortisation</b>	<b>2,795.7</b>	<b>2,801.6</b>	<b>(5.9)</b>	<b>(0.2)</b>	<b>5,597.3</b>	<b>5,579.0</b>	<b>18.3</b>	<b>0.3</b>
<b>Total Operating Expenses</b>	<b>14,390.5</b>	<b>14,443.1</b>	<b>(52.6)</b>	<b>(0.4)</b>	<b>28,833.6</b>	<b>30,150.4</b>	<b>(1,316.8)</b>	<b>(4.4)</b>

1 Reported as Revenue in 4QFY22 due to IBR implementation in SESB.

2 Reduction in generation cost due to lower coal price (refer Fuel Cost slide).

3 1HFY23 vs 1HFY22: Higher expenses driven by higher R&M activities.

# Lower overall fuel cost due to lower coal prices in 1HFY23, albeit higher gas cost

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

Fuel Type	1HFY23	1HFY22	Variance	
			RM mil	%
Coal	11,230.2	13,246.6	(2,016.4)	(15.2)
Gas	5,436.6	5,341.1	95.5	1.8
Distillate	118.6	354.3	(235.7)	(66.5)
Oil	11.8	103.1	(91.3)	(88.6)
<b>Total</b>	<b>16,797.2</b>	<b>19,045.1</b>	<b>(2,247.9)</b>	<b>(11.8)</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	1HFY23		1HFY22		Variance	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	37,385.1	57.0%	36,396.9	56.0%	988.2	2.7
Gas & LNG	24,039.0	36.7%	24,762.1	38.1%	(723.1)	(2.9)
Distillate	99.5	0.2%	476.3	0.7%	(376.8)	(79.1)
Oil	-	0.0%	-	0.0%	-	-
Hydro	2,953.2	4.5%	2,678.1	4.1%	275.1	10.3
Solar	1,071.3	1.6%	703.5	1.1%	367.8	52.3
<b>Total</b>	<b>65,548.1</b>	<b>100.0%</b>	<b>65,016.9</b>	<b>100.0%</b>	<b>531.2</b>	<b>0.8</b>

**Table C – Fuel Costs Related Data**

Fuel statistics	1HFY23	1HFY22
Average Coal Price Delivered (USD/MT)(CIF)	156.4	198.0
Average Coal Price Delivered (RM/MT)(CIF)	697.4	847.3
Coal Consumption (mil MT)	16.4	15.8
Gas Reference Market Price (RM/mmbtu)	1Q'FY23 Tier 1 : 30.0 Tier 2 : 62.1	1Q'FY22 Tier 1 : 30.0 Tier 2 : 36.9
	2Q'FY23 Tier 1 : 30.0 Tier 2 : 51.7	2Q'FY22 Tier 1 : 30.0 Tier 2 : 38.2
Daily Average Piped Gas Volume (mmscfd)	873	909

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

	1HFY23	1HFY22	Variance	
			USD	%
FOB	146.5	184.2	(37.7)	(20.5)
Freight	9.5	13.3	(3.8)	(28.8)
Others	0.5	0.5	(0.0)	-
<b>CIF</b>	<b>156.4</b>	<b>198.0</b>	<b>(41.6)</b>	<b>(26.6)</b>

## Lower Q-o-Q fuel costs mainly due to lower coal price

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

Fuel Type	2QFY23		1QFY23		Variance 2QFY23 vs 1QFY23	
	RM mil	%	RM mil	%	RM mil	%
Coal	5,640.9		5,589.3		51.6	0.9
Gas	2,495.9		2,940.7		(444.8)	(15.1)
Distillate	81.6		37.0		44.6	>100.0
Oil	10.2		1.6		8.6	>100.0
<b>Total</b>	<b>8,228.6</b>		<b>8,568.6</b>		<b>(340.0)</b>	<b>(4.0)</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	2QFY23		1QFY23		Variance 2QFY23 vs 1QFY23	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	20,470.6	60.1%	16,914.5	53.7%	3,556.1	21.0
Gas & LNG	11,597.7	34.0%	12,441.3	39.5%	(843.6)	(6.8)
Distillate	67.7	0.2%	31.8	0.1%	35.9	>100.0
Oil	-	0.0%	-	0.0%	-	-
Hydro	1,361.8	4.0%	1,591.4	5.1%	(229.6)	(14.4)
Solar	566.5	1.7%	504.7	1.6%	61.8	12.2
<b>Total</b>	<b>34,064.3</b>	<b>100.0%</b>	<b>31,483.7</b>	<b>100.0%</b>	<b>2,580.6</b>	<b>8.2</b>

**Table C – Fuel Costs Related Data**

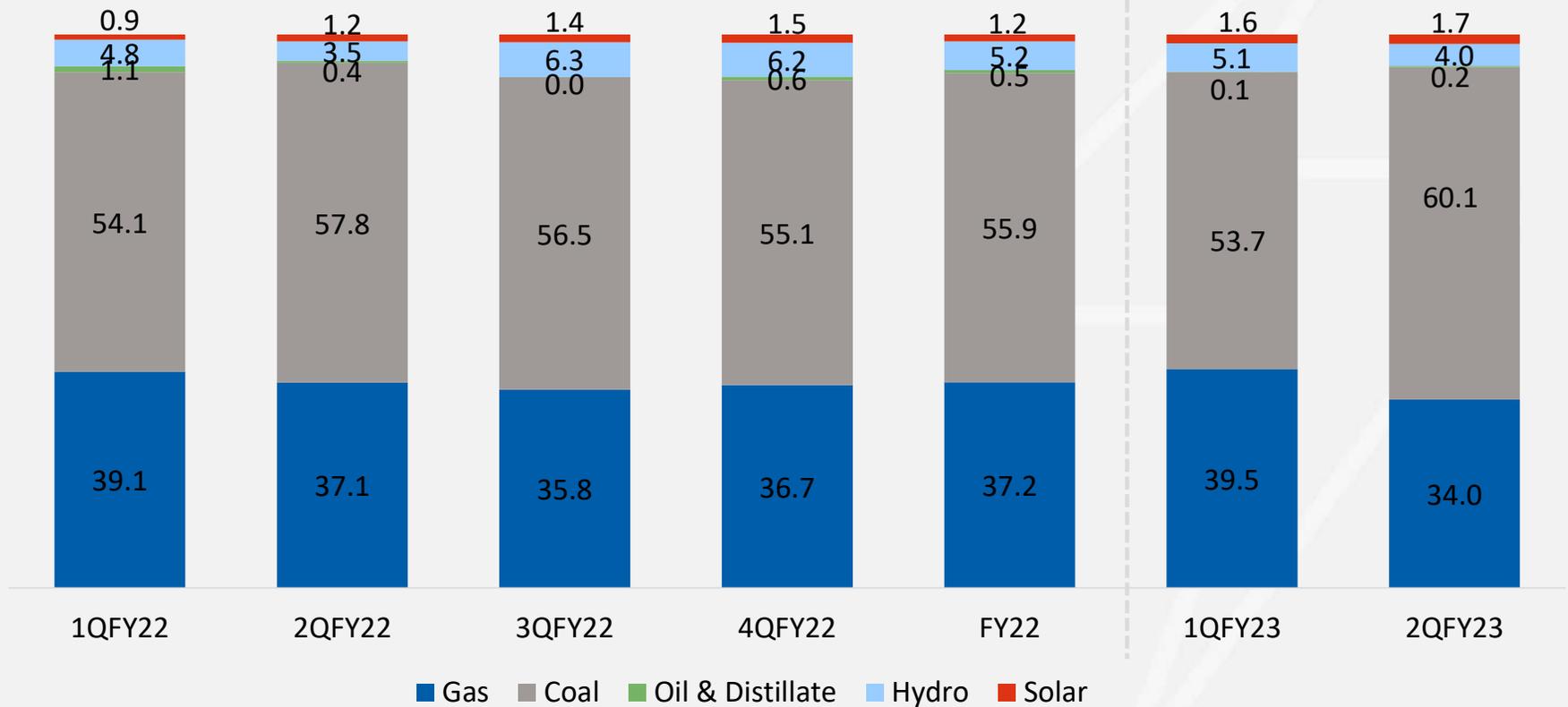
Fuel statistics	2QFY23	1QFY23
Average Coal Price Delivered (USD/MT)(CIF)	137.3	177.5
Average Coal Price Delivered (RM/MT)(CIF)	623.2	779.4
Coal Consumption (mil MT)	8.9	7.5
Gas Reference Market Price (RM/mmbtu)	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 51.7	Tier 2 : 62.1
Daily Average Piped Gas Volume (mmscfd)	840	907

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

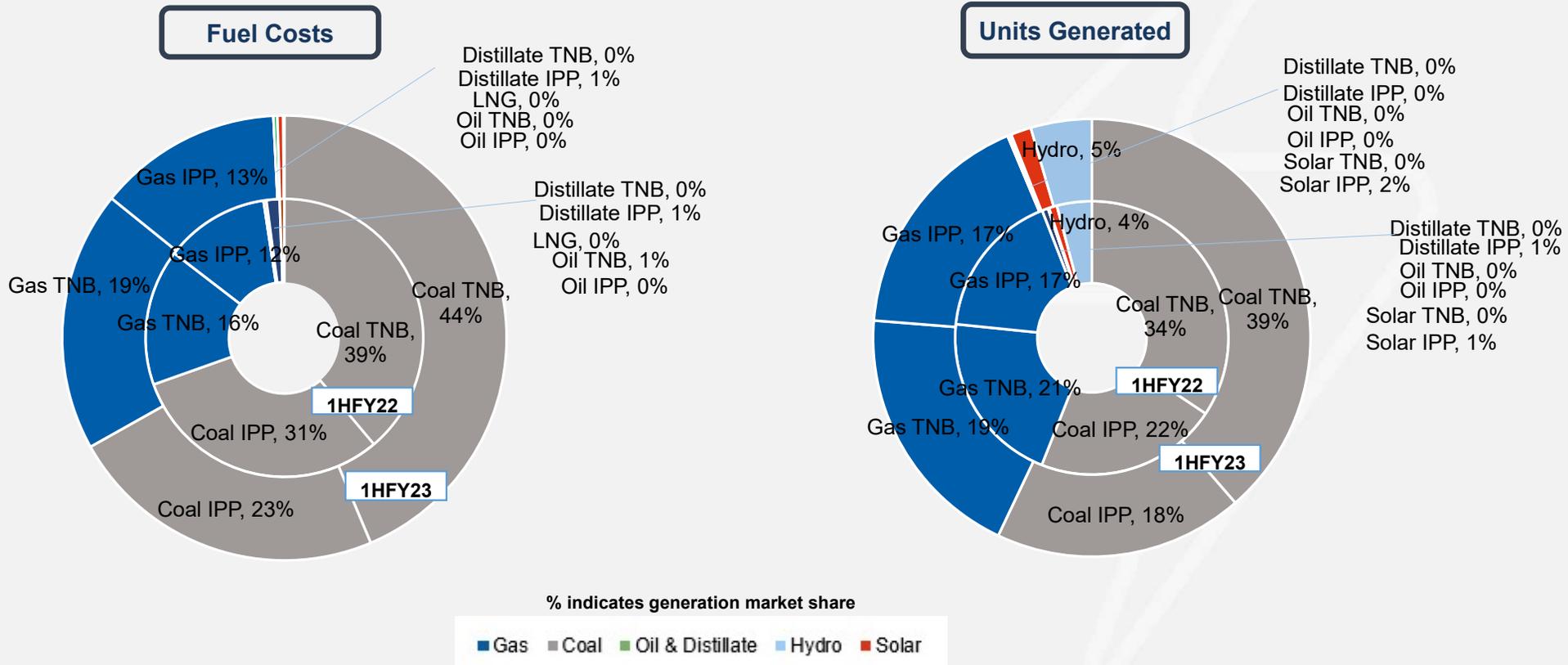
	2QFY23		1QFY23		Variance 2QFY23 vs 1QFY23	
	USD	%	USD	%	USD	%
FOB	127.9		167.1		(39.2)	(23.5)
Freight	8.9		10.0		(1.1)	(11.0)
Others	0.5		0.4		0.1	25.0
<b>CIF</b>	<b>137.3</b>		<b>177.5</b>		<b>(40.2)</b>	<b>(22.6)</b>

## Higher generation from coal in 2QFY23

Generation Mix for Industry (%)



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



Note: Fuel Costs exclude solar and hydro

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

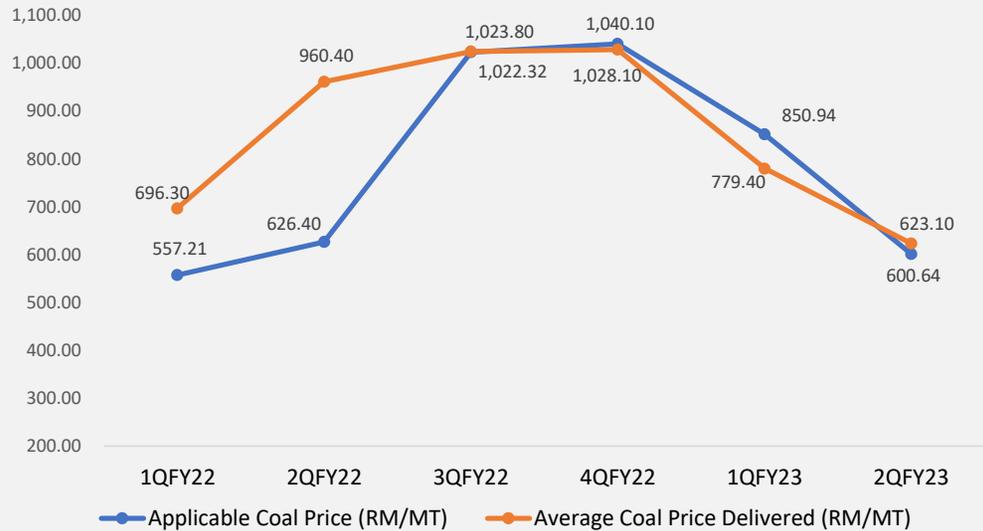
	2QFY22 (RM mil)	3QFY22 (RM mil)	4QFY22 (RM mil)	1QFY23 (RM mil)	2QFY23 (RM mil)
Reported Total Cost of Generation (with MFRS16)	11,634.6	11,029.5	12,052.8	9,199.4	9,068.1
Adjustment not related to IBR	948.3	840.2	* 307.2	726.3	752.4
TNB Capacity and VOR: SLA & SPV	1,621.5	2,191.0	1,744.5	1,334.3	1,201.9
<b>Total Generation Costs (Related to IBR)</b>	<b>14,204.4</b>	<b>14,060.7</b>	<b>14,104.5</b>	<b>11,260.0</b>	<b>11,022.4</b>

	2QFY22 (RM mil)	3QFY22 (RM mil)	4QFY22 (RM mil)	1QFY23 (RM mil)	2QFY23 (RM mil)
Single Buyer Actual Generation Costs: <b>(A)</b>	14,204.4	14,060.7	14,104.5	11,260.0	11,022.4
<i>Actual Sales (GWh)</i>	30,159.7	30,347.5	29,415.1	29,113.2	31,153.3
<i>Single Buyer Tariff (RM/kWh)</i>	0.2620	0.2620	0.2620	0.2620	0.2620
Actual Generation Cost Recovered (RM mil) <b>(B)</b>	7,901.8	7,951.0	7,706.8	7,627.7	8,162.2
<b>ICPT Surcharge / (Rebate) (C)</b> <b>(C = A – B)</b>	<b>6,302.6</b>	<b>6,109.6</b>	<b>6,397.7</b>	<b>3,632.3</b>	<b>2,860.2</b>

\*Reclass of SESB Fuel Subsidy from cost to revenue in 4QFY22

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

### Coal Price Trending



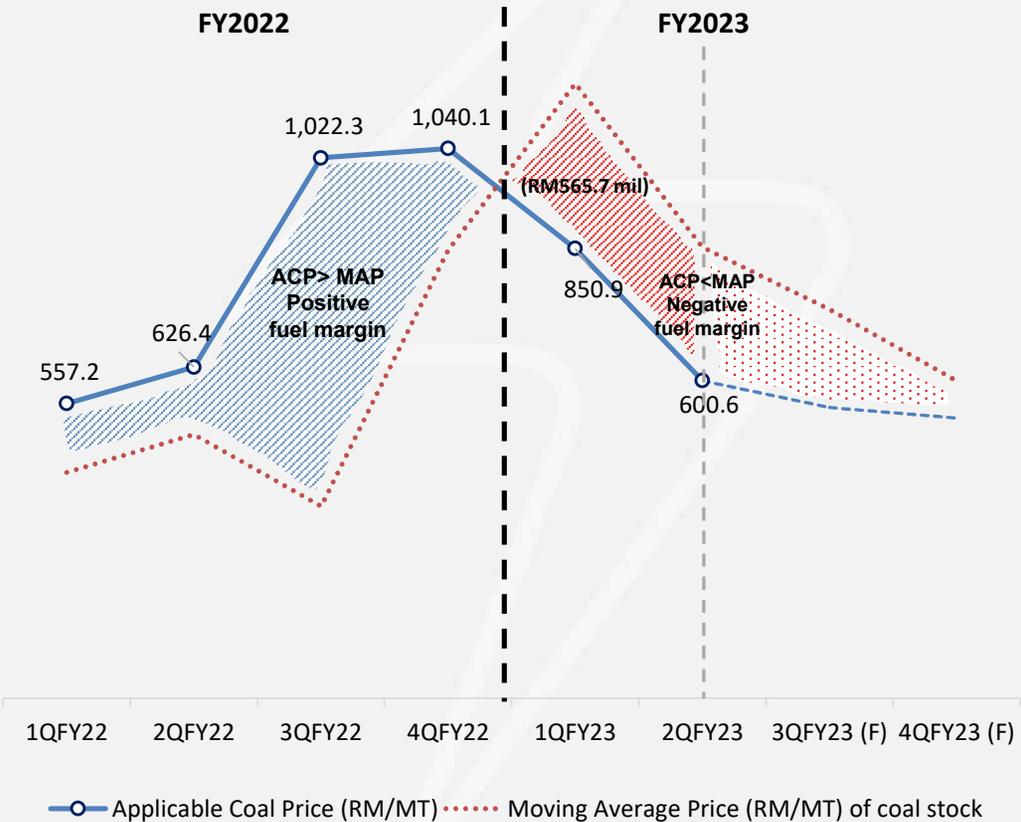
#### Coal Price & Applicable Coal Price (ACP) comparison

	1QFY22	2QFY22	3QFY22	4QFY22	1QFY23	2QFY23
Average Coal Price Delivered (RM/mmbtu) *	31.88	46.76	48.88	44.96	35.85	29.43
ACP (RM/mmbtu)	25.53	28.70	46.84	47.65	38.77	27.52

\* Based on internal conversion

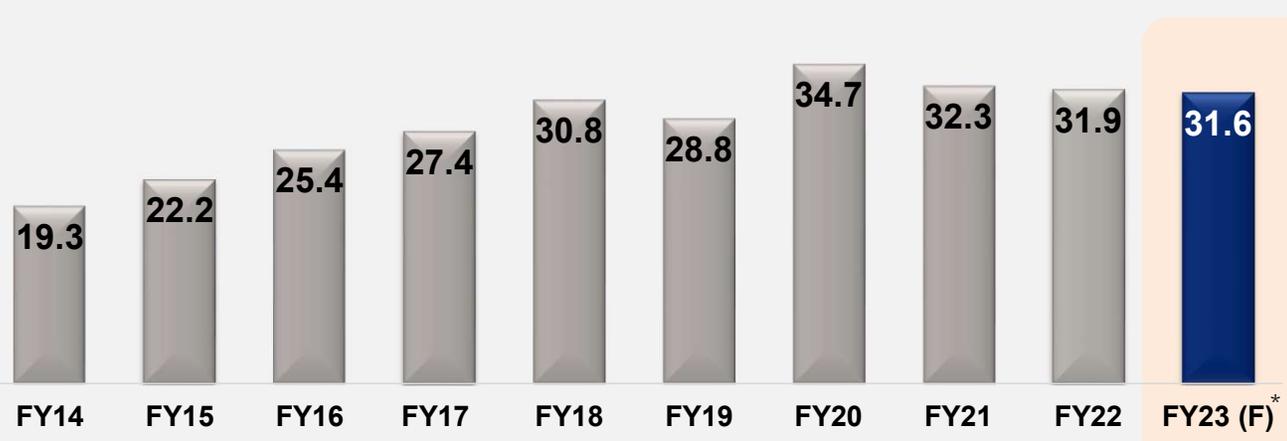
- **Fuel Price Adjustments (FPA)** is the difference between the Applicable Coal Price (ACP) billed to generators and the actual coal price paid to supplier (delivered) by TNBF. The difference is caused by higher or lower coal price or due to currency exchange.
- ACP is set by Energy Commission on a monthly basis starting from August 2022.
- In 2QFY23, the base ACP (RM27.52/mmbtu) used for billing the generators is lower than the coal price paid to supplier (RM29.43/mmbtu).

### Illustration for Generators' Fuel Margin: Applicable Coal Price (ACP) vs Moving Average Price (MAP)



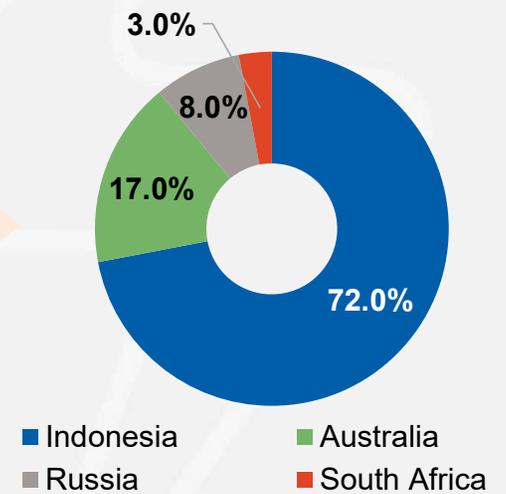
# Industry coal requirement forecast for FY2023

**Coal Consumption (mil MT)**

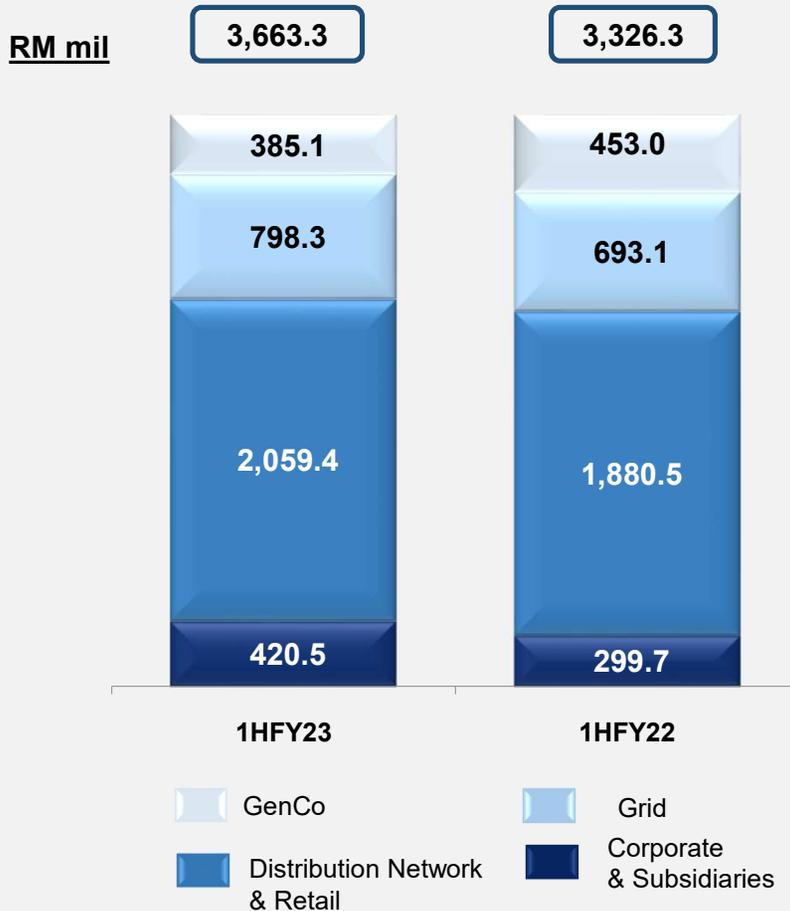


\* Based on tonnage planned for delivery in FY2023

**Source Country Mix**



## Group CAPEX



## Regulated CAPEX and Regulated Asset Base (RAB)

FY	RP3 REGULATED ENTITIES CAPEX		
	IBR Approved (RM mil)	Actual YTD (RM mil)	Utilisation (%)
2023	6,973.1	2,830.1	40.6%

Total RAB (RM mil)	
Actual As at 30 June 2023	Approved FY2023
61,858.6	64,768.7
Regulatory net returns: RM2,337.9 mil	

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

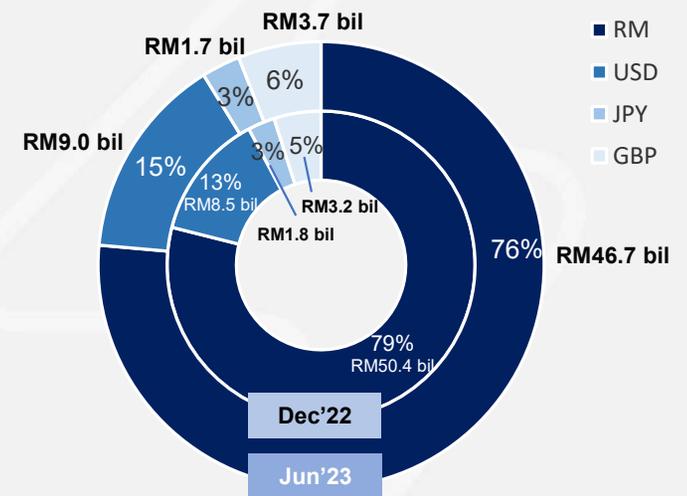
## Gearing improved to 50.2% as at 1HFY23

Statistics	30 Jun 2023	31 Dec 2022
Total Debt (RM bil)	61.1	63.9
Net Debt (RM bil)*	43.8	50.8
Gearing (%)	<b>50.2</b>	51.2
Net Gearing (%)	36.0	40.7
<b>Fixed : Floating</b>		
Underlying	94:6	95:5
Final Exposure	98:2	99:1
Effective Average Cost of Borrowing (based on exposure) **	4.73	4.63

\* Net Debt excludes deposits, bank and cash balances and investment in UTF

\*\* Inclusive of interest rate swap

### Loan Breakdown



Closing FOREX	30 Jun 2023	31 Dec 2022
USD/RM	4.679	4.412
100YEN/RM	3.233	3.326
GBP/RM	5.902	5.312

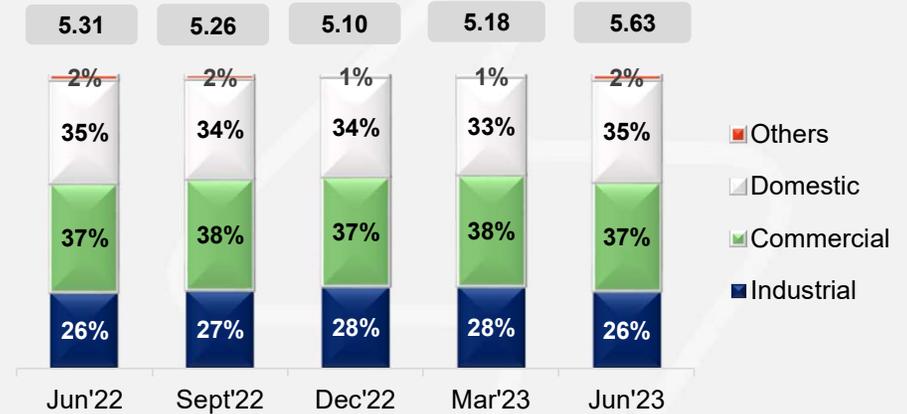
Note:  
Debt consists of Principal + Accrued Interest

# Trade debtors ageing as at 1HFY23

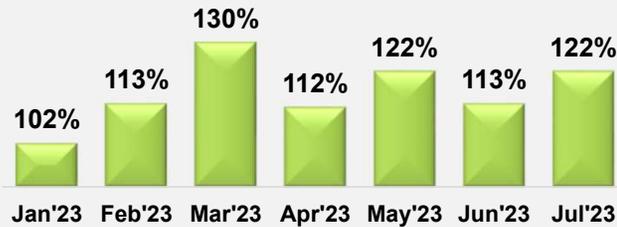
Trade Debtors Ageing (RM bil)



Trade Receivables By Sectors (RM bil)



## Improvement in collection trend



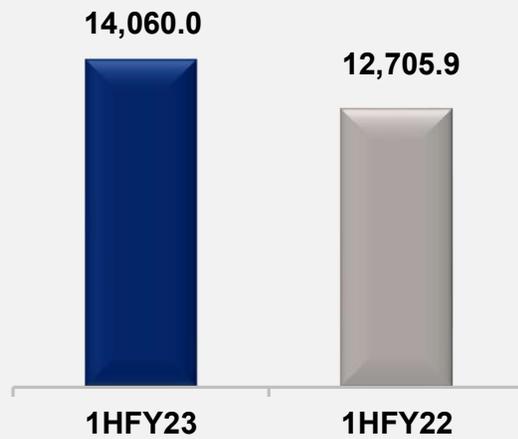
## Cash flow

- We continuously monitor our cash flow position on a daily basis and remain prudent on our working capital management.

# Domestic generation business performance

RM mil

## REVENUE



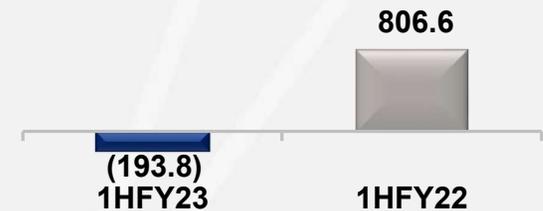
Higher revenue mainly due to higher energy payment resulted from higher fuel prices

## EBIT

*EBIT without fuel margin*



## PROFIT AFTER TAX

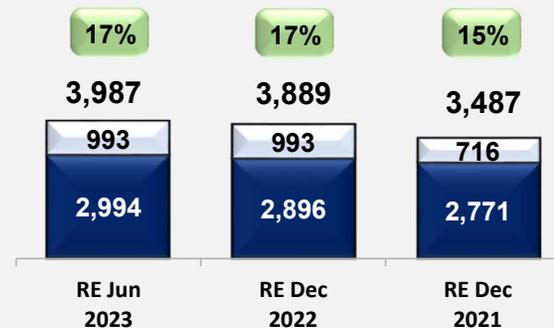


Lower EBIT and PAT due to:

- Impact of negative fuel margin of RM565.7 mil; and
- CRF step down of certain power plants starting from 3QFY22.

# Our RE journey is progressing well

## TNB RE Journey Renewable capacity (MW)



- % RE in TNB's portfolio
- ▤ International
- Domestic

Note:

- RE capacity includes large hydro
- Gross RE Capacity
- Solar capacity is quoted in MWp starting from 2QFY23

## Recent RE Progress

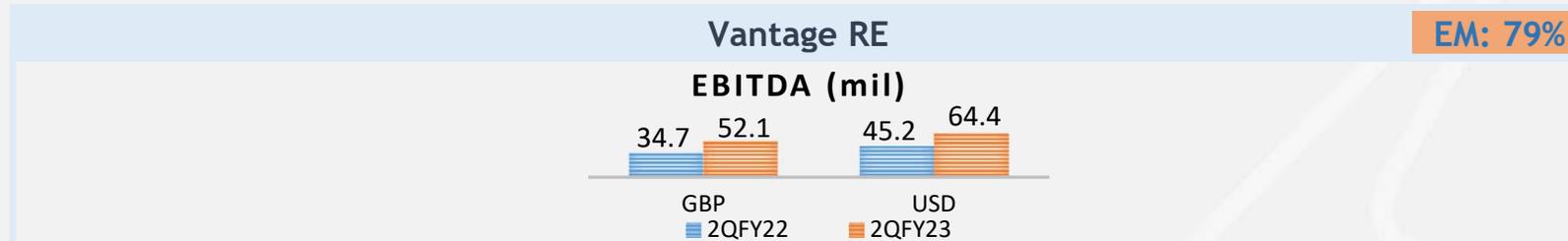
### 1) Domestic renewables

- We have signed a 30-year power purchase agreement for the 300MW Nenggiri hydro plant which is expected to achieve Commercial Operation Date (COD) on 1 June 2027. The construction works have started since 1 March 2022.
- **GSPARX has successfully secured a total capacity of 294.1MWp as of June 2023. (Dec 2022: secured 240.9MW, Dec 2021: secured 116.3MW).**
- Successfully commissioned a biogass of 1.6MW in Kempas, Melaka.
- Successfully commissioned a mini hydro of 4.0MW in Sungai Tersat, Kuala Berang in December 2021.

### 2) UK / Europe renewables

- In December 2022, we have successfully acquired 102MW of solar farms in the UK & potential development of 65MW for battery storage. The solar farms are expected to achieve COD by 1Q 2024.
- In June 2022, Bajoli Holi hydro power plant of 180MW in GMR was successfully commissioned.
- In April 2022, we successfully acquired 97.3MW Onshore Wind Portfolio in the UK.
- We have successfully acquired a 49% stake in Blyth Offshore Demonstrator Ltd (BODL), an offshore UK wind farm company in October 2021, with existing floating offshore wind capacity of 41.5MW and further development rights for similar type of RE of up to 58.4MW.
- In May 2021, we acquired a 500kW FIT turbine in the UK.
- The formation and establishment of Vantage RE Ltd or RACo has been completed on 1 July 2021.

## International Business - Core/Renewable Energy (RE) Assets Performance as at June 2023



- Higher Y-o-Y EBITDA due to additional contribution from wind portfolio (97.3MW) and higher locked-in PPA prices in 2QFY23.
- Total cash distribution declared to date amounting to GBP161.2mil.

### Outlook for Vantage RE:

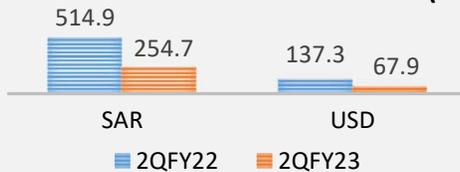
- In FY2022, Vantage had successfully completed the acquisition of a 97.3MW operating onshore wind portfolio and its first greenfield acquisition, a 102MW Ready-to-Build (RTB) solar portfolio with an option to develop 65MW Battery Energy Storage System (BESS) in the UK. The expected Commercial Operation Date (COD) of the solar portfolio is 2024.
- Vantage is focused on expanding its current pipeline build to include more greenfield assets at various stages and technologies within its European target markets, as it pursues its growth strategy.
- Vantage Solar and CEI UK have also locked-in Renewable Energy Guarantees of Origin (REGO) prices with expected upside over the next 5 years.
- The UK Government has introduced the Electricity Generator Levy (EGL) beginning 1 January 2023 until 31 March 2028. There will be a new 45% tax on receipts made by low carbon generators above a benchmark power price of £75/MWh (referred to as Exceptional Generation Receipts), with an allowance of GBP10 mil per annum. The supplementary EGL technical note benchmark price will be indexed with CPI from 2025 onwards, and revenue relating to sale of Renewables Obligation Certificates (ROCs), REGOs, and Feed-in-Tariff payments are excluded.
- A stabilising merchant power prices trend has been observed in 2023. As part of prudent price exposure risk management, Vantage management has locked-in the PPA prices of most of its capacity under its portfolio.
- Inflation has decreased to 7.9% in June 2023, a drop from 10.1% recorded in March 2023. The Bank of England (BoE) forecasts inflation to reach just over 5.0% in late 2023 and below its 2.0% target by early 2025. No adverse impact is anticipated as Vantage's subsidy revenue is inflation linked and likely to offset any increase in operating expenses.

## International Business - Core/Renewable Energy (RE) Assets Performance as at June 2023

### Shuaibah

EM: 69%

#### EBITDA (mil)



- Lower Y-o-Y EBITDA due to lower revenue as a result of reclassification from operating lease to finance lease resulting from SWEC's project restructuring after the signing of the amended PWPA on 20 June 2022.

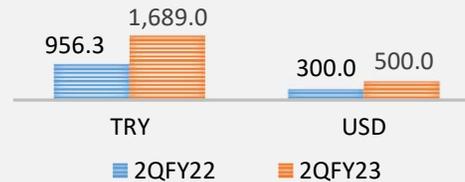
#### Outlook for Shuaibah:

- Shuaibah is to remain largely unimpacted by the Russia-Ukraine war as the Power and Water Purchase Agreement (PWPA) has been contracted for 20 years with the Saudi Government as the offtaker.
- Shuaibah's performance is expected to remain positive with a consistent dividend distribution to shareholders.

### GAMA Enerji A.S. (GEAS)

EM: 13%

#### EBITDA (mil)<sup>1</sup>



- Higher Y-o-Y EBITDA is mainly contributed by the hyper-inflationary accounting adjustment made in 1Q 2023 as per IAS29.

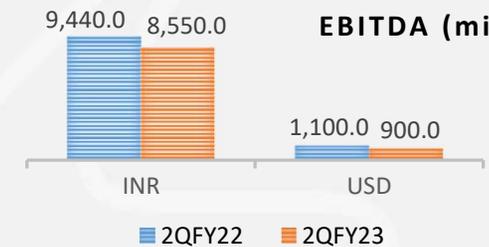
#### Outlook for GEAS:

- Turkey's inflation further reduced to 38.2% in June 2023 from 39.6% in May 2023, the lowest since December 2021. Furthermore, Turkish Lira (TRY) further depreciated against US Dollars (USD) with closing rate increased to 26.01 from 20.76 in May 2023.
- Turkish President's promise of free natural gas for households has resulted in a slowdown in overall inflation.
- Moreover, Turkish Central Bank had increased its policy rate to 15% on 22 June 2023 from 8.50% in May 2023 to establish disinflation, manage inflation expectations, and control pricing behaviour.
- GEAS has already made partial debt repayment for 2023 and 2024 outstanding amount and is expected to secure payment for principal and interest in 2023 and 2024 from DIWACO's dividends and ICAN's cash flows.

### GMR Energy Limited (GEL)

EM: 33%

#### EBITDA (mil)<sup>1</sup>



- Lower Y-o-Y EBITDA due to higher import coal expenses in Warora and Kamalanga in this quarter and the plant shutdown in Bajoli Holi.

#### Outlook for GEL:

- Power demand is expected to grow from June 2023 onwards due to rise in temperature in the summer season.
- Both Kamalanga and Warora had further imported coal in 2Q 2023 in order to meet their coal requirements. Two consignments of import coal are planned in Kamalanga for 3Q 2023 and 4Q 2023 requirement, currently under final stages of order placement for one of the consignment while no plans to further import coal in Warora.
- In the near term, Coal India Ltd. (CIL), being the only domestic coal supplier to our plants, had demonstrated its ability to meet its annual coal targets.
- TNB is supportive of GEL's current initiatives to preserve value and sustainability of the portfolio, while in parallel pursuing exit strategies to enable TNB to re-focus its resources and capital into Renewable Energy (RE) in key markets, in line with TNB's approved "Reimagining TNB Strategy".

Notes :

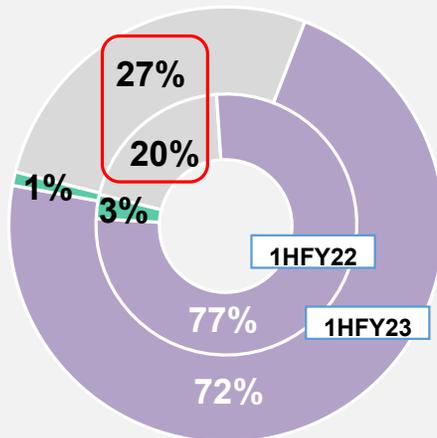
EM : YTD EBITDA Margin

<sup>1</sup>Reported 3 months lagging

## Higher TNB coal contribution for 1HFY23 due to higher demand

- % Actual Group revenue: 27% (1HFY22: 20%)
- % Units generated: 39% (1HFY22: 34%); lower coal IPP dispatch due to unavailability

Actual Group Revenue\*

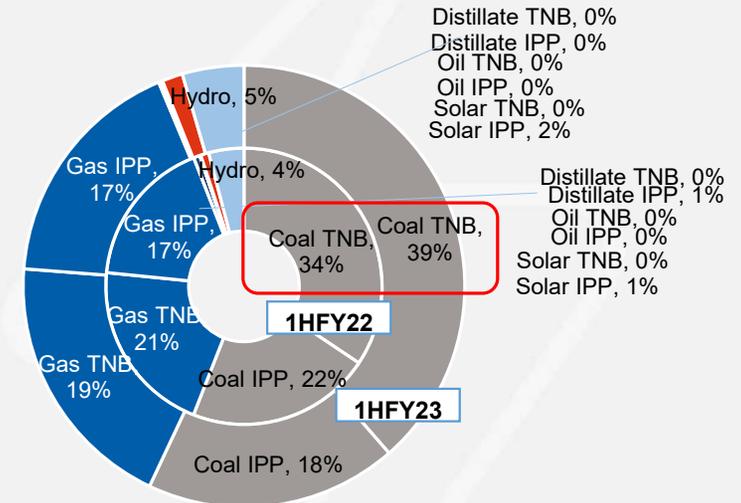


RE Coal Others \*\*

\* Total revenue includes ICPT

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

Units Generated



Gas Coal Oil & Distillate Hydro Solar & Others

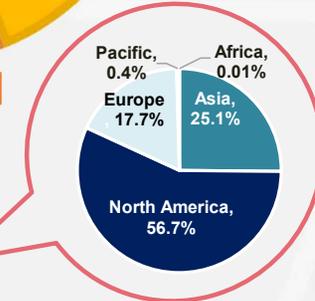
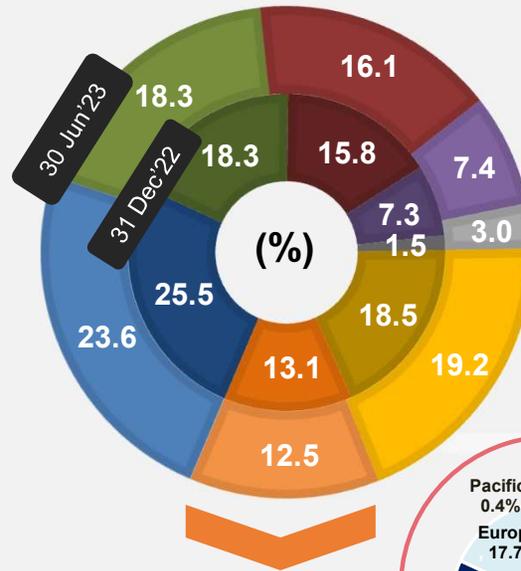


**Long-term aspiration:  
aims to be coal-free by  
2050**

- No new coal plant investment in the pipeline
- Reduction of coal capacity by 50% by 2035 & coal-free by 2050

# Shareholdings

- Khazanah Nasional Berhad
- Permodalan Nasional Berhad (PNB)
- Employees Provident Fund Board (EPF)
- Kumpulan Wang Persaraan (KWAP)
- Other Government Agencies
- Local Corporation & Retail
- Foreign Shareholding



**Foreign Shareholding (%)**



**Institutional: 12.3%**  
**Individual: 0.2%**

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# Thank you

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