

# 3Q FY2022 Analysts Briefing

8 December 2022

# Key Highlights: Fair performance and prudent capital management sustained amidst challenging times





- a) Sustained resilient financial performance
- b) Solid technical operations contributed by generation performance and world-class network standard



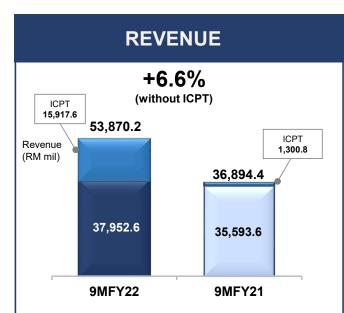
### Prudent Capital Management

- a) Timely ICPT cost recovery and utilisation of Government guaranteed funding in managing high fuel prices
- b) Improved average collection rate





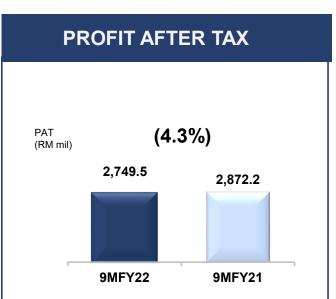
Fair 9MFY22 financial performance supported by the higher Group electricity demand of 7.2% year-on-year, in line with Malaysia economic growth



- Increase in TNB sales of electricity, driven by higher consumption in all sectors especially from commercial sector (+19.2% year-onyear), consistent with the overall improvement of Malaysia's GDP of 9.3% year-on-year.
- Peninsula Malaysia electricity demand grew by 8.1% year-on-year.



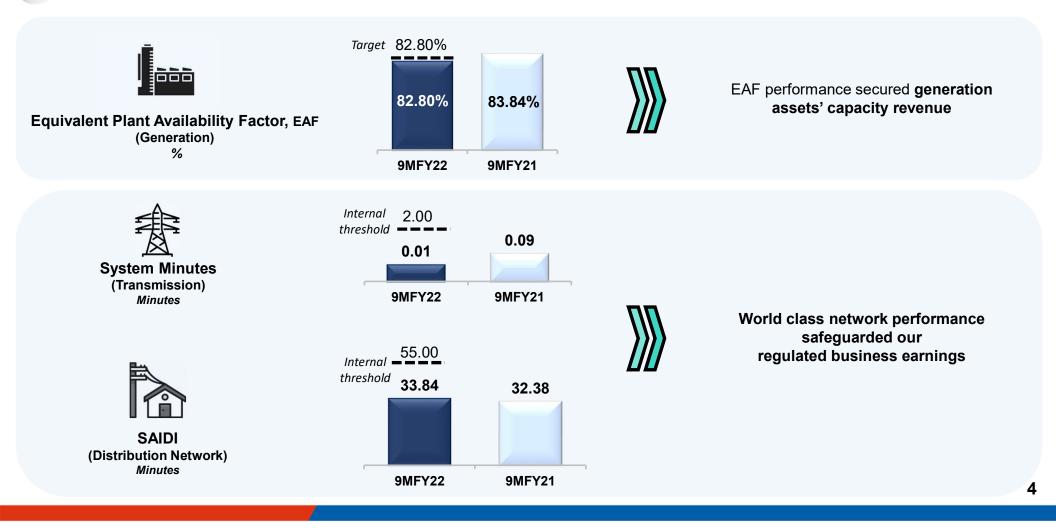
- Driven by higher Group electricity revenue and lower Allowance for Doubtful Debts (ADD 9MFY22: RM105.0 mil, 9MFY21: RM581.2 mil).
- EBITDA margin (without ICPT) has improved to 43.0% from 40.4% as compared to the same period last year reflecting improvement in our performance.



- PAT impacted by:
  - i. Net forex loss of RM584.3 mil in 9MFY22 due to the weakening of MYR against USD.
  - ii. Higher finance cost mainly from MFRS16 adjustment from Edra Melaka power plant (RM234.4 mil).
  - iii. Higher tax expense was attributable to lower capital allowances as at 9MFY22 and deferred tax. Impact from slower asset build up will be normalised by Dec'22.

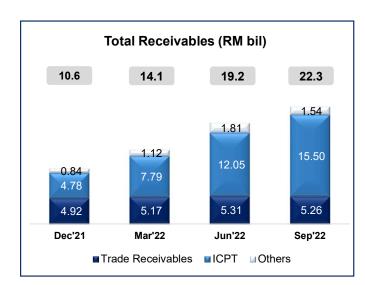


## 1b Solid generation and world-class network performance support our Group earnings



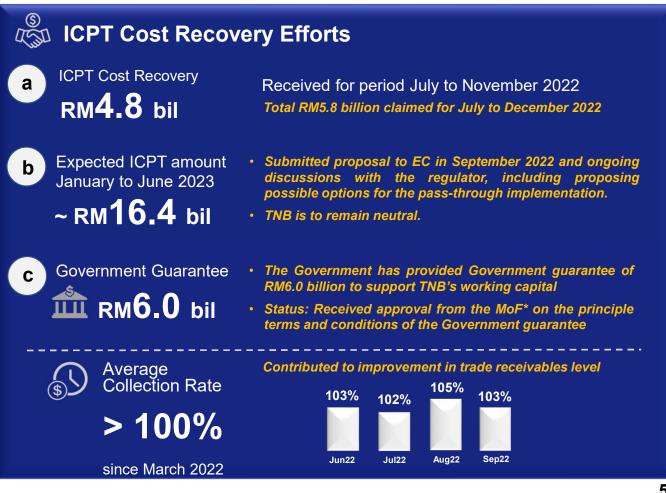


The Government has honoured ICPT cost recovery and provided guarantee to support TNB's working capital. We continue to be prudent and proactive in our capital management.



- Amid the high fuel cost, ICPT receivables is high due to the timing mismatch between the upfront payment made by TNB and recovery of the surcharges via the ICPT framework.
- TNB is recovering the cost of working capital through ICPT and managing cash flow proactively.

\*MoF – Ministry of Finance



Forward Guidance

The Group foresees a reasonable performance for the financial year 2022 despite a challenging environment







# Key Highlights: Sustainability journey toward 2050 Net Zero Aspiration continue to progress well



c) Winning the Customer

#### Sustainable capacity expansion through healthy pipeline of projects **Future Generation** ensure business growth while supporting the Group's decarbonisation agenda Emission Avoidance

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Sources



		COD	(Equivalent to CO2 emission)
TNB Bukit Selambau 2 (Large Scale Solar 4 scheme) 50 MW	<ul> <li>In view of high PV panel price, Energy Commission has approved the extension of PPA tenure from 21 to 25 years for all LSS4 operators in August 2022; ensuring commercial viability of projects.</li> <li>The project has achieved financial close on 30 September 2022. Commencement of work has started since September 2022.</li> </ul>	2023	0.08 million tCO2-e/ year (~17,000 cars/year)
Sungai Perak Hydro Life Extension Programme 650.75 MW	<ul> <li>Uprate and upgrade the Sungai Perak Hydroelectric Scheme which consists of Stesen Janaelektrik (SJ) Temengor, SJ Bersia, SJ Kenering, SJ Chenderoh and SJ Sungai Piah with eighteen (18) generating units. with the latest technology.</li> <li>The project will commence in Q3 of year 2024.</li> </ul>	Q3 2025	<b>0.5 million tCO2-e/ year</b> (~100,000 cars/year)
Nenggiri Hydro Project 300 MW	<ul> <li>Commencement of work has started since 1 March 2022.</li> <li>The project has achieved financial close on 8 July 2022, approved under the sustainable Sukuk Framework with "Gold" rating assigned by MARC. Sukuk programme up to RM10 bil, first issuance of RM1.5 bil over-subscribed by 3.41x.</li> </ul>	Q2 2027	<b>0.3 million tCO2-e/ year</b> (~70,000 cars/year)
Paka Repowering 1,400 MW	<ul> <li>Brownfield project to repower the retired SJSI PAKA using highly efficient CCGT with hydrogen ready technology by 2030.</li> <li>This project serves as a unique pioneering project in deploying green technologies that may be utilised in future power plants.</li> </ul>	2030	<b>3.2 million tCO2-e/ year</b> (~700,000 cars/year)
New Combined Cycle Power Plant, Kapar 2,100 MW	<ul> <li>Greenfield project that is marked for combined cycle gas-fired plant with hydrogen-fired combustion capability; replacing KEV coal capacity and supplying cleaner electricity.</li> </ul>	2031	<b>4.7 million tCO2-e/ year</b> (~1,000,000 cars/year)
Solar greenfield development, UK 102 MW	<ul> <li>Greenfield project with option to develop co-located battery energy storage systems.</li> <li>This project offers opportunities for environmental initiatives, supporting TNB's wider biodiversity agenda.</li> </ul>	<b>2024</b> (estimate)	0.05 million tCO2-e/ year (~10,000 cars/year)
		COD: Commercial opera	tion date 8

**TENAGA NASIONAL** Better. Brighter.

Future Generation Sources

> 2025 2029 Sungai Perak Hydro Life **Extension Programme (LEP)** ~RM5.8 bil (PPA: 40 years) **Paka Repowering** Received Letter of Award (LOA) ~RM6.3 bil Received Letter of Intent (LOI) **Pipeline of Genco's Projects** (COD) & **Estimated Project** 2031 2027 Cost **New CCPP Kapar** Nenggiri Hydro Project ~RM9.5 bil ~RM5 bil (PPA: 30 years) Received Letter of Intent (LOI) Development stage

Genco continues to build value through pipeline of projects starting

with the hydro LEP in 2025, ensuring sustainable revenue flow

### Grid of the Future

Our continuous investment in grid modernisation will spur regional interconnection expansion while further strengthen our position in the Energy Transition space

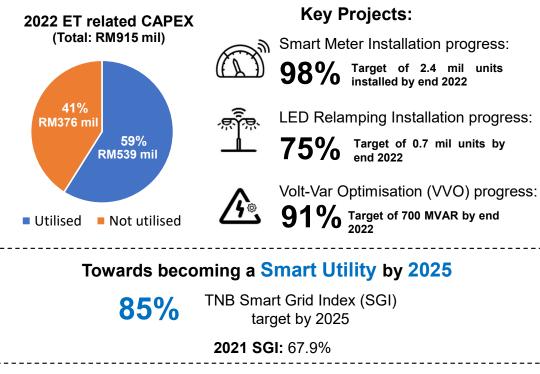


RP3 Approved CAPEX

# 13% (RM2.54 bil)

Supporting the Energy Transition (ET) and RAB growth

### Progress as of September 2022:



### **Regional interconnections**

#### Benefits of regional interconnection:

- a) Support Genco expansion plan in regional countries as it aims to explore hydro and gas opportunities in ASEAN.
- b) Provide access to RE capacities from neighbouring countries by enabling more offtakers to purchase power across ASEAN.
- c) Strengthen grid security of supply.

#### Key development:

#### Malaysia – Singapore interconnection

- i. In October 2022, Malaysia and Singapore have completed the upgrading of the electricity interconnector between both countries to enable mutual energy transfer in times of power outage.
- ii. The interconnector can now accommodate bidirectional electricity flows of around 1,000 megawatts between Malaysia and Singapore.

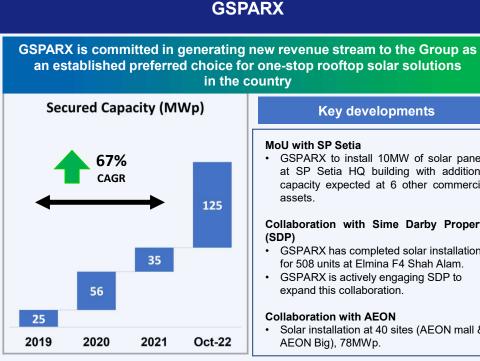


Winning the

Customer

### We continue to win customers trust, evidenced through robust growth seen in GSPARX and exciting developments in the Electric Vehicle (EV) space







#### Key developments

GSPARX to install 10MW of solar panels at SP Setia HQ building with additional capacity expected at 6 other commercial

## Collaboration with Sime Darby Property

- · GSPARX has completed solar installation for 508 units at Elmina F4 Shah Alam.
- GSPARX is actively engaging SDP to expand this collaboration.

#### Collaboration with AEON

Solar installation at 40 sites (AEON mall & AEON Big), 78MWp.

> 319 MWp **Targeted Capacity** by 2025

EV (Charging Infrastructure & Platform)

TNB aims to accelerate the development of EV ecosystem with projection of 500k BEVs by 2030, uplifting the demand side by approximately 2.318 TWh (RM1.26 billion)

#### Key developments



#### MoU with Gamuda Land

· To build the nation's first solar-powered electron stations for electric vehicle (EV) at Gamuda Cove and Gamuda Gardens in Klang Valley with a host of services such as food and beverage outlets and convenience stores.

#### MoU with PLUS

To set up fast charging points with PLUS Malaysia by leveraging its strategically located Rest & Recreation (R&R) areas along the major highways.

TNB initiates ~RM90 mil investment over the span of 3 years to uplift the EV development and ecosystem in Malaysia

- a) Build Electron Hubs along high volume traffic highways
- b) Build Direct Current Fast Chargers (DCFCs) along highways and trunk roads
- c) Build Destination Charges in TNB premises across Peninsular Malaysia for public usage

To support the nation's aspiration of having 10.000 charging stations by 2025 (Current: ~700 installed)



# Appendix

# 3Q FY2022

- Details on Financial Results
- GenCo Performance
- International Business Performance
- Shareholdings Analysis

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

RM mil				Varian	ce
		9MFY22	9MFY21	RM mil	%
Revenue	1	53,870.2	36,894.4	16,975.8	46.0
Operating expenses (without depreciation)	2	(38,104.5)	(22,143.2)	(15,961.3)	72.1
Net loss on impairment of financial instruments	3	(128.3)	(906.9)	778.6	(85.9)
Other operating income		676.8	548.4	128.4	23.4
EBITDA		16,314.2	14,392.7	1,921.5	13.4
EBITDA Margin (%)		30.3%	39.0%	-	(8.7)
EBITDA Margin w/o ICPT (%)		43.0%	40.4%	-	2.6
Depreciation	4	(8,404.7)	(7,882.7)	(522.0)	6.6
EBIT		7,909.5	6,510.0	1,399.5	21.5
Foreign exchange:					
- Transaction gain/(loss)		24.0	(27.9)	51.9	>(100.0)
- Translation (loss)/gain	5	(608.3)	(162.4)	(445.9)	>100.0
Share of results of joint ventures		19.0	17.4	1.6	9.2
Share of results of associates		83.5	103.6	(20.1)	(19.4)
Profit before finance cost		7,427.7	6,440.7	987.0	15.3
Fair value changes of financial instrument		125.1	147.5	(22.4)	(15.2)
Finance income		179.9	159.7	20.2	12.6
Finance cost	4	(3,200.8)	(2,831.6)	(369.2)	13.0
Profit from ordinary activities before taxation		4,531.9	3,916.3	615.6	15.7
Taxation and Zakat:					
- Company and subsidiaries		(1,661.1)	(1,128.6)	(532.5)	47.2
- Deferred taxation	6	(121.3)	84.5	(205.8)	>(100.0)
Profit for the period		2,749.5	2,872.2	(122.7)	(4.3)
Attributable to:					
- Owners of the Company		2,654.2	2,784.0	(129.8)	(4.7)
- Non-controlling interests		95.3	88.2	7.1	8.0
Profit for the period		2,749.5	2,872.2	(122.7)	(4.3)
	_				

Y-o-Y analysis:

- 1 Higher revenue mainly due to ICPT surcharge of RM15,917.6 mil (9MFY21 surcharge of RM1,300.8 mil) and higher sales of electricity.
- Higher operating expenses driven by higher generation cost.
- Includes lower Allowance for doubtful debts (ADD) of RM105.0 mil (9MFY21 RM581.2 mil).
- 4 Higher depreciation and finance cost mainly due to MFRS16 adjustment for EDRA Melaka power plant.
- 5 Higher loss in forex translation mainly due to the weakening of MYR against USD.
- 6 Higher tax expense was attributable to slower asset build up as at 9MFY22 and deferred tax.

## **Quarter vs Previous Quarter (3QFY22 vs 2QFY22) analysis**

RM mil		3QFY22	2QFY22	Variano	e
		JQF 1 22	2QF 1 22	RM mil	%
Revenue		19,071.4	19,140.3	(68.9)	(0.4)
Operating expenses (without depreciation)	1	(13,533.1)	(13,907.8)	374.7	(2.7)
Net loss on impairment of financial instruments		(48.1)	(44.5)	(3.6)	8.1
Other operating income		247.1	251.1	(4.0)	(1.6)
EBITDA		5,737.3	5,439.1	298.2	5.5
EBITDA Margin (%)		30.1%	28.4%	-	1.7%
EBITDA Margin w/o ICPT (%)		44.3%	42.4%		1.9%
Depreciation		(2,825.7)	(2,810.8)	(14.9)	0.5
EBIT		2,911.6	2,628.3	283.3	10.8
Foreign exchange:					
- Transaction gain/(loss)		13.1	10.6	2.5	23.6
- Translation (loss)/gain	2	(413.8)	(237.2)	(176.6)	74.5
Share of results of joint ventures		8.2	4.8	3.4	70.8
Share of results of associates		23.2	30.3	(7.1)	(23.4)
Profit before finance cost		2,542.3	2,436.8	105.5	4.3
Fair value changes of financial instrument		66.4	18.5	47.9	>100.0
Finance income		57.4	76.3	(18.9)	(24.8)
Finance cost		(1,131.9)	(1,065.9)	(66.0)	6.2
Profit from ordinary activities before taxation		1,534.2	1,465.7	68.5	4.7
Taxation and Zakat:					
- Company and subsidiaries		(515.3)	(615.9)	100.6	(16.3)
- Deferred taxation		(46.2)	55.8	(102.0)	>(100.0)
Profit for the period	_	972.7	905.6	67.1	7.4
Attributable to:					
- Owners of the Company		888.9	872.2	16.7	1.9
- Non-controlling interests		83.8	33.4	50.4	>100.0
Profit for the period		972.7	905.6	67.1	7.4

Q vs Previous Quarter analysis:

- Lower OPEX mainly due to lower generation cost.
- 2 Higher loss in forex translation mainly due to the weakening of MYR against USD.

# Y-o-Y normalised EBITDA & PAT for 9MFY22

EBITDA		9MFY22	9MFY21
Components		RM mil	RM mil
Reported EBITDA		16,314.2	14,392.7
Impairment		-	455.8
Additional ADD for TNB*		62.2	431.0
MFRS16 impact	1	(3,328.0)	(3,149.2)
Normalised EBITDA		13,048.4	12,130.3

PAT	Ś	9MFY22	9MFY21
Components		RM mil	RM mil
Reported PAT		2,749.5	2,872.2
Impairment		-	455.8
Additional ADD for TNB*		62.2	431.0
Forex Translation		608.3	162.4
MFRS16 impact	1	700.5	434.2
Normalised PAT	2	4,120.5	4,355.6

\*ADD 9MFY22: RM105.0mil, approved ADD FY22: RM 57.1mil ADD 9MFY21: RM581.2 mil, approved ADD FY21: RM200.3 mil Please refer MFRS16 impact slide for details.

Lower normalised PAT in 9MFY22 mainly due to higher tax expense resulting from slower asset build up.

# Higher Y-o-Y sales of electricity and contribution from subsidiaries, driven by stronger economic growth

	3QFY22	2	2QFY22 (3			Variance QFY22 vs 2QFY22) 9MFY22		9MFY21		(!	Variance (9MFY22 vs 9MFY21)		
UNITS SOLD	GWh		GWh		GWh	%	GWh		GWh			GWh	%
Sales of Electricity (GWh)													
- TNB	30,347.5		30,159.7		<b>1</b> 187.8	0.6	89,466.5		82,738.7		1	6,727.8	8.1
- SESB	1,472.3		1,445.2		27.1	1.9	4,301.8		3,976.4			325.4	8.2
- EGAT (Export)	-		0.1		(0.1)	(100.0)	0.3		1.2			(0.9)	(75.0)
- LPL	-		-		-	-	-		878.8		2	(878.8)	(100.0)
- TNBI (UK Wind)	14.3		18.0		(3.7)	(20.6)	58.8		49.5			9.3	18.8
- TNBI (Vortex)	126.7		142.1		3 (15.4)	(10.8)	327.1		305.1		3	22.0	7.2
- TNBI (CEI UK LTD)	42.2		52.9		4 (10.7)	(20.2)	95.1		-		4	95.1	100.0
Total Units Sold (GWh)	32,003.0		31,818.0		185.0	0.6	94,249.6		87,949.7			6,299.9	7.2
REVENUE	RM mil	Sen/ kWh	RM mil	Sen/ kWh	(RM mil)	%	RM mil	Sen/ kWh	RM mil	Sen/ kWh		(RM mil)	%
Sales of Electricity (RM)								-			_		
- TNB	12,194.6	40.07	12,210.3	40.24	(15.7)	(0.1)	35,692.8	40.14	33,100.4	39.95		2,592.4	7.8
- Sales Discount	-		-		-	-	-		(460.0)			460.0	(100.0)
- SESB	504.5	34.26	497.2	33.93	7.3	1.5	1,470.0	34.29	1,375.5	34.40		94.5	6.9
- Sales Discount	-		-		-	-	-		(0.6)			0.6	(100.0)
- Accrued Revenue	(34.7)		(81.0)		46.3	(57.2)	37.3		(50.0)			87.3	>(100.0)
- EGAT (Export)	0.1	-	-	-	0.1	100.0	0.4	-	0.3	-		0.1	33.3
- LPL	-		-		-	-	-	-	290.0	33.00		(290.0)	(100.0)
- TNBI (UK Wind)	21.1	147.55	25.4	141.11	(4.3)	(16.9)	83.6	142.18	70.1	141.62		13.5	19.3
- TNBI (Vortex)	97.1	76.64	110.3	77.62	(13.2)	(12.0)	254.1	77.68	231.3	75.81		22.8	9.9
- TNBI (CEI UK LTD)	31.4	74.41	37.6	71.08	(6.2)	(16.5)	69.0	72.56	-	-		69.0	>100.0
Sales of Electricity	12,814.1	40.04	12,799.8	40.23	14.3	0.1	37,607.2	39.90	34,557.0	39.29		3,050.2	8.8
Imbalance Cost Pass Through	6,109.6		6,302.6		(193.0)	(3.1)	15,917.6		1,300.8			14,616.8	>100.0
Other Regulatory Adjustment	(228.0)		(294.7)		<b>5</b> 66.7	(22.6)	(679.4)		(265.9)		5	(413.5)	>100.0
Relief Package from Government	-		-		-	-	0.6		406.1			(405.5)	(99.9)
SESB Tariff Support Subsidy	67.6		68.2		(0.6)	(0.9)	199.7		274.4			(74.7)	(27.2)
Others	-		-		-	-	-		(55.3)			55.3	(100.0)
Total Sales of Electricity	18,763.3		18,875.9		(112.6)	(0.6)	53,045.7		36,217.1		c	16,828.6	46.5
Goods & Services	201.3		165.2		36.1	21.9	514.5		443.8		6	70.7	15.9
Construction contracts	38.6		29.8		8.8	29.5	105.9		45.9			60.0	>100.0
Customers' Contribution	68.2		69.4		(1.2)	(1.7)	204.1		187.6			16.5	8.8
Total Revenue	19,071.4		19,140.3		(68.9)	(0.4)	53,870.2		36,894.4			16,975.8	46.0

3QFY22	vs	2QF)	/22:	Higher	units	sold	and
sales of e	elec	tricity	mair	nly from	comm	ercial	and
industrial	sec	tors.					

9MFY22 vs 9MFY21: Higher units sold and sales of electricity from all sectors.

Divestment of LPL on 30 Nov'21.

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3QFY22 vs 2QFY22: Lower solar generation due to seasonality factor (approaching winter season).

9MFY22 vs 9MFY21: Higher generation mainly due to higher irradiance.

3QFY22 vs 2QFY22: Lower generation from offshore wind due to seasonality factor (lower wind speed).

9MFY22 vs 9MFY21: Acquisition of 97.3MW onshore wind portfolio (UK) in April 2022.

Refer Other Regulatory Adjustment slide

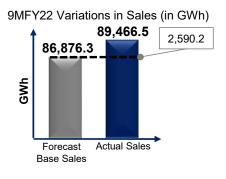
6 9MFY22 vs 9MFY21: Higher mainly due to improved subsidiaries performance driven by stronger economic growth.

### As at 9MFY22, RM679.4 mil of other regulatory adjustment to be returned

Components of Other Regulatory Adjustment	1QFY22 (RM mil)	2QFY22 (RM mil)	3QFY22 (RM mil)	9MFY22 (RM mil)
Revenue Adjustment for Revenue Cap & Price Cap	(44.2)	(239.4)	(211.8)	(495.4)
Refund Related to Regulated Business	(113.1)	(63.9)	(16.6)	(193.6)
Regulatory Adjustment for SESB*	0.6	8.6	0.4	9.6
TOTAL	(156.7)	(294.7)	(228.0)	(679.4)
Regulatory Adjustment for SESB*	0.6	8.6	0.4	

\*SESB has implemented IBR framew ork starting 1 January 2022

#### Revenue Cap

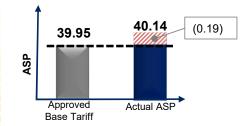


- The allowed annual revenue for revenue cap entities is based on 1.7% demand growth. Any excess/shortfall is adjusted through revenue adjustment mechanism.
- For 9MFY22, higher actual sales has led to amount to be returned via revenue adjustment mechanism.

<b>Business Entities</b>	Allowed Tariff (sen/kWh)	Variations in Sales (GWh)	Adjustment (RM mil)
<b>Revenue Cap Entities</b>	12.60	2,590.2	(325.9)*
		* No week a we	wa a way all the and way when all

#### Price Cap

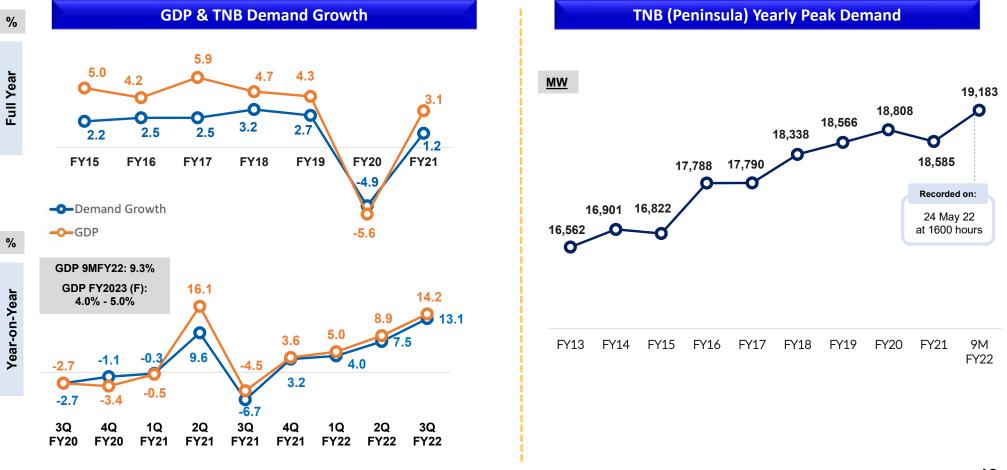
9MFY22 Variations in ASP (sen/kWh)



- 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 9MFY22, the ASP recorded was higher than the Base Tariff, leading to amount to be returned via revenue adjustment mechanism.

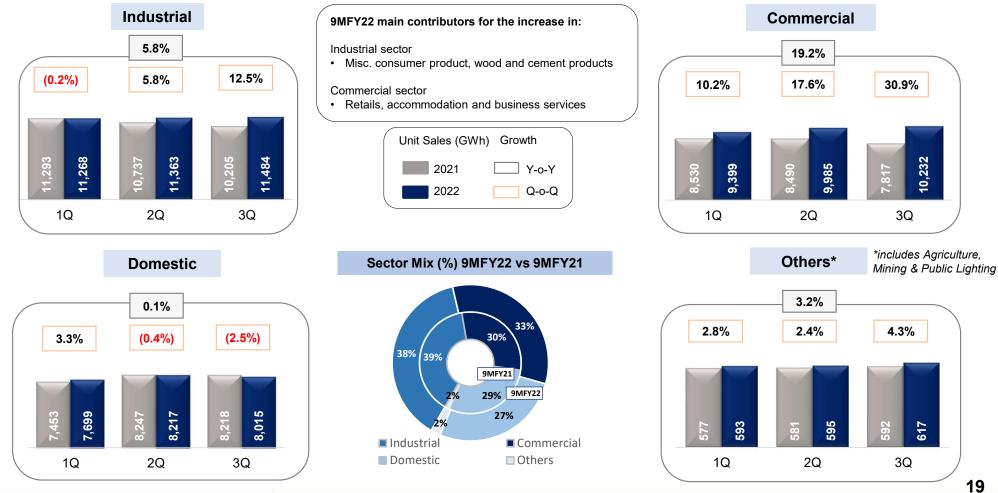
Business Entities	Actual Sales	Variations in ASP	Adjustment
	(GWh)	(sen/kWh)	(RM mil)
Price Cap Entity	89,466.5	(0.19)	(169.5)*

Numbers manually computed will not match due to decimal variance



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

### Improved Y-o-Y electricity demand across all sectors



# Higher Y-o-Y operating expenses due to increase in generation cost

	3QFY22	2QFY22	Variance (3QFY22 vs 2QFY22)		9MFY22	9MFY21		Variance (9MFY22 vs 9MFY21)		
	(RM mil)	(RM mil)	RM mil	%	(RM mil)	(RM mil)	RM mil	%		
Non-TNB IPPs Costs	5,337.5	4,123.7	1,213.8	29.4	12,901.8	5,620.4	7,281.4	>100.0	Ψ	3QFY22 vs 2QFY22: Lower generation cost
Capacity Payment	(81.7)	(89.2)	7.5	(8.4)	(270.1)	147.6	(417.7)	>(100.0)		due to higher generation from hydro plants.
Energy Payment	5,419.2	4,212.9	1,206.3	28.6	13,171.9	5,472.8	7,699.1	>100.0		9MFY22 vs 9MFY21: Higher generation cost
TNB Fuel Costs	5,692.0	7,510.9	(1,818.9)	(24.2)	18,129.4	9,720.3	8,409.1	86.5		mainly due to higher coal prices (USD209.7/MT vs USD97.8/MT).
Fuel Costs	5,280.6	4,670.9	609.7	13.1	13,992.4	7,651.9	6,340.5	82.9		
Fuel Price Adjustment	485.9	3,096.4	(2,610.5)	(84.3)	4,589.9	2,271.0	2,318.9	>100.0	2	3QFY22 vs 2QFY22, 9MFY22 vs 9MFY21:
Fuel Subsidy - SESB	(74.5)	(256.4)	181.9	(70.9)	(452.9)	(202.6)	(250.3)	>100.0		Higher expenses driven by more R&M
Total Cost of Generation	1 11,029.5	11,634.6	(605.1)	(5.2)	1 31,031.2	15,340.7	15,690.5	>100.0		activities.
Staff Costs	950.8	946.5	4.3	0.5	2,822.7	2,851.1	(28.4)	(1.0)	3	9MFY22 vs 9MFY21: Higher depreciation
Repair & Maintenance	2 792.4	539.8	252.6	46.8	2 1,807.3	1,410.0	397.3	28.2		mainly due to MFRS16 adjustment for EDRA
TNB General Expenses	368.6	367.9	0.7	0.2	1,178.6	1,096.1	82.5	7.5		Melaka power plant.
Subs. General Expenses	391.8	419.0	(27.2)	(6.5)	1,264.7	1,445.3	(180.6)	(12.5)		
Total Non-Generation Cost	2,503.6	2,273.2	230.4	10.1	7,073.3	6,802.5	270.8	4.0		
Total Operating Expenses (without Depreciation)	13,533.1	13,907.8	(374.7)	(2.7)	38,104.5	22,143.2	15,961.3	72.1		
Depreciation & Amortisation	2,825.7	2,810.8	14.9	0.5	<mark>3</mark> 8,404.7	7,882.7	522.0	6.6		
Total Operating Expenses	16,358.8	16,718.6	(359.8)	(2.2)	46,509.2	30,025.9	16,483.3	54.9		

### Higher Y-o-Y fuel costs mainly due to higher fuel prices

	9MFY22	9MFY21	Varia	nce
Fuel Type			RM mil	%
Coal	20,810.4	9,485.8	11,324.6	>100.0
Gas	7,962.0	3,998.2	3,963.8	>100.0
Distillate	546.1	55.0	491.1	>100.0
Oil	105.1	1.3	103.8	>100.0
Total	29,423.6	13,540.3	15,883.3	>100.0

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

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

#### Table B – TNB & IPP Units Generated for Peninsula (GWh)

Fuel Type	9MFY22		9MF	Y21	Variance	
гиеттуре	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	55,227.1	56.2%	55,413.6	59.7%	(186.5)	(0.3)
Gas & LNG	36,697.8	37.3%	31,309.8	33.7%	5,388.0	17.2
Distillate	479.9	0.5%	47.0	0.1%	432.9	>100.0
Oil	2.7	0.0%	31.0	0.0%	(28.3)	(91.3)
Hydro	4,773.7	4.9%	5,132.3	5.5%	(358.6)	(7.0)
Solar	1,153.5	1.2%	854.4	0.9%	299.1	35.0
Total	98,334.7	100.0%	92,788.1	100.0%	5,546.6	6.0

#### Table C – Fuel Costs Related Data

Fuel statistics	9MFY22	9MFY21
Average Coal Price Delivered (USD/MT)(CIF)	209.7	97.8
Average Coal Price Delivered (RM/MT)(CIF)	910.5	403.5
Coal Consumption (mil MT)	24.1	24.0
Gas Reference Market Price (RM/mmbtu)	<u>1QFY22</u> Tier 1 : 30.0 Tier 2 : 36.9 <u>2QFY22</u> Tier 1 : 30.0 Tier 2 : 38.2 <u>3QFY22</u> Tier 1 : 30.0 Tier 2 : 43.4	1QFY21 : 15.4 2QFY21 : 18.9 3QFY21 : 21.4
Daily Average Piped Gas Volume (mmscfd)	893	778

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

	9MFY22	9MFY21	Variance	
	JWIF 122	JIVIE 121	USD	%
FOB	195.9	86.8	109.1	>100.0
Freight	13.3	10.5	2.9	27.3
Others	0.5	0.5	(0.0)	(6.1)
CIF	209.7	97.8	111.9	>100.0

### Lower 3Q vs 2Q fuel costs due to higher generation from hydro plants

			1QFY22	Variance 30	Q vs 2Q
Fuel Type	JQF 122	201122	IQF 122	RM mil	%
Coal	7,418.2	8,410.4	4,981.8	(992.2)	(11.8)
Gas	2,820.5	2,619.6	2,521.9	200.9	7.7
Distillate	36.9	94.7	414.5	(57.8)	(61.0)
Oil	105.1	-	0.0	105.1	100.0
Total	10,380.7	11,124.7	7,918.2	(744.0)	(6.7)

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

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

#### Table B – TNB & IPP Units Generated for Peninsula (GWh)

Fuel Type	3QFY2	2	2QFY2	22	1QFY2	2	Variance 3	Q vs 2Q
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	18,830.2	56.5%	19,164.8	57.8%	17,232.1	54.1%	(334.6)	(1.7)
Gas & LNG	11,935.7	35.8%	12,309.8	37.1%	12,452.3	39.1%	(374.1)	(3.0)
Distillate	3.6	0.0%	137.1	0.4%	339.2	1.1%	(133.5)	(97.4)
Oil	2.7	0.0%	-	0.0%	-	0.0%	2.7	100.0
Hydro	2,095.6	6.3%	1,134.7	3.4%	1,543.4	4.8%	960.9	84.7
Solar	450.0	1.4%	401.5	1.2%	302.0	0.9%	48.5	12.1
Total	33,317.8	100.0%	33,147.9	100.0%	31,869.0	100.0%	169.9	0.5

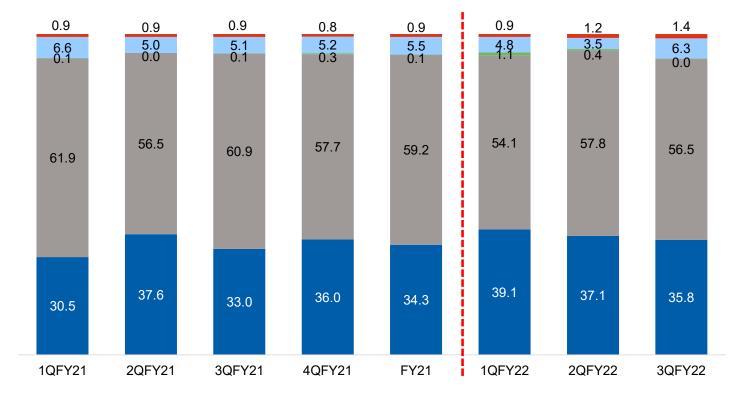
#### Table C – Fuel Costs Related Data

Fuel statistics	3QFY22	2QFY22	1QFY22
Average Coal Price Delivered (USD/MT)(CIF)	229.7	221.4	165.5
Average Coal Price Delivered (RM/MT)(CIF)	1,023.8	960.4	696.3
Coal Consumption (mil MT)	8.3	8.4	7.4
Gas Reference Market Price (RM/mmbtu)			
Tier 1	30.0	30.0	30.0
Tier 2	43.4	38.2	36.9
Daily Average Piped Gas Volume (mmscfd)	862	905	912

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

	205722	20EV22	20EV22 40EV22		3Q vs 2Q
	3QFY22	2QFY22	1QFY22	USD	%
FOB	215.8	207.1	152.3	8.7	4.2
Freight	13.4	13.8	12.6	(0.4)	(2.7)
Others	0.5	0.5	0.5	(0.0)	(2.0)
CIF	229.7	221.4	165.4	8.3	3.7

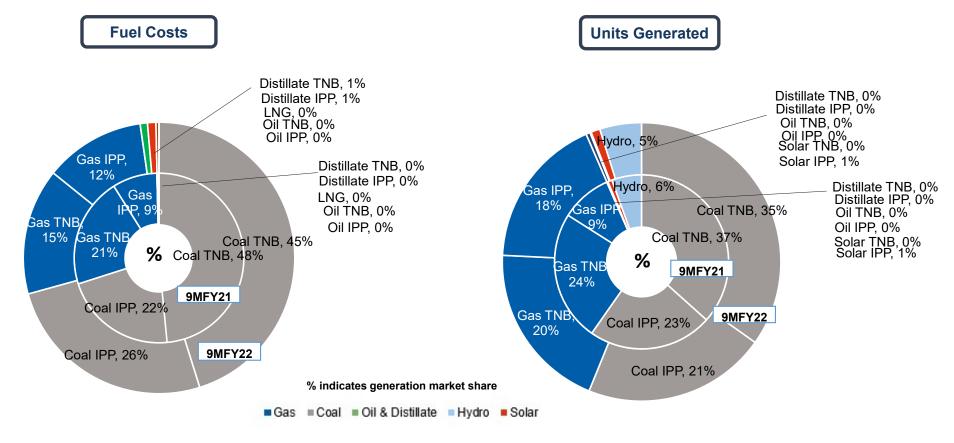
## Higher units generated from hydro in 3QFY22



Generation MIx for Industry (%)

Gas Coal Oil & Distillate Hydro Solar

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

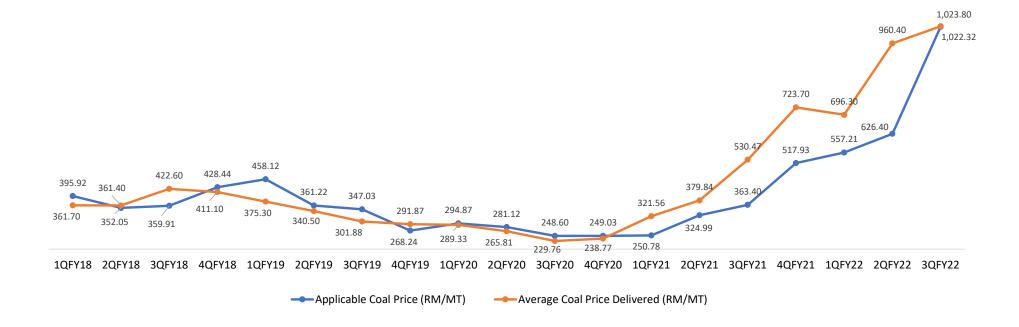


# TNB is neutral to volatility in fuel costs under the ICPT framework

	3QFY21	4QFY21	1QFY22	2QFY22	3QFY22
	(RM mil)				
Reported Total Cost of Generation (with MFRS16)	6,107.3	8,438.1	8,367.1	11,634.6	11,029.5
Adjustment not related to IBR	756.6	753.6	909.5	948.3	840.2
TNB Capacity and VOR: SLA & SPV	1,372.9	1,594.8	1,816.1	1,621.5	2,191.0
Total Generation Costs	8,236.8	10,786.5	11,092.7	14,204.4	14,060.7
(Related to IBR)	0,20010		,	,_•	,
	3QFY21	4QFY21	1QFY22	2QFY22	3QFY22
	(RM mil)				
Single Buyer Actual Generation Costs: (A)	8,236.8	10,786.5	11,092.7	14,204.4	14,060.7
Actual Sales (GWh)	26,830.8	29,367.3	28,959.3	30,159.7	30,347.5
Single Buyer Tariff (RM/kWh)	0.2580	0.2580	0.2620	0.2620	0.2620
Actual Gen Cost Recovered (RM mil) (B)	6,923.2	7,577.7	7,587.3	7,901.8	7,951.0
ICPT Surcharge / (Rebate) (C) (C = A – B)	1,313.5	3,208.8	3,505.4	6,302.6	6,109.6

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

### **Coal price trending**



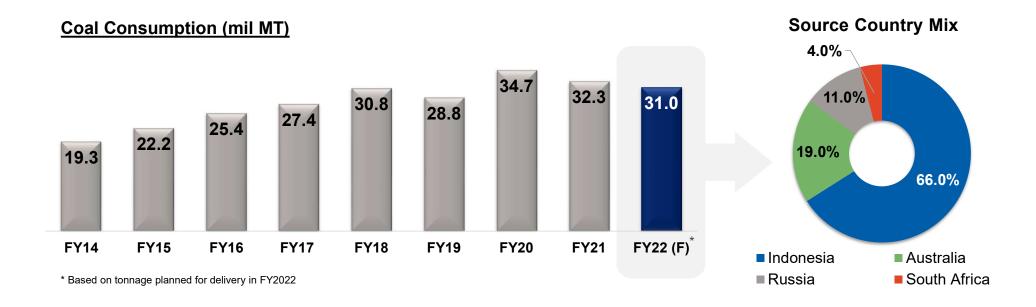
#### Coal price & Applicable Coal Price (ACP) comparison

	4QFY21	1QFY22	2QFY22	3QFY22
Average Coal Price Delivered (RM/mmbtu) *	32.88	31.88	46.76	48.88
ACP (RM/mmbtu)	23.73	25.53	28.70	46.84

\* Based on internal conversion

- Fuel Price Adjustments (FPA) is the difference between the Applicable Coal Price (ACP) used to bill the generators and the actual coal price paid to supplier. The difference is caused by higher or lower coal price or due to currency exchange.
- In 3QFY22, the base ACP (RM46.84/mmbtu) used for billing the generators is lower than the coal price paid to supplier (RM48.88/mmbtu).

## **Industry coal requirement forecast for FY2022**

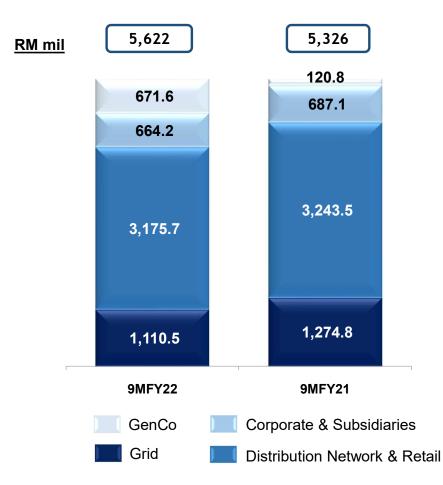


# MFRS 16: Group PAT is negatively impacted by RM700.5 mil

	9MFY22 (RM mil)	9MFY21 (RM mil)	Variance (RM mil)
Capacity Payment	3,328.0	3,149.2	178.8
Depreciation	(2,902.4)	(2,607.0)	(295.4)
Finance Cost	(1,332.1)	(1,097.7)	(234.4)
Deferred Tax	206.0	121.3	84.7
Net Impact to PAT	(700.5)	(434.2)	(266.3)

### Net Impact of MFRS 16 (Y-o-Y) analysis





# Regulated CAPEX and Regulated Asset Base (RAB)

	RP3 RE	GULATED ENTITI	ES CAPEX
FY	IBR Approved (RM mil)	Actual YTD (RM mil)	Utilisation (%)
2022	7,168.0	4,274.9 As at Sept'22	59.6%

Total RAB (RM mil)			
Actual 9MFY22	Approved FY2022		
60,036.6 62,248.7			
Regulatory net returns: RM3,394.7 mil			

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

# **Gearing stood at 51.2% in 9MFY22**

Statistics	30 Sept 2022	31 Dec 2021	Loan Breakdown
Total Debt (RM bil)	62.9	51.7	RM2.7 bil
Net Debt (RM bil)*	50.6	42.5	RM1.7 bil 3% 4%
Gearing (%)	51.2	47.0	RM9.0 bil 14% 4% 5%
Net Gearing (%)	41.2	38.6	15% RM8.0 bit RM2.4 bit
Fixed : Floating			79% RM49.4 bil
Underlying	96:4	95:5	76%
Final Exposure	99:1	99:1	RM39.2 bit
Effective Average Cost of Borrowing (based on exposure) **	4.54	4.61	DEC'21 SEPT'22

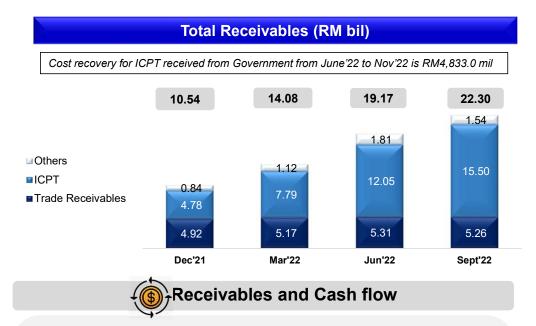
\* Net Debt excludes deposits, bank and cash balances and investment in UTF

\*\* Inclusive of interest rate swap

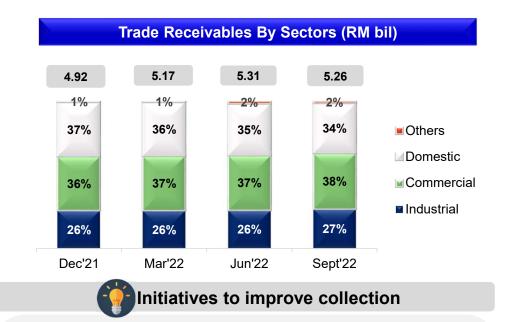


Closing Forex	30 Sept 2022	31 Dec 2021
USD/RM	4.64	4.17
100YEN/RM	3.21	3.63
GBP/RM	5.16	5.64

### Improvement in trade receivables resulting from effective credit management

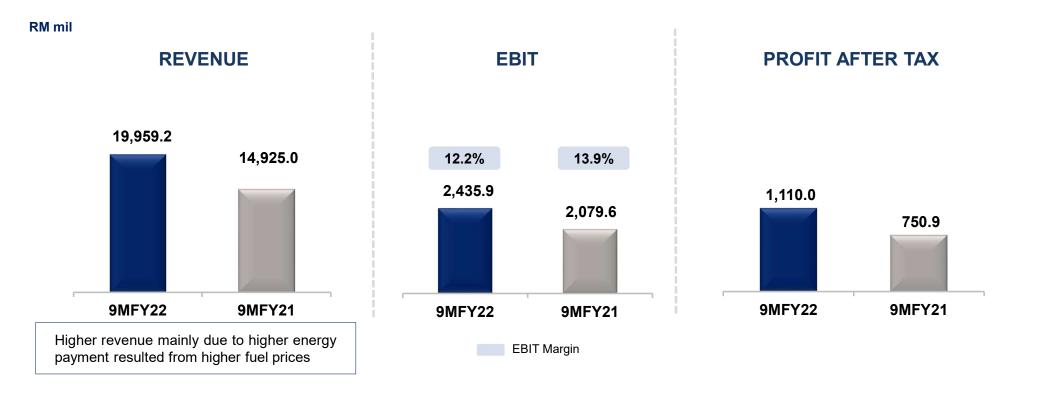


- Amid the high fuel cost, ICPT receivables is high due to the timing mismatch between the upfront payment made by TNB and recovery of the surcharges via the ICPT framework. The cost of working capital is also recoverable through ICPT.
- We continuously monitor our cash flow position on a daily basis and remain prudent on our working capital management.

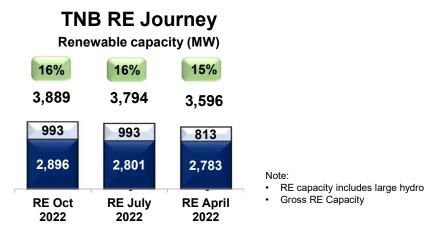


- Promotional activities to increase enrolment of Autopay, Direct Debit and e-Bulk Scheme to targeted domestic and non-domestic customers.
- Enrich customer experience, especially via digital payment channels such as myTNB, Online Banking and e-Wallet.
- Provide personalised engagement with large power consumers such as SMEs and Government and Large Business (GLB).
- Perform close monitoring on commercial and industrial customers with debt exposure, especially those under vulnerable sub-sectors.

# **Domestic generation business performance**



## Our RE journey is progressing well



🛏 International 🗧 Domestic 🥯 RE in TNB's portfolio

#### Recent RE Progress

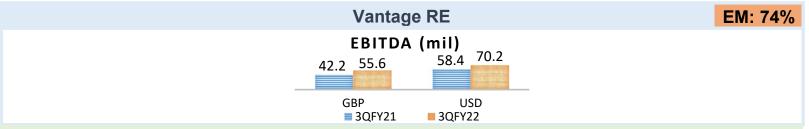
- 1) Domestic renewables
  - We have signed a 30-year power purchase agreement for the 300MW Nenggiri hydro plant which is expected to commence on 1 June 2027. The construction works have started since 1 March 2022.
  - GSPARX has successfully secured a total capacity of 240.9MW as of Oct 2022. (December 2021: secured 116.3MW)
  - Successfully commissioned a mini hydro of 4.0MW in Sungai Tersat, Kuala Berang in December 2021.

#### 2) UK / Europe renewables

- 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

### **International Performance as at Sept'22**



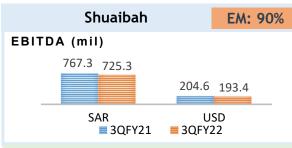
- Higher EBITDA YoY due to better operational performance from Vantage Solar and TWV which is contributed by higher generation as a result of higher irradiance and favorable wind speed conditions experienced across the UK in H1 2022. Performance is further supported by higher PPA locked-in prices for both assets.
- The addition of 97.3MW onshore wind asset in April 2022 has resulted in an increase to EBITDA by GBP 9.2mil on a YoY basis.
- The total cash distribution declared to date amounting to GBP 72.68mil.

#### Outlook for Vantage RE:

- Successfully completed acquisition of a 97.3MW operating onshore wind portfolio in the UK on 1st April 2022 with addition of MW growth and EBIT contribution to the portfolio.
- Vantage is focused on expanding its current pipeline build to include more greenfield assets at various stages and technologies with the aim to develop new Renewable Energy (RE) projects as it pursues a higher economic internal rate of return.
- Vantage Solar and CEI UK have also locked-in record high Renewable Energy Guarantees of Origin (REGO) prices with expected upside over the next 5 years.
- Based on the recent announcement, the UK government has scrapped the Cost-Plus Revenue Limit (CPRL) for renewables and nuclear generators proposed in October 2022 and replaced it with a windfall tax (levy on extraordinary returns). The levy takes effect from 1 January 2023 to 31 March 2028. The levy will not be deductible from profits subject to Corporation Tax and is administered in the same way as Corporation Tax.
- Inflation increased to 10.1% in September 2022 and is currently expected to peak in Q4 2022. However, no adverse impact is anticipated as Vantage's subsidy revenue is inflation linked and likely to offset any increase in operating expenses.

## International Business – Non-core assets

### International Performance as at Sept'22

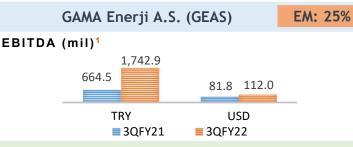


- Lower EBITDA YoY due to higher operating cost as a result of electricity import cost from the total plant outage at SWEC (Water and Power) in March 2022 and August 2022.
- Shuaibah maintains solid financial performance with higher YoY net profit by 26%.

#### **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.

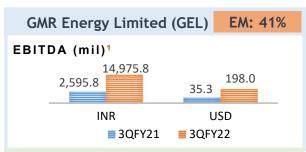
Notes: EM: YTD EBITDA Margin <sup>1</sup>Reported 3 months lagging <sup>2</sup>EPIAS is the market operator responsible for operating day-ahead, intra-day and balancing markets in the country



 Higher EBITDA YoY is mainly contributed by higher power prices as a result of higher share of gas generation.

#### Outlook for GEAS:

- Turkey is experiencing hyperinflationary economy as Turkey's inflation has surged at all time high ~85%. However, GEAS remains operationally profitable (EBITDA), benefiting from the lucrative electricity prices which is underpinned by high gas price and seasonal hydro generation. Furthermore, some portions of GEAS' revenue and cost are indexed to USD, and this cushion the financial impact of the hyperinflation and provides steady cash flows to GEAS. GEAS is still in process of preparing the application of IAS 29 "Financial Reporting in Hyperinflationary Economies" and assessing the adjustment impact towards its financial reporting.
- Recently, Energy Market Regulatory Authority (EMRA) had extended the regulation of allowing retail electricity suppliers to delay daily payments to EPIAS<sup>2</sup> by monthly basis until end of October 2022. GEAS has taken precautional measures by increasing its bilateral sales with retail clients.
- Nevertheless, GEAS has made early debt repayment for ICAN's debt scheduled in 2022 and 2023 and the successfully restructured debt within GEAS's portfolio provides sustainability to weather through current volatility in the market. In near term, GEAS is expected to secure payment for principal and interest in 2022 to 2023 from DIWACO's dividends and ICAN's cash flows.

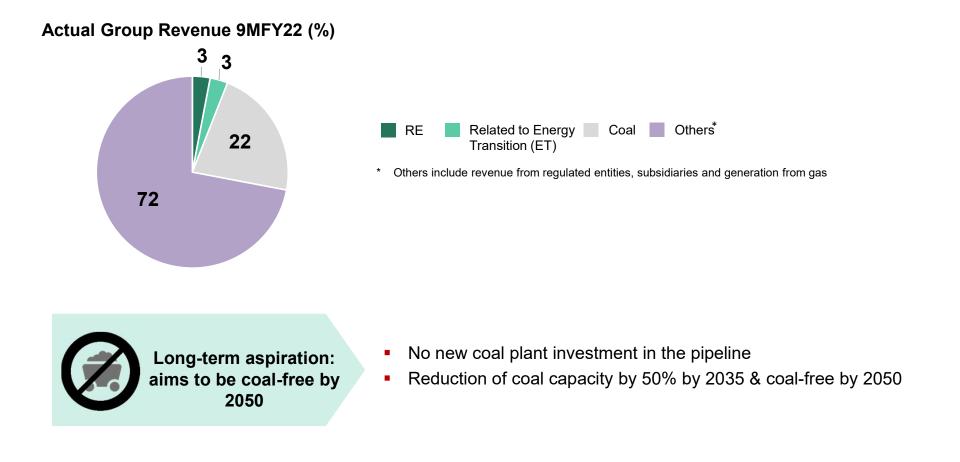


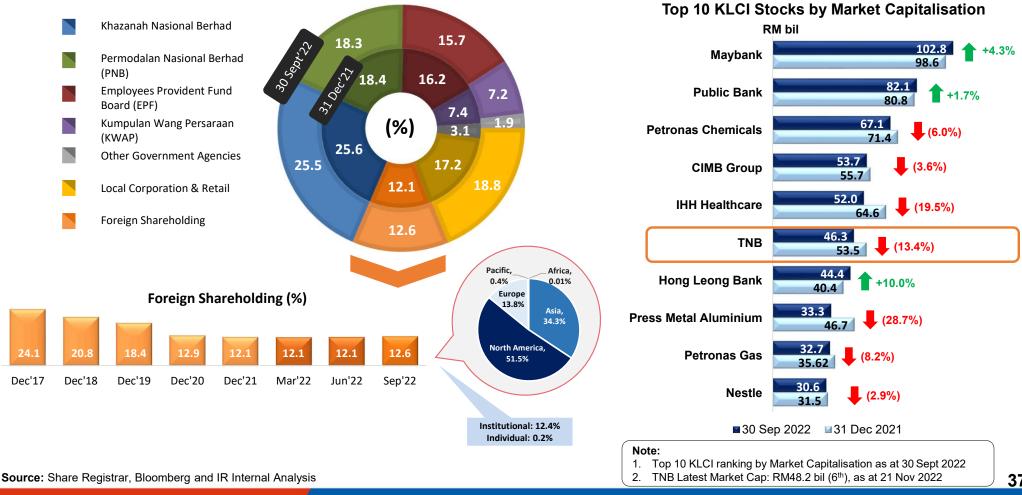
 Higher EBITDA YoY due to the full consolidation of Kamalanga's financial results upon the recognition of Kamalanga as a subsidiary (GEL previously recognized Kamalanga's share of profits only). It is also due to a one-off gain post-Warora debt restructuring.

#### Outlook for GEL:

- Peak Power Demand for September 2022 rose to 199.47GW, which was 180.73GW last year due to improvement in economic activities and the festive seasons in India.
- GEL coal plants (i.e., Kamalanga and Warora) had drawn up their coal strategies to ensure 100% linkage coal supply and coal procurement at competitive prices via e-auctions. In August and September 2022, only Kamalanga had imported coal at a much higher price. There are no plans for both power plants to import coal in the near future.
- 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".

### Ensuring revenue from coal remains below 25%, towards longer-term aspiration





# TNB market capitalisation of RM46.3 bil as at 30 September 2022



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# **THANK YOU**

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