

ANALYST BRIEFING 3QFY2023

28 November 2023



Amid a challenging environment, our 9MFY2023 PAT was impacted by negative fuel margin

REVENUE (RM mil)

9MFY2023
RM39,414.9  +3.9%

9MFY2022: RM 37,952.6

- Improved Y-o-Y electricity demand growth of 2.7% (Group) mainly from:
 - Peninsular Malaysia of 2.5% from commercial and domestic sector; and
 - Sales of electricity of UK Investment (acquired in April 2022).

EBITDA (RM mil)

9MFY2023
RM14,342.8  (12.1%)

EBITDA MARGIN: 36.4%*

9MFY2022: RM16,314.2
EBITDA MARGIN: 43.0%

- EBITDA margin declined to 36.4% from 43.0% as compared to the same period last year mainly due to:
 - Impact of negative fuel margin of RM767.9 mil (EBITDA without negative fuel margin: RM15,110.7 mil).
 - Higher non-generation cost resulted from repair and maintenance expenses compared to previous year but within the IBR approved level.
- While the regulated business recorded a stable performance, GenCo was impacted by negative fuel margin and capacity rate financing (CRF) step down.

*EBITDA margin (excl. fuel margin): 38.4% (9MFY2022 40.6%)

PAT (RM mil)

9MFY2023
RM2,079.2  (24.4%)

9MFY2022: RM2,749.5

- PAT impacted by:
 - Increase in finance cost by RM175.3 mil due to interest on higher borrowings, mainly for working capital to fund higher fuel cost.

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



Equivalent Plant
Availability Factor, EAF
(Generation)
%

9MFY2023

84.2%

9MFY2022: 82.8%

2023 Target: 81.80%



EAF performance secured
generation assets'
capacity revenue



System Minutes
(Transmission)
Minutes

9MFY2023

0.67

9MFY2022: 0.01

2023 Internal Threshold: 2.00



World class network
performance safeguarded our
regulated business earnings



SAIDI
(Distribution Network)
Minutes

9MFY2023

34.62

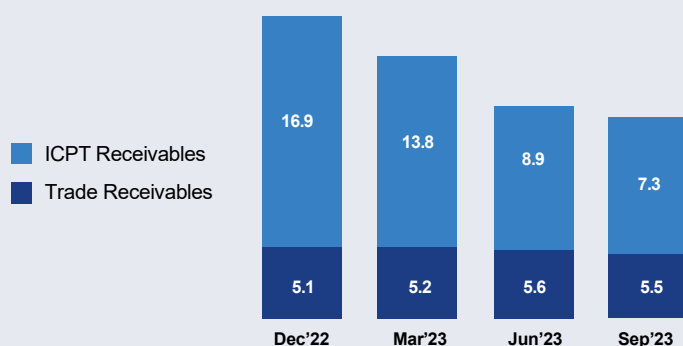
9MFY2022: 33.84

2023 Internal Threshold: 53.0



Lower receivables contributed by easing fuel price trend and improvement in collection stabilised our cash flow position

Receivables (RM bil)



- 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 377.59 USD/MT* in Sep 2022 to 138.62 USD/MT* in Sep 2023.
- Easing coal prices, improved collection and the ability to drawdown on a RM6 bil government-guaranteed loan for working capital will leave TNB in a stronger cash flow position for 2023.

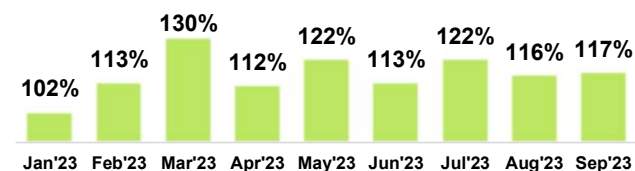
* Source: globalCOAL Newcastle index

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.
- To date, TNB has **received RM2.35 bil of ICPT cost recovery** (claim for July - September).

2 Improvement in Collection

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



3 ICPT Outlook ~RM4.0 bil

- ICPT to be recovered in 1HFY2024 is forecasted to be around RM4.0 bil given the current fuel price trend.
- ICPT mechanism is intact & TNB remains neutral.

The FY2023 outlook is on track, with a focus on accelerating the Energy Transition Plan to achieve Net Zero by 2050



Latest demand growth is 1.7% (120,933 GWh)*
(IBR reference: 116,367 GWh)



Total Group CAPEX :
RM9.5 – RM10.0 bil

Regulated capex* : ~RM7.0 bil
Others** : ~RM3.0 bil

* ET Related capex of RM2.76 bil (includes system improvement CAPEX)

** Major projects, subsidiaries and corporate



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



Delivering Value to our Shareholders

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



Key Theme of Regulatory Period 4

Delivering our customers' energy needs and facilitating Malaysia's Energy Transition



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)



Energy Sources

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

	Electricity Export to Singapore Finalising relevant agreements and licensing	100MW COD: 1Q2024
	Sungai Perak Hydro Life Extension Programme Finalised new PPA	650.8MW COD: 2025
	Nenggiri Hydro Project Physical progress as of September 2023 is 32%	300MW COD: 2Q2027
	Paka Repowering Establishment of Feasibility Study	1,400MW COD: 2030
	New Combined Cycle Power Plant (Kapar) Establishment of Feasibility Study	2,100MW COD: 2031

New Projects under NETR

Hybrid Hydro-Floating Solar PV (HHFS) ~2,500MW by 2040



Phase 1
230MW
COD: 2025

International tender floated
for EPCC 30MWac at
Chenderoh reservoir

Phase 2
470MW
COD: 2028

Phase 3
800MW
COD: 2035

Phase 4
924MW
COD: 2040

New Energy Division (NED)

	TNB Bukit Selambau Solar 2 Physical progress as of September 2023 is 86%	50MW COD: 4Q2023
	Solar Greenfield Development (UK) Discharging remaining planning conditions	102MW COD: 2024
	Corporate Green Power Programme (CGPP)	90MWac ¹ COD: 2025

¹Effective ownership of 48MWac/72MWp

New Projects under NETR

	Large-Scale Solar Parks	5 x 100MW COD: 2026
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Energy Sources

Entrusted with NETR flagship projects that promises tremendous growth opportunities

Deliver Renewable Energy Zones through Solar Parks



Large-Scale Solar Parks

- Finalising business model, offtake mechanism and interconnection with Single Buyer and Energy Commission
- Finalising land selection through technical analysis
- Assessing and reviewing of LOIs with potential corporate customers

Key Milestones

- Finalisation of Land & Partners Selection
- Finalisation of corporate off-takers agreement
- COD: 2026

Deploy RE at scale through Hydropower-floating solar plants



Hybrid Hydro-Floating Solar PV (HHFS)

- Finalising potential offtake mechanisms
- Ongoing Feasibility Studies for Perak Scheme; Planning for Terengganu Scheme & Kelantan Scheme
- Finalised Technical & Commercial Specifications

Key Milestones

- Notice to Proceed (Phase 1 EPCC)
- COD: 2025

Invest in clean tech at scale through Co-firing of Hydrogen & Ammonia



Co-firing of Hydrogen & Ammonia

- Completed evaluation on the external consultant for the joint feasibility study
- Consolidating findings from TNB and Petronas internal studies on levelised cost of hydrogen

Key Milestones

- Completion of Paka Repowering Project with hydrogen ready technology (subject to joint feasibility study and issuance of LOA by government)
- COD: 2030



Energy Sources

Grid of the Future is key to NETR success while interconnection continues to see encouraging bilateral developments

RP3 Approved Capex

RM8.20 bil for RP3

Supporting the Energy Transition (ET) and RAB growth

67%

CAPEX* utilisation
as of 9MFY2023

*RM2.76 bil FY2023 ET related CAPEX

Key Projects

Smart Meter Installation progress:



97%

Installed 577,058 units
FY2023 Target: 600,000 units
Total Installed to date: 1,415,888 units

Volt-Var Optimisation (VVO) progress:



74%

Achieved 89MVar
FY2023 Target: 120 MVar

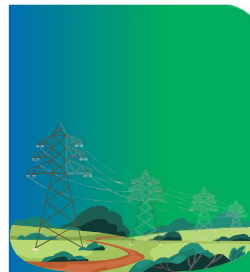
Towards becoming a Smart Utility by 2025

85%

TNB Smart Grid Index (SGI) target by 2025

2022 SGI: 71.4%

2021 SGI: 67.9%



Regional Interconnection

Key Collaborations

PT PLN and ASEAN Centre for Energy (ACE)

Feasibility study for Cross-Border Electricity Interconnection between Sumatra, Indonesia, and Peninsular Malaysia.

Progress:

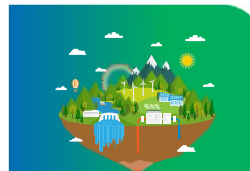
The kick-off meeting on the feasibility studies was held on 15 November 2023 in Jakarta, Indonesia.

SP Power Assets (SPPA)

Assess the Technical Feasibility of a Second Power Interconnection Linking Peninsular Malaysia and Singapore.

Progress:

The kick-off meeting and site visit to potential landing point were held on 2 November 2023 in Singapore. Next meeting is scheduled in December 2023.



Green Energy Island by 2026

Cleaner source of energy with smart grid adoption

Outlook for 4QFY2023:

Commissioning of 120kWp Building-Integrated Photovoltaic (BIPV) system in Masjid Pulau Perhentian.

36%
completion

Achievement:

Top 3 Best Paper Award at Enlit Asia 2023 in Jakarta, Indonesia.



Energy Vector

**Completed a total of 6 data centre projects for 292MW ahead of time;
strong potential demand as we commit to regional hub aspiration**

Data Centre

Key Achievements

Completed Projects

6

~292MW

Total amount of energy



GDS 万国数据



AIMS company



GDS 万国数据

GDS IDC Malaysia

GDS Data Centre Plot 1, Nusajaya Tech Park was **commissioned at 132kV supply in September 2023** with total capacity of **85.5 MW ahead of schedule.**

Memorandum of Understanding



AirTrunk

- Collaborate on renewable energy supply for JHB1 data centre campus.
- Explore the application of energy storage and other novel technologies that promote green DC operations and Malaysia's Energy Transition.
- Research opportunities to develop technology roadmaps to advance 24/7 clean energy in Malaysia.

Electricity Supply Agreements (ESA)

8 projects

2,000MW

Total amount of energy



Yellowwood Properties
(Yondr)



SIPP Power



K2 Strategic



AirTrunk Malaysia



GDS 万国数据
3 ESA signed



PDG

Outlook

2023 Pipeline Data Centres

4

companies

~840MW

Total amount of energy

Potential Demand

>5,000MW

by 2035



Energy Usage

Latest MOU paves exciting regional growth prospect while the green lane supply connection is TNB's commitment to support rapid demand of EV infrastructure nationwide

Electric Vehicle (EV)

National Energy Transition Roadmap (NETR)

2025 Target:

10,000

EV charging points

Installed along highways and selected commercial buildings in collaboration with strategic partners

Partnership with Charge+ for Cross-Border EV Charging



Objectives

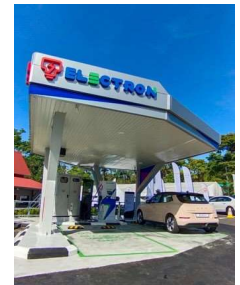
- Explore a ground-breaking cross-border roaming platform.
- Connect customers to EV charging points across Malaysia and Singapore.

Grand Vision

Integrated into an expansive network of **30,000** charging points by **2030**, spanning a **5,000km** EV highway across **5** Southeast Asian countries

Green Lane Supply Connection

- TNB introduced Green Lane Supply Connection process for EV Charging Station in November 2022, as part of TNB's commitment to support the rapid growth of EV Infrastructure nationwide.
- Focus on establishing green lane supply connection for EV Charging Station with the objectives of:
 - **Efficient interactions** between EV Charging Station's applicant and TNB along supply connection process, and
 - **Reduced duration** in giving supply.
- TNB commits to **provide guidance for Charging Point Operators (CPOs), facilitating the supply connection for EV infrastructure**, and has **established a Single Point of Contact platform** to facilitate electricity supply connections.
- To date, we have **received 113 supply connections equivalent to 111MW**.



Progress



- 3 electron charging stations commissioned this year (Ayer Keroh, Paka & Tapah).
- Physical progress at **7 R&R locations** has achieved an average of **40-50% progress**.



Energy Usage

GSPARX continues to make headway achieving 80% of 2023 target; strategic partnership under NETR projects fuel future growth

GSPARX

Highlights

- Signed MoU on 28 August 2023 to collaborate with RHB, to accelerate energy transition through green financing solutions.



- Target Segment: Small Medium Enterprises (SMEs)
 - TNB to introduce energy efficiency technology and solutions as well as renewable energy sources.
 - RHB will provide advisory and financial support through green financing solutions.



- Signed MoU on 23 August 2023 to establish working committee to drive sustainability initiatives and promote the adoption of renewable energy in the country.
- Joint marketing and work collaboratively to explore and unlock new business opportunities to develop Malaysia's solar photovoltaic market.

National Energy Transition Roadmap (NETR)



Key Milestone:

On 29 August 2023, MoU has been signed between TNB with Sime Darby Property

Outlook:

Pilot project to be executed in Q1 2024

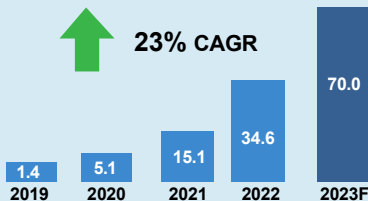
4.5MW
Solar capacity across 450 homes in City of Elmina

Key Achievements

80%
Capacity secured of
FY2023 Target (386MWp)



23% CAGR



- Completed installation of solar panels at Shorubber's manufacturing plant in Perlis to generate 2.6MWp of solar capacity on 11 November 2023.
- Emission avoidance of carbon dioxide (CO2) in the quantum of 1,571 metric tonnes per year, equivalent to planting over 25,972 saplings.



Kian Joo Can
Factory Bhd

- Awarded to install 2.98MWp rooftop solar PV at factory in Nilai.
- This project is under Outright Purchase arrangement and target to complete physical work by end of year 2023.



AIMST
University

- Secured Outright Purchase project from AIMST University (Sg Petani) for total rooftop solar capacity of 2.8MWp.
- Target delivery: Q2 2024

Appendix

9M FY2023

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

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

RM mil		9MFY23	9MFY22	Variance	
				RM mil	%
Revenue	1	39,414.9	37,952.6	1,462.3	3.9
Imbalance Cost Pass Through (ICPT)		8,491.6	15,917.6	(7,426.0)	(46.7)
Operating expenses (without depreciation)	2	(34,141.4)	(38,104.5)	3,963.1	(10.4)
Net (loss) / gain on impairment of financial instruments	3	(32.1)	(128.3)	96.2	(75.0)
Other operating income		609.8	676.8	(67.0)	(9.9)
EBITDA		14,342.8	16,314.2	(1,971.4)	(12.1)
EBITDA Margin (%)		36.4%	43.0%	-	(6.6)
Depreciation		(8,368.4)	(8,404.7)	36.3	(0.4)
EBIT		5,974.4	7,909.5	(1,935.1)	(24.5)
Foreign exchange:					
- Transaction gain / (loss)		2.0	24.0	(22.0)	(91.7)
- Translation (loss) / gain	4	(362.5)	(608.3)	245.8	(40.4)
Share of results of joint ventures		9.4	19.0	(9.6)	(50.5)
Share of results of associates		26.3	83.5	(57.2)	(68.5)
Profit before finance cost		5,649.6	7,427.7	(1,778.1)	(23.9)
Fair value changes of financial instrument		14.5	125.1	(110.6)	(88.4)
Finance income		411.7	179.9	231.8	>100.0
Finance cost	5	(3,376.1)	(3,200.8)	(175.3)	5.5
Profit from ordinary activities before taxation		2,699.7	4,531.9	(1,832.2)	(40.4)
Taxation and Zakat:					
- Company and subsidiaries	6	(631.6)	(1,661.1)	1,029.5	(62.0)
- Deferred taxation	7	11.1	(121.3)	132.4	>(100.0)
Profit for the period		2,079.2	2,749.5	(670.3)	(24.4)
Attributable to:					
- Owners of the Company		2,186.4	2,654.2	(467.8)	(17.6)
- Non-controlling interests		(107.2)	95.3	(202.5)	>(100.0)
Profit for the period		2,079.2	2,749.5	(670.3)	(24.4)

Y-o-Y analysis:

- Higher Group revenue driven by sales demand growth of 2.7% and additional revenue from UK investments.
- Reduction in operating expenses was mainly due to lower generation cost.
- Includes lower allowance for doubtful debts (ADD) of RM11.8 mil (9MFY22 ADD of RM105.0 mil).
- Translation loss due to weakening of MYR, mainly attributed to the outstanding USD denominated loans.
- Higher finance cost due to interest on borrowings, mainly for working capital to fund higher fuel cost.
- Lower tax expense in 9MFY23 due to higher reinvestment allowance (RA) claim and one-off Prosperity Tax impact in 9MFY22.
- Deferred tax movement resulted from increase in accrued revenue.

Quarter vs previous quarter (3QFY23 vs 2QFY23) analysis

RM mil		3QFY23	2QFY23	Variance	
				RM mil	%
Revenue	1	13,466.1	13,323.2	142.9	1.1
Imbalance Cost Pass Through (ICPT)	2	1,999.1	2,860.2	(861.1)	(30.1)
Operating expenses (without depreciation)		(10,905.1)	(11,594.8)	689.7	(5.9)
Net gain / (loss) on impairment of financial instruments	3	20.4	(101.2)	121.6	>(100.0)
Other operating income		214.2	177.0	37.2	21.0
EBITDA	4	4,794.7	4,664.4	130.3	2.8
EBITDA Margin (%)		35.6%	35.0%		0.6
Depreciation		(2,771.1)	(2,795.7)	24.6	(0.9)
EBIT		2,023.6	1,868.7	154.9	8.3
Foreign exchange:					
- Transaction (loss)/gain		(58.3)	61.8	(120.1)	>(100.0)
- Translation gain/(loss)	5	62.9	(453.5)	516.4	>(100.0)
Share of results of joint ventures		3.9	4.6	(0.7)	(15.2)
Share of results of associates		10.5	(6.3)	16.8	>(100.0)
Profit before finance cost		2,042.6	1,475.3	567.3	38.5
Fair value changes of financial instrument		(32.4)	54.9	(87.3)	>(100.0)
Finance income		155.2	157.9	(2.7)	(1.7)
Finance cost		(1,109.9)	(1,146.6)	36.7	(3.2)
Profit from ordinary activities before taxation		1,055.5	541.5	514.0	94.9
Taxation and Zakat:					
- Company and subsidiaries	6	(204.9)	(276.3)	71.4	(25.8)
- Deferred taxation		26.8	5.7	21.1	>100.0
Profit for the period		877.4	270.9	606.5	223.9
Attributable to:					
- Owners of the Company		856.2	327.9	528.3	>100.0
- Non-controlling interests		21.2	(57.0)	78.2	>(100.0)
Profit for the period		877.4	270.9	606.5	223.9

Q-o-PrevQ analysis:

- Higher revenue mainly due to higher Group sales of electricity.
- Lower ICPT surcharge mainly due to lower coal price.
- Write back of ADD provision in 3QFY23 as collection improved.
- Improvement in EBITDA resulted from improvement in fuel margin as coal prices moderated in 3QFY23.
- Translation gain in 3QFY23 due to strengthening of MYR against USD.
- Lower tax expense in 3QFY23 due to higher capital allowance and RA claims.

Y-o-Y normalised EBITDA & PAT for 9MFY23

EBITDA Components	9MFY23 RM mil	9MFY22 RM mil
Reported EBITDA	14,342.8	16,314.2
MFRS16 impact	1 (3,174.7)	(3,328.0)
Normalised EBITDA	11,168.1	12,986.2

PAT Components	9MFY23 RM mil	9MFY22 RM mil
Reported PAT	2,079.2	2,749.5
Forex Translation gain	362.5	608.3
MFRS16 impact	1 529.4	700.5
Normalised PAT	2 2,971.1	4,058.3

1

MFRS16 impact:

	9MFY23 RM mil	9MFY22 RM mil	Variance RM mil
Capacity Payment	3,174.7	3,328.0	(153.3)
Depreciation	(2,617.7)	(2,902.4)	284.7
Finance Cost	(1,236.5)	(1,332.1)	95.6
Deferred Tax	150.1	206.0	(55.9)
Net Impact	(529.4)	(700.5)	171.1

2

Lower normalised PAT mainly due to negative fuel margin of RM767.9 mil in 9MFY23 (positive fuel margin of RM916.7 mil in 9MFY22).

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

	3QFY23		2QFY23		Variance (3QFY23 vs 2QFY23)		9MFY23		9MFY22		Variance (9MFY23 vs 9MFY22)		
UNITS SOLD	GWh		GWh		GWh	%	GWh		GWh		GWh	%	
Sales of Electricity (GWh)													
- TNB	31,448.1		31,153.3		1	294.8	0.9	91,714.6		89,466.5	1	2,248.1	2.5
- SESB	1,641.3		1,499.9			141.4	9.4	4,543.2		4,301.8		241.4	5.6
- EGAT (Export)	0.3		-			0.3	-	0.4		0.3		0.1	33.3
- TNBI (UK Wind)	18.2		13.2			5.0	37.9	55.5		58.8		(3.3)	(5.6)
- TNBI (Vortex)	113.5		145.8		2	(32.3)	(22.2)	307.0		327.1	2	(20.1)	(6.1)
- TNBI (CEI UK LTD)	50.4		33.5			16.9	50.4	160.2		95.1	3	65.1	68.5
Total Units Sold (GWh)	33,271.8		32,845.7			426.1	1.3	96,780.9		94,249.6		2,531.3	2.7
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	12,646.5	40.80	12,618.3	40.44	1	28.2	0.2	36,708.4	40.23	35,695.0	40.26	1,013.4	2.8
- Sales Discount	-		-			-	-	-		(2.2)		2.2	(100.0)
- SESB	541.7	33.79	529.7	35.33		12.0	2.3	1,550.2	34.41	1,470.0	34.45	80.2	5.5
- Accrued Revenue	(0.2)		(14.7)			14.5	(98.6)	182.9		37.3		145.6	>100.0
- EGAT (Export)	0.2	-	-	-		0.2	100.0	0.3	-	0.4	-	(0.1)	(25.0)
- TNBI (UK Wind)	37.2	204.40	26.6	201.52		10.6	39.8	99.3	178.92	83.6	142.18	15.7	18.8
- TNBI (Vortex)	133.2	117.36	165.9	113.79		(32.7)	(19.7)	333.9	108.76	254.1	77.68	79.8	31.4
- TNBI (CEI UK LTD)	56.6	112.30	36.0	107.46		20.6	57.2	157.5	98.31	69.0	-	88.5	>100.0
Sales of Electricity	13,415.2	40.32	13,361.8	40.68		53.4	0.4	39,032.5	40.33	37,607.2	39.90	1,425.3	3.8
Other Regulatory Adjustment	(417.2)		(495.3)			78.1	(15.8)	(988.3)		(679.4)		(308.9)	45.5
Relief Package from Government	-		-			-	-	-		0.6		(0.6)	(100.0)
SESB Tariff Support Subsidy	74.9		71.5			3.4	4.8	210.7		199.7		11.0	5.5
Fuel Subsidy - SESB	77.0		69.5			7.5	10.8	211.5		-		211.5	100.0
Total Sales of Electricity	13,149.9		13,007.5			142.4	1.1	38,466.4		37,128.1		1,338.3	3.6
Goods & Services	214.0		203.2			10.8	5.3	621.8		514.5		107.3	20.9
Construction contracts	31.3		43.2			(11.9)	(27.5)	115.2		105.9		9.3	8.8
Customers' Contribution	70.9		69.3			1.6	2.3	211.5		204.1		7.4	3.6
Total Revenue	13,466.1		13,323.2			142.9	1.1	39,414.9		37,952.6		1,462.3	3.9

1 3QFY23 vs 2QFY23: Higher units sold and sales of electricity from industrial and commercial sectors.

9MFY23 vs 9MFY22: Higher units sold and sales of electricity from commercial and domestic sectors.

2 Lower generation due to lower irradiance.

3 9MFY23 vs 9MFY22: Acquisition of 97.3MW onshore wind portfolio (UK) in April 2022.

4 Refer Other Regulatory Adjustment slide.

5 9MFY23 vs 9MFY22: Reported as Revenue starting from 4QFY22 due to IBR implementation in SESB.

6 Higher revenue recorded by subsidiaries.

As at 9MFY23, other regulatory adjustment of RM988.3 mil to be returned

Components of Other Regulatory Adjustment

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

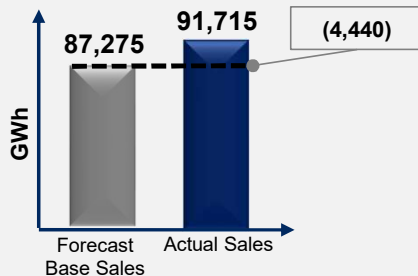
TOTAL

1QFY23 RM mil	2QFY23 RM mil	3QFY23 RM mil	9MFY23 RM mil	9MFY22 RM mil
(1.4)	(418.1)	(384.3)	¹ (803.8)	(495.4)
(71.1)	(67.8)	(63.7)	(202.6)	(193.6)
(3.2)	(9.5)	30.8	18.1	9.6
(75.8)	(495.3)	(417.2)	(988.3)	(679.4)

*SESB has implemented IBR framework starting 1 January 2022

Revenue Cap

9MFY23 Variation in Sales (in GWh)

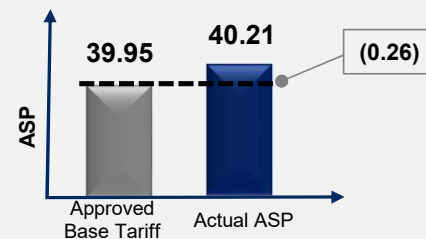


- The allowed annual revenue for revenue cap entities is based on 87.3TWh demand growth. Any excess/shortfall is adjusted through revenue adjustment mechanism.
- For 9MFY23, higher actual sales has led to amount to be returned via revenue adjustment mechanism.

Business Entities	Allowed Tariff (sen/kWh)	Variation in Sales (GWh)	Adjustment (RM mil)
Revenue Cap Entities	12.60	(4,440)	(558.5)*

Price Cap

9MFY23 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 9MFY23, 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	91,715	0.26	(245.3)*

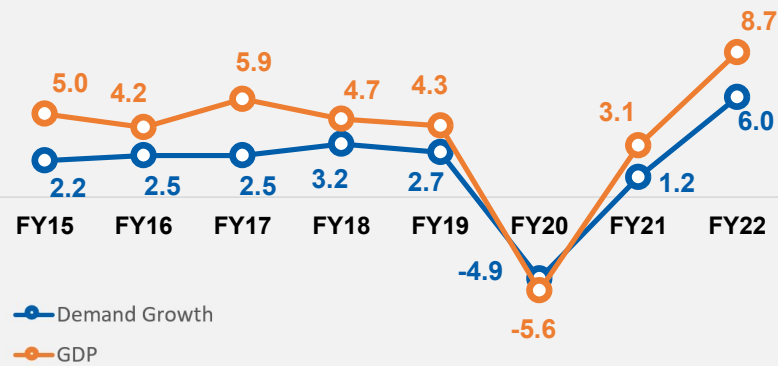
* Numbers manually computed will not match due to decimal variance

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

GDP & TNB Demand Growth

%

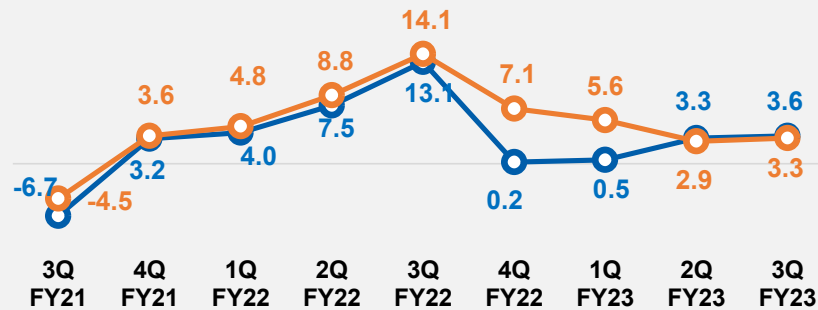
Full Year



%

Year-on-Year

*GDP FY2023 (F): 4.0%



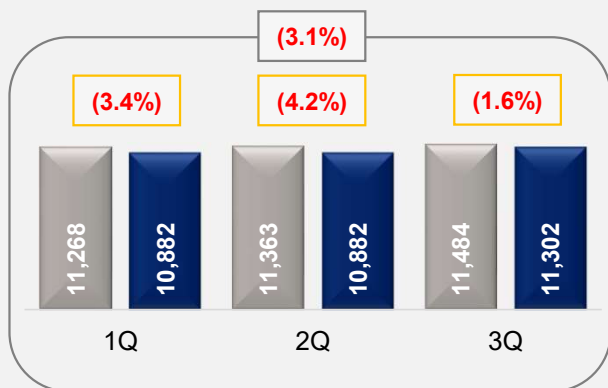
TNB (Peninsular) Yearly Peak Demand

MW



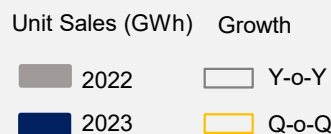
Improved Y-o-Y electricity demand mainly contributed by commercial and domestic sectors

Industrial

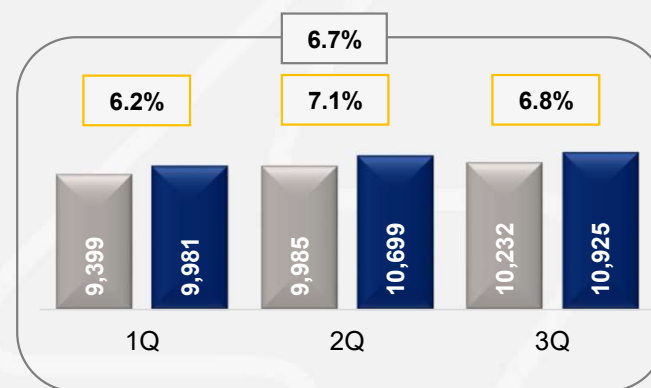


9MFY23 main contributors for the increase in commercial sector:

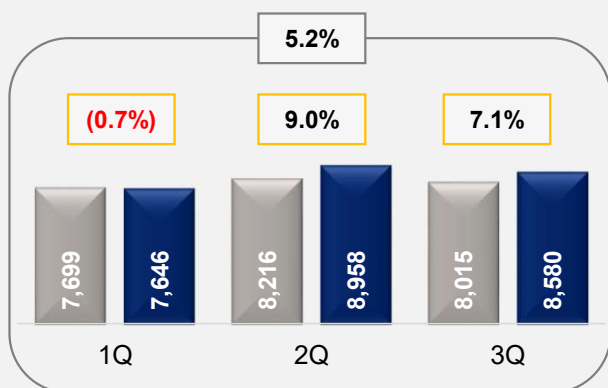
- Retails, business services and accommodation services



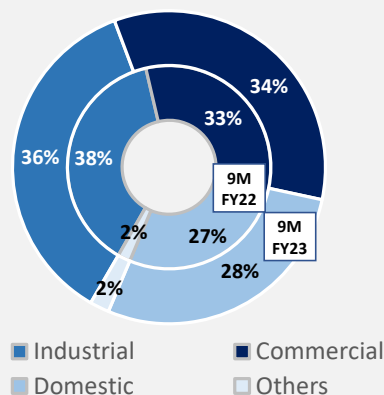
Commercial



Domestic

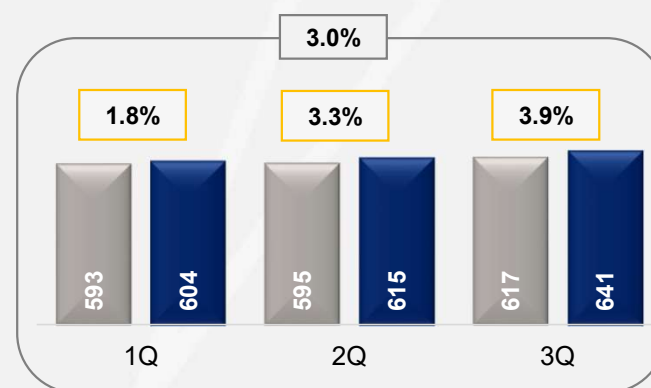


Sector Mix (%) 9MFY23 vs 9MFY22



Others*

*includes Agriculture, Mining & Public Lighting



Lower Y-o-Y operating expenses due to lower generation cost

	3QFY23	2QFY23	Variance (3QFY23 vs 2QFY23)		9MFY23	9MFY22	Variance (9MFY23 vs 9MFY22)	
	RM mil	RM mil	RM mil	%	RM mil	RM mil	RM mil	%
Non-TNB IPPs Costs	3,797.0	4,001.0	(204.0)	(5.1)	11,506.3	12,901.8	(1,395.5)	(10.8)
Capacity Payment	30.9	14.9	16.0	>100.0	(60.5)	(270.1)	209.6	(77.6)
Energy Payment	3,766.1	3,986.1	(220.0)	(5.5)	11,566.8	13,171.9	(1,605.1)	(12.2)
TNB Fuel Costs	4,341.8	5,067.1	(725.3)	(14.3)	14,900.0	18,129.4	(3,229.4)	(17.8)
Fuel Costs	4,309.2	5,046.8	(737.6)	(14.6)	15,497.7	13,992.4	1,505.3	10.8
Fuel Price Adjustment	32.6	20.3	12.3	60.6	(597.7)	4,589.9	(5,187.6)	>(100.0)
Fuel Subsidy - SESB	0.0	0.0	0.0	-	¹ 0.0	(452.9)	452.9	(100.0)
Total Cost of Generation	8,138.8	9,068.1	² (929.3)	(10.2)	26,406.3	31,031.2	² (4,624.9)	(14.9)
Staff Costs	914.9	1,002.4	(87.5)	(8.7)	2,855.6	2,822.7	32.9	1.2
Repair & Maintenance	810.8	724.4	86.4	11.9	2,156.3	1,807.3	³ 349.0	19.3
TNB General Expenses	435.4	371.0	64.4	17.4	1,214.4	1,178.6	35.8	3.0
Subs. General Expenses	605.2	428.9	⁴ 176.3	41.1	1,508.8	1,264.7	⁴ 244.1	19.3
Total Non-Generation Cost	2,766.3	2,526.7	239.6	9.5	7,735.1	7,073.3	661.8	9.4
Total Operating Expenses (without Depreciation)	10,905.1	11,594.8	(689.7)	(5.9)	34,141.4	38,104.5	(3,963.1)	(10.4)
Depreciation & Amortisation	2,771.1	2,795.7	(24.6)	(0.9)	8,368.4	8,404.7	(36.3)	(0.4)
Total Operating Expenses	13,676.2	14,390.5	(714.3)	(5.0)	42,509.8	46,509.2	(3,999.4)	(8.6)

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

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

³ 9MFY23 vs 9MFY22: Higher expenses driven by higher R&M activities.

⁴ Higher due to increase in cost of sales and general expenses of other subsidiaries.

Lower overall fuel cost due to lower coal price in 9MFY23

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

Fuel Type	9MFY23	9MFY22	Variance	
			RM mil	%
Coal	15,762.4	20,966.0	(5,203.6)	(24.8)
Gas	7,941.9	7,962.0	(20.1)	(0.3)
Distillate	214.3	390.6	(176.3)	(45.1)
Oil	29.9	105.1	(75.2)	(71.6)
Total*	23,948.6	29,423.7	(5,475.1)	(18.6)

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

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

Fuel Type	9MFY23		9MFY22		Variance	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	%
Coal	57,371.1	57.6%	55,196.3	56.1%	2,174.8	3.9
Gas & LNG	36,006.4	36.1%	36,750.0	37.4%	(743.6)	(2.0)
Distillate	175.7	0.2%	479.9	0.5%	(304.2)	(63.4)
Oil	-	0.0%	2.7	0.0%	(2.7)	-
Hydro	4,493.8	4.5%	4,773.7	4.9%	(279.9)	(5.9)
Solar	1,618.8	1.6%	1,153.5	1.2%	465.4	40.3
Total	99,665.8	100.0%	98,356.1	100.0%	1,309.8	1.3

Table C – Fuel Costs Related Data

Fuel statistics	9MFY23	9MFY22
Average Coal Price Delivered (USD/MT)(CIF)	139.9	209.7
Average Coal Price Delivered (RM/MT)(CIF)	630.7	910.5
Coal Consumption (mil MT)	25.2	24.1
Gas Reference Market Price (RM/mmbtu)		
	1Q'FY23	1Q'FY22
	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 62.1	Tier 2 : 36.9
	2Q'FY23	2Q'FY22
	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 51.7	Tier 2 : 38.2
	3Q'FY23	3Q'FY22
	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 44.9	Tier 2 : 43.4
Daily Average Piped Gas Volume (mmscfd)	859	892

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

	9MFY23	9MFY22	Variance	
			USD	%
FOB	130.2	195.9	(65.7)	(0.3)
Freight	9.4	13.3	(3.9)	(29.5)
Others	0.3	0.5	(0.23)	(45.1)
CIF	139.9	209.7	(69.8)	(33.3)

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

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

Fuel Type	3QFY23		2QFY23		1QFY23		Variance 3QFY23 vs 2QFY23	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	Gen. Mix	RM mil	%
Coal	19,986.0	58.6%	20,470.6	60.1%	16,914.5	53.7%	(484.6)	(2.4)
Gas	11,967.4	35.1%	11,597.7	34.0%	12,441.3	39.5%	369.7	3.2
Distillate	76.2	0.2%	67.7	0.2%	31.8	0.1%	8.5	12.6
Oil	0	0.0%	-	0.0%	-	0.0%	-	-
Hydro	1,540.6	4.5%	1,361.8	4.0%	1,591.4	5.1%	178.8	13.1
Solar	547.6	1.6%	566.5	1.7%	504.7	1.6%	(18.9)	(3.3)
Total	34,117.8	100.0%	34,064.3	100.0%	31,483.7	100.0%	53.5	0.2

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

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

Fuel Type	3QFY23		2QFY23		1QFY23		Variance 3QFY23 vs 2QFY23	
	GWh	Gen. Mix	GWh	Gen. Mix	GWh	Gen. Mix	USD	%
FOB	104.2		127.9		167.1		(23.7)	(18.5)
	8.7		8.9		10.0		(0.2)	(1.7)
	0.4		0.5		0.4		(0.1)	(15.9)
	113.4		137.3		177.5		(23.9)	(17.4)

Table C – Fuel Costs Related Data

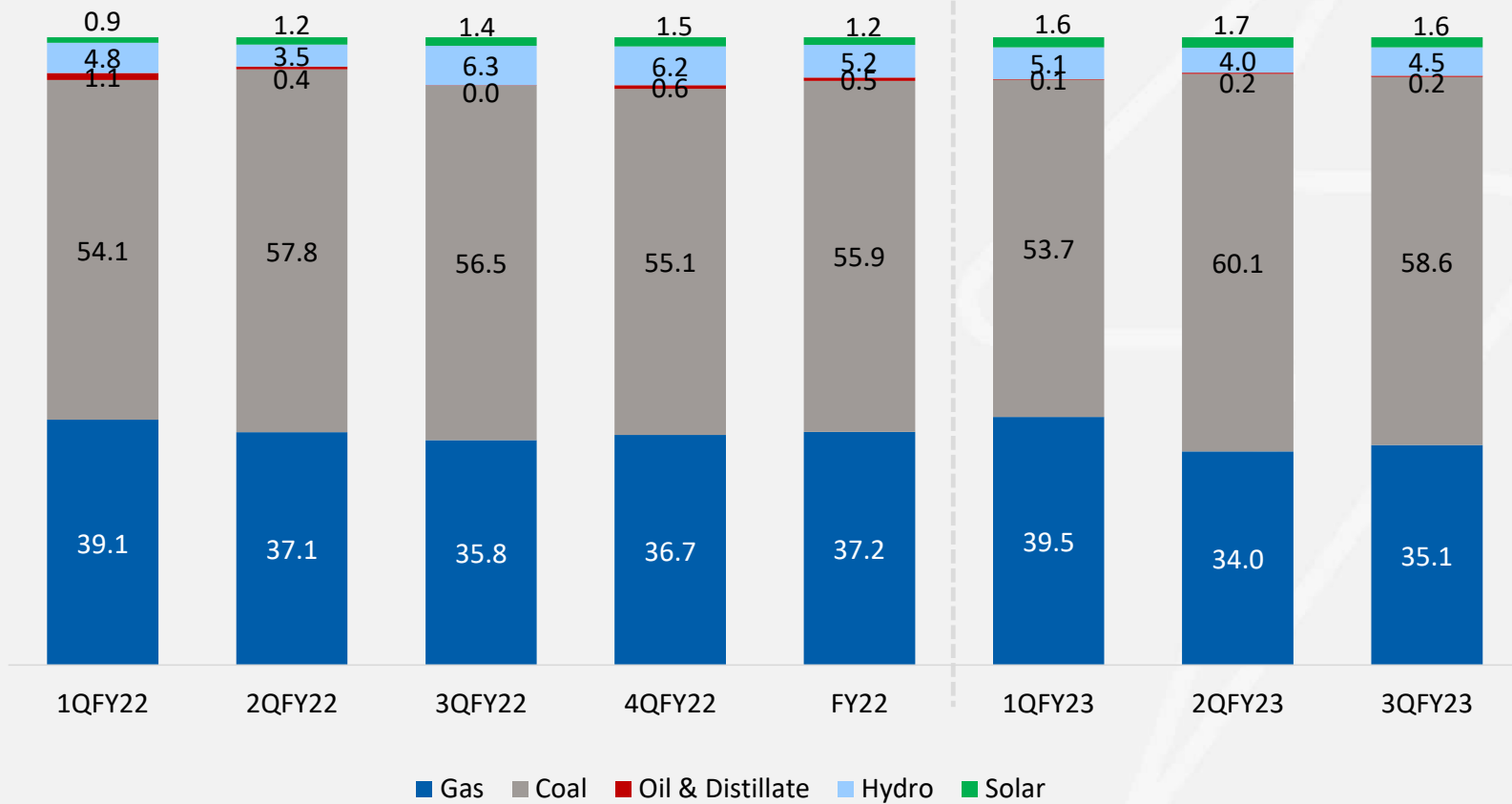
Fuel statistics	3QFY23	2QFY23	1QFY23
Average Coal Price Delivered (USD/MT)(CIF)	111.8	137.3	177.5
Average Coal Price Delivered (RM/MT)(CIF)	508.9	623.2	779.4
Coal Consumption (mil MT)	8.8	8.9	7.5
Gas Reference Market Price (RM/mmbtu)	3QFY23	2QFY23	1QFY23
	Tier 1 : 30.0	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 44.9	Tier 2 : 51.7	Tier 2 : 62.1
Daily Average Piped Gas Volume (mmscfd)	831	840	907

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

	3QFY23	2QFY23	1QFY23	Variance 3QFY23 vs 2QFY23	
	USD			USD	%
FOB	104.2	127.9	167.1	(23.7)	(18.5)
	8.7	8.9	10.0	(0.2)	(1.7)
	0.4	0.5	0.4	(0.1)	(15.9)
	113.4	137.3	177.5	(23.9)	(17.4)

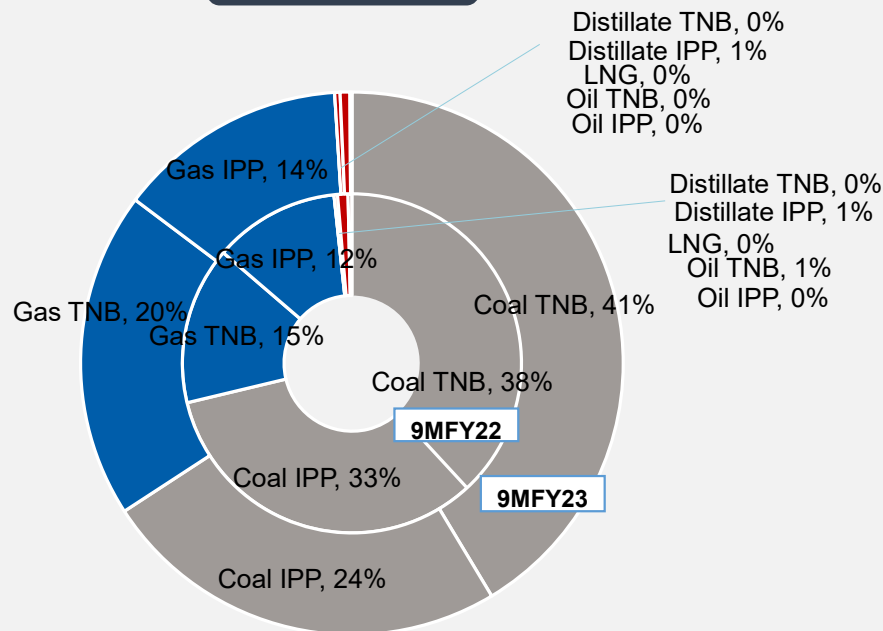
Lower generation from coal in 3QFY23

Generation Mix for Industry (%)

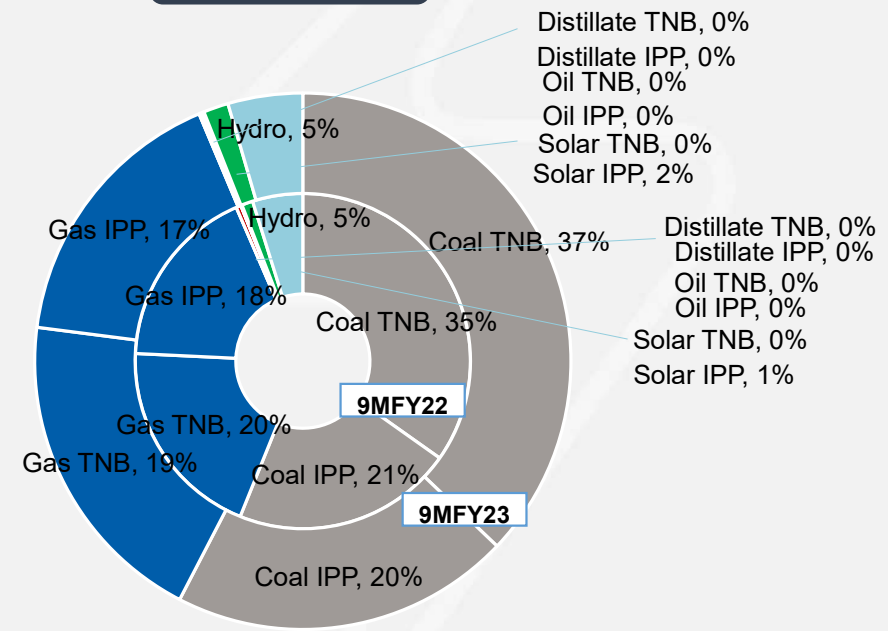


Fuel Costs & Units Generated (TNB & IPPs – Peninsular) in 9MFY23

Fuel Costs



Units Generated



% indicates generation market share

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

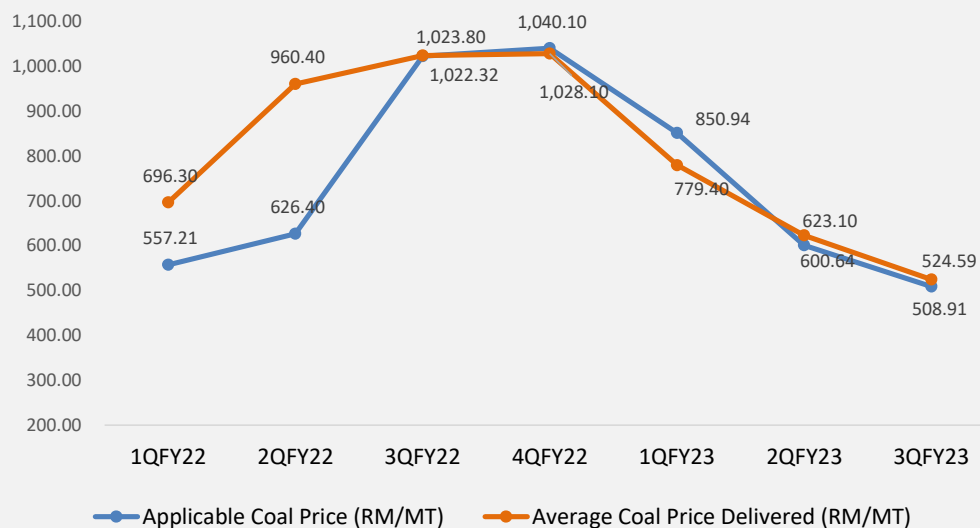
Note: Fuel Costs exclude solar and hydro

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

	3QFY22 RM mil	4QFY22 RM mil	1QFY23 RM mil	2QFY23 RM mil	3QFY23 RM mil
Single Buyer Actual Generation Costs: (A)	14,060.7	14,104.5	11,260.0	11,022.4	10,238.5
<i>Actual Sales (GWh)</i>	30,347.5	29,415.1	29,113.2	31,153.3	31,448.1
<i>Single Buyer Tariff (RM/kWh)</i>	0.2620	0.2620	0.2620	0.2620	0.2620
Actual Gen Cost Recovered (RM mil) (B)	7,951.0	7,706.8	7,627.7	8,162.2	8,239.4
ICPT Surcharge / (Rebate) (C) (C = A – B)	6,109.6	6,397.7	3,632.3	2,860.2	1,999.1

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

Coal Price Trending



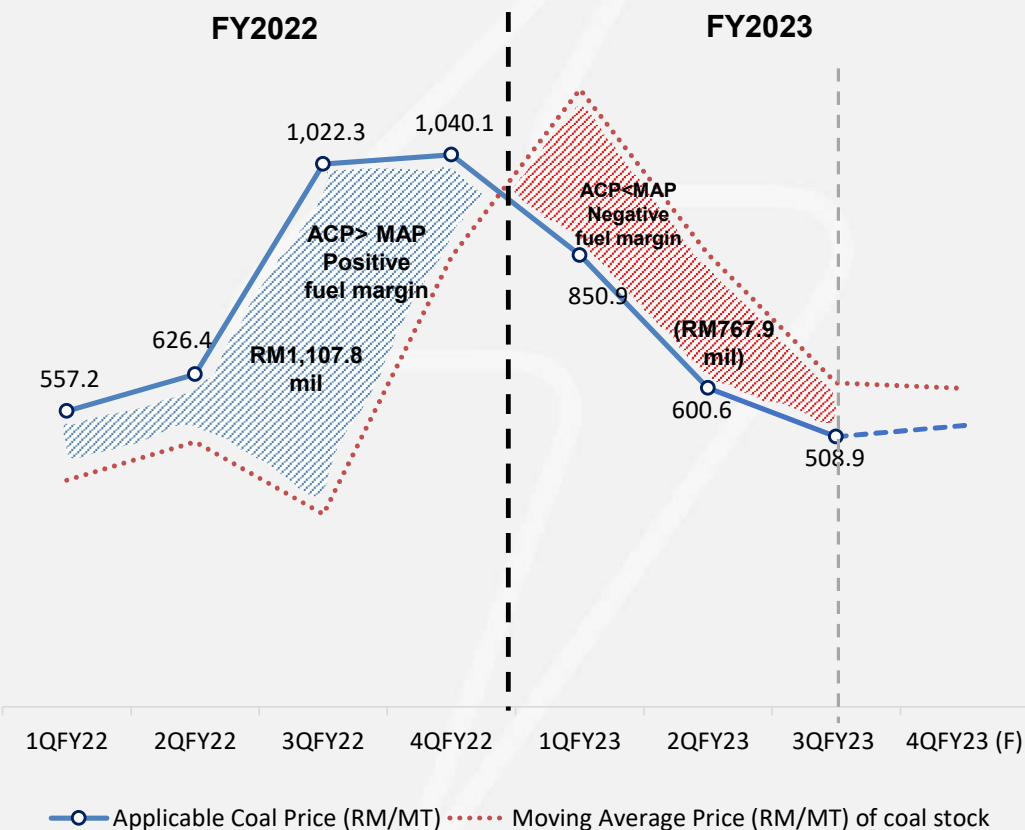
Coal Price & Applicable Coal Price (ACP) comparison

	1QFY22	2QFY22	3QFY22	4QFY22	1QFY23	2QFY23	3QFY23
Average Coal Price Delivered (RM/mmbtu) *	31.88	46.76	48.88	44.96	35.85	29.43	24.31
ACP (RM/mmbtu)	25.53	28.70	46.84	47.65	38.77	27.52	23.32

* Based on internal conversion

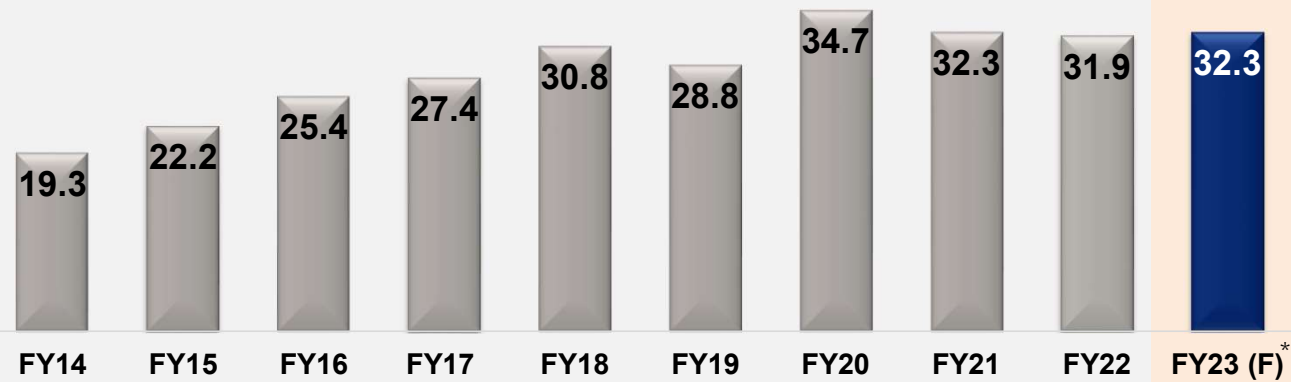
- Fuel Price Adjustments (FPA)** is the difference between the Applicable Coal Price (ACP) billed to generators and the actual coal price paid to supplier (delivered) by TNBF. The difference is caused by higher or lower coal price or due to currency exchange.
- ACP is set by Energy Commission on a monthly basis starting from August 2022.
- In 3QFY23, the base ACP (RM23.32/mmbtu) used for billing the generators is lower than the coal price paid to supplier (RM24.31/mmbtu).

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



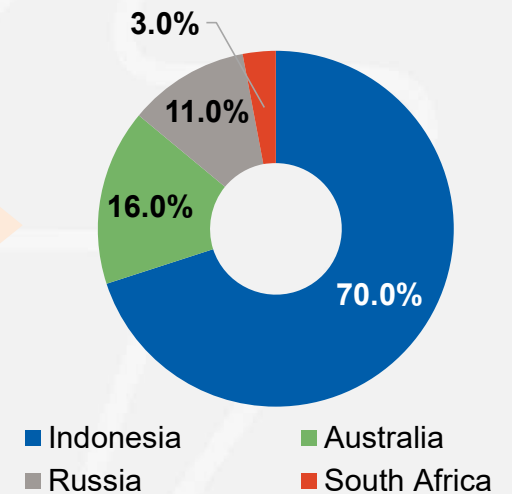
Industry coal requirement forecast for FY2023

Coal Consumption (mil MT)



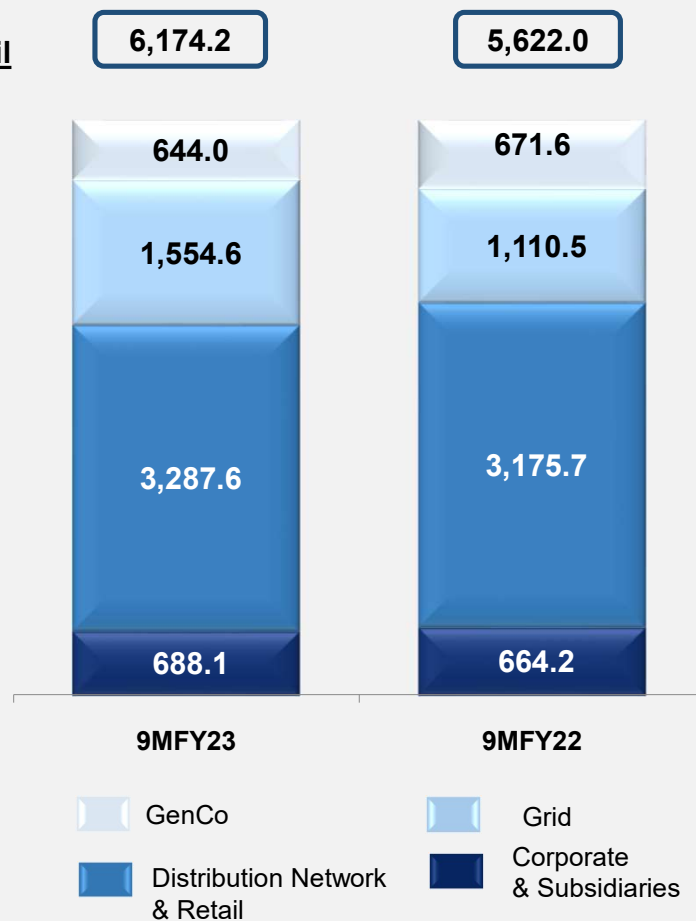
* Based on tonnage planned for delivery in FY2023

Source Country Mix



Group CAPEX

RM mil



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	4,806.8	68.9%

Total RAB (RM mil)	
Actual As at 30 Sep 2023	Approved FY2023
62,809.7	64,768.7
Regulatory net returns: RM3,562.8 mil	

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

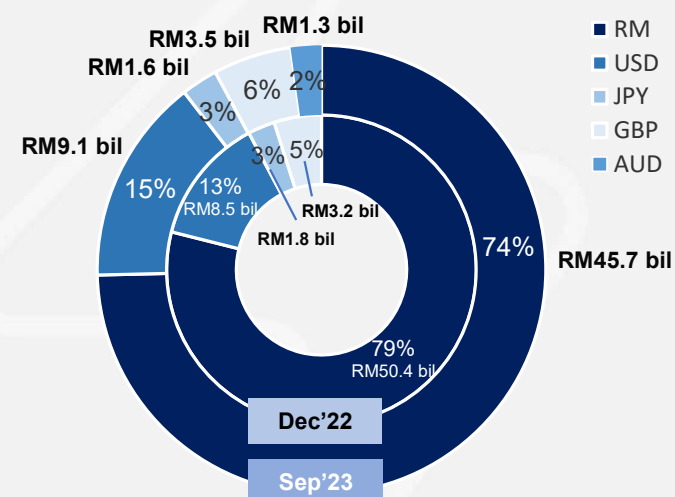
Gearing improved to 50.4% as at 9MFY23


Statistics	30 Sep 2023	31 Dec 2022
Total Debt (RM bil)	61.2	63.9
Net Debt (RM bil)*	42.6	50.8
Gearing (%)	50.4	51.2
Net Gearing (%)	35.1	40.7
Fixed : Floating		
Underlying	92:8	95:5
Final Exposure	96:4	99:1
Effective Average Cost of Borrowing (based on exposure) **	4.78	4.63

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

** Inclusive of interest rate swap

Loan Breakdown

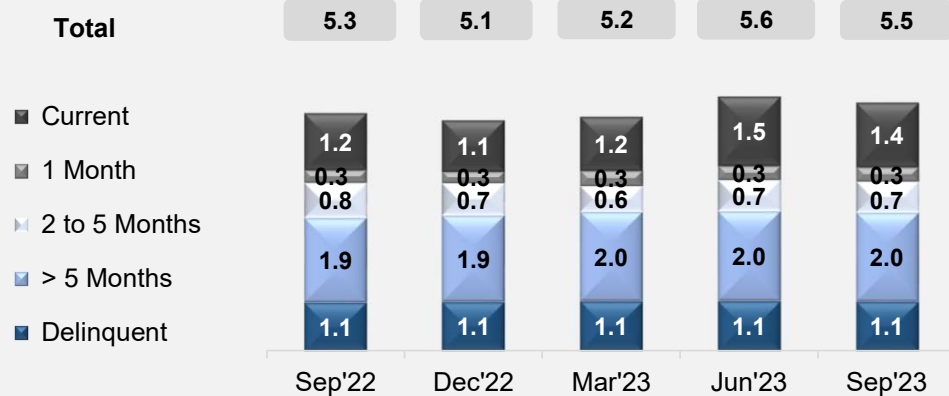


 Closing FOREX	30 Sep 2023	31 Dec 2022
USD/RM	4.685	4.412
100YEN/RM	3.148	3.326
GBP/RM	5.735	5.312
AUD/RM	3.034	

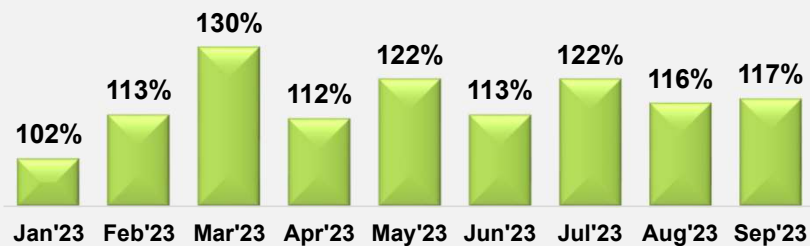
Note:
Debt consists of Principal + Accrued Interest

Trade debtors ageing as at 9MFY23

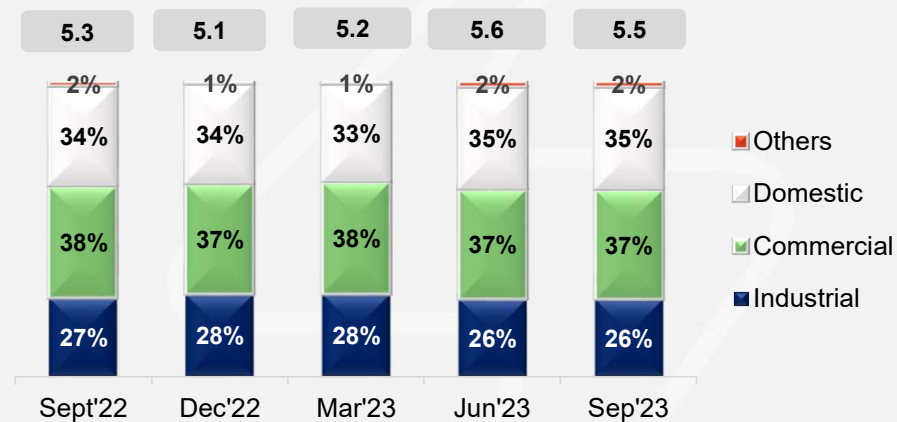
Trade Debtors Ageing (RM bil)



Improvement in collection trend



Trade Receivables By Sectors (RM bil)



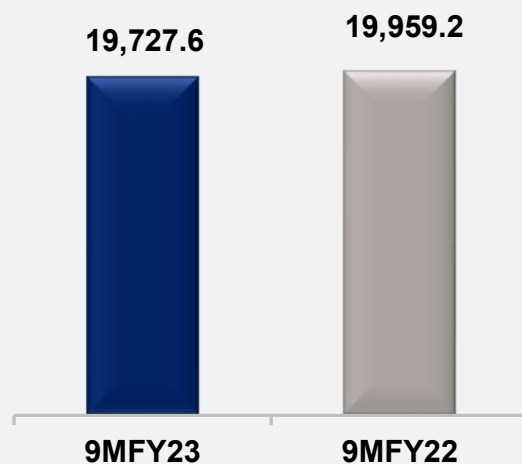
Cash flow

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

Domestic generation business performance

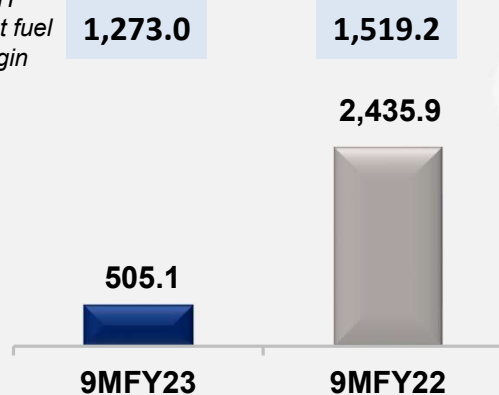
RM mil

REVENUE

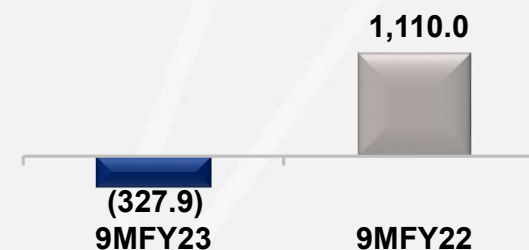


EBIT

*EBIT
without fuel
margin*



PROFIT AFTER TAX



Lower EBIT and PAT mainly due to:

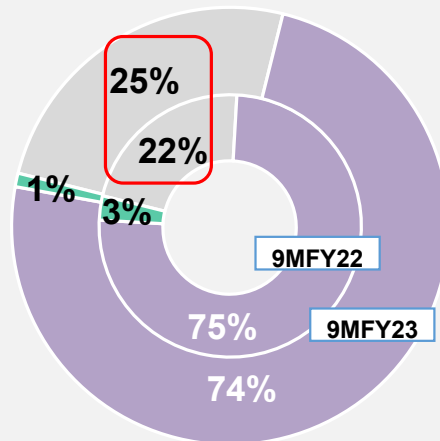
- Impact of negative fuel margin of RM767.9 mil; and
- CRF step down of certain power plants starting from 3QFY22.

Note: Includes generation related subsidiaries

Higher TNB coal contribution for 9MFY23 due to higher units generated

- % Actual Group revenue: 25% (9MFY22: 22%)
- % Units generated: 37% (9MFY22: 35%)

Actual Group Revenue*



RE Coal Others **

* Total revenue includes ICPT

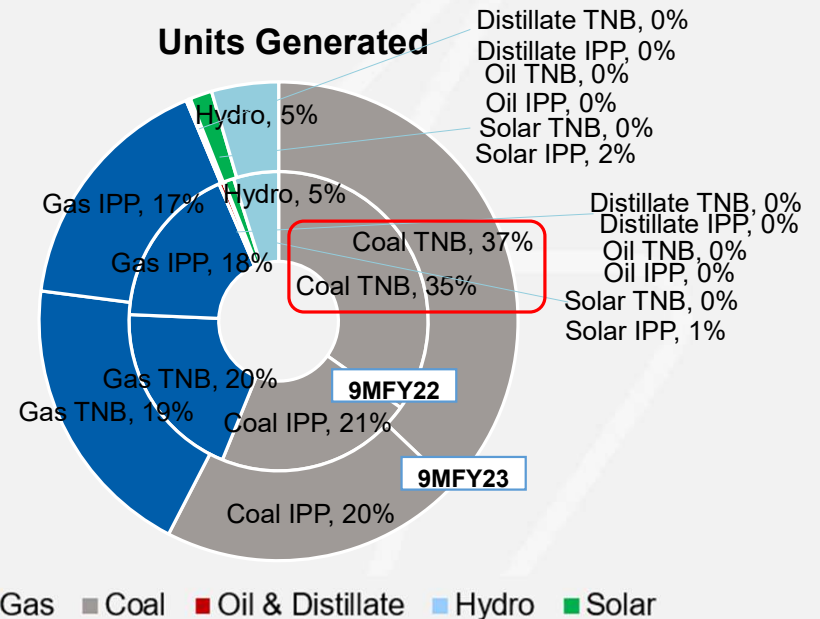
** Others include revenue from regulated business, subsidiaries and generation from gas



**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

Units Generated

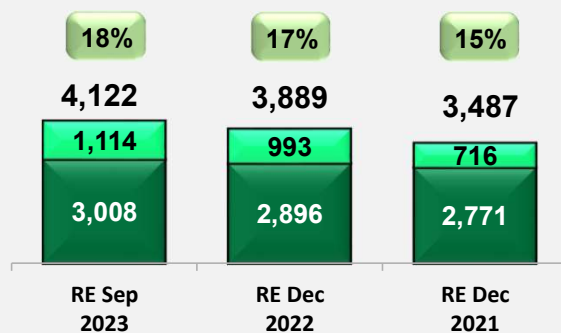


Gas Coal Oil & Distillate Hydro Solar

Our RE journey is progressing well

TNB RE Journey

Renewable capacity (MW)



■ % RE in TNB's portfolio

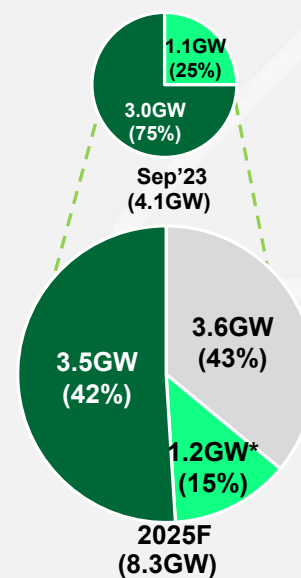
■ International

■ Domestic

Note:

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

TNB Group RE Capacity



Achieved
50% of target capacity
of 8.3GW by 2025

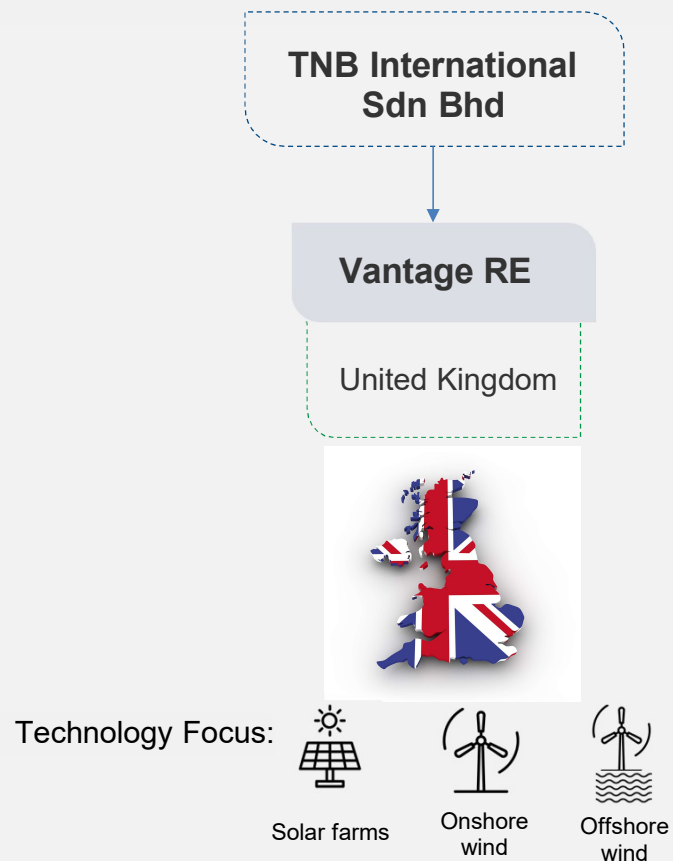
■ International

■ Domestic

Potential Growth

*Excluding potential growth (pipeline) from Australian acquisition

International Investments: Renewable Energy (RE)



TNBI is a TNB wholly owned subsidiary incorporated under the laws of Malaysia on 23 February 2006 as a private limited company.

Objective/Rationale:

A platform focused on capturing RE opportunities, attracting a broader range of financiers and partnerships and showing TNB's commitment to ESG.

Vision:

An agile organization spearheading TNB's Energy Transition initiative via contribution towards supporting key milestones in TNB's Net Zero 2050 journey.

International Investments: Renewable Energy (RE)

As at Q3 FY23

TNB INTERNATIONAL SDN BHD

Financial Performance

Higher EBITDA Y-o-Y (Q3 FY23: RM 442.6 mil vs Q3 FY22: RM286.6 mil) due to:

- Additional contribution from newly acquired onshore wind portfolio in the UK (97.3MW) in April 2022.
- Higher tariff via various schemes (ROC, FIT & locked-in PPA prices) in 2023 within Vantage portfolio.

Vantage RE Outlook

- In FY22, Vantage had successfully completed the acquisition of 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 in 2024.
- A **stabilising merchant power prices trend** observed in 2023. As part of prudent price exposure risk management, Vantage management has locked-in majority of its capacity under its portfolio.
- **Inflation has decreased** to 6.7% in September 2023, a drop from 7.9% recorded in June 2023. 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-RE Assets

As at Q3 FY23



SHUAIBAH

Financial Performance

Lower EBITDA Y-o-Y RM467.9 mil (SAR388.8 mil) vs RM872.8 mil (SAR725.3 mil) due to lower revenue as a result of reclassification from operating lease to finance lease due to SWEC's project restructuring after the signing of the amended PWPA on 20 June 2022.

Outlook:

Shuaibah 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 ENERJİ A.Ş.

GAMA Enerji A.S. (GEAS)

Financial Performance

Lower EBITDA Y-o-Y RM 457.3 mil (TRY 1,971 mil) vs RM 580.1 mil (TRY1,803 mil) is mainly contributed by lower captured spark spread.

Outlook:

Turkey's inflation accelerates to 61.5% in September 2023 from 58.9% in August 2023. The Central Bank of Turkey has hiked interest rates 4 times this year to 30% (May: 8.5%; June: 15.0%; July: 17.5%; Aug: 25%) to control prices. Further tightening is expected to bring inflation under control. No impact to GEAS' debt portfolio as the Lira loan debt at ICAN is a fixed rate loan at 10%. Lira (TRY) further depreciated against US Dollars (USD) with closing rate increased to 27.4 in September 2023 from 26.7 in August 2023, as the re-elected government continues towards a more conventional economic policy approach with the central bank's decision to tighten monetary policy. GEAS' ICAN debt repayment is on track with DIWACO's dividends and ICAN existing cashflow.



GMR Energy Limited (GEL)

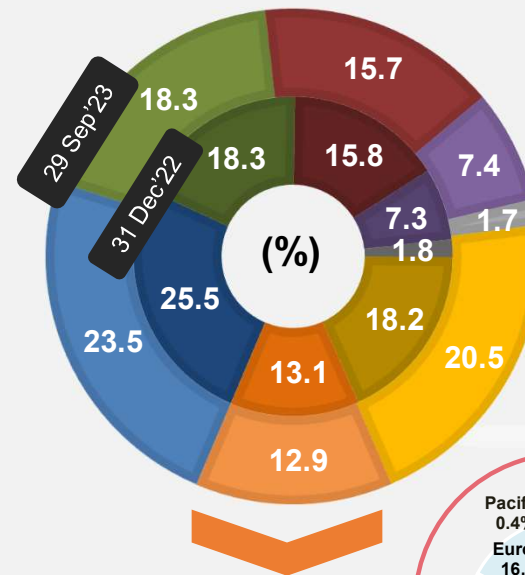
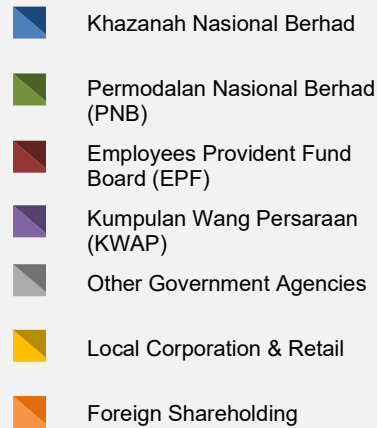
Financial Updates

Lower EBITDA Y-o-Y RM722.2 mil (INR13,189 mil) vs RM769.0 mil (INR14,045 mil) due to plant shutdown in Bajoli Holi and higher import coal expenses in Warora and Kamalanga this year.

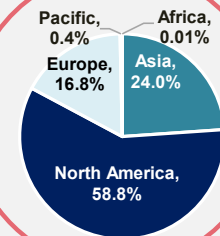
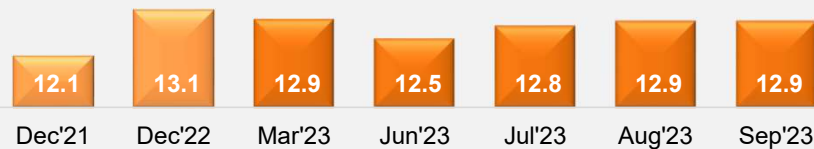
Outlook:

On 17 November 2023, TNB has entered into a Settlement Agreement and the transaction is expected to complete in Quarter 4 of FY2023. Upon completion of the transaction, GEL will cease to become an associate of TNB.

Shareholdings



Foreign Shareholding (%)



Institutional: 12.72%
Individual: 0.14%

Source: Share Registrar, Bloomberg and IR Internal Analysis

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Thank you

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