

ANALYST BRIEFING

2QFY2024

2 September 2024



STRATEGY FORWARD (DCEO)

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

1HFY2024

PAT 

RM2,190.3 mil

+82.3%

(Y-o-Y)

Improved financial performance

Electricity Demand 

8.4%

(Y-o-Y)

From increased economic activities

Gearing 

48.4%

(Dec'23: 50.3%)

Efficient capital management for growth

Peak Demand 

20,066MW

Recorded on 25 July at 2030 hrs

Dividend Payout 

56.7%

(Based on adjusted PATAMI)

Interim Dividend Per Share of 25.0 sen

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

Electricity Supply and Demand

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

Up to 5GW

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

Regulatory

- ✓ **Third Party Access (TPA) Framework¹:** The Energy Commission (EC) has announced² the system access charge (SAC) under the Corporate Energy Supply Scheme (CRESS) for RE plants



25 sen/kWh

Firm Output, with BESS

45 sen/kWh

Non-Firm Output, without BESS

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

Market Prospect

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

S&P Global
Ratings

A-

FitchRatings

BBB+

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

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

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

² Announcement made by EC on 22 August 2024

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

Projects

Sungai Perak Hydro Life Extension Programme	651MW	COD: 1 st unit 2026 (8MW)
Nenggiri Hydro Project	300MW	COD: 2Q2027
Hybrid Hydro-Floating Solar PV (HHFS)	~2,900MWp by 2040	Phase 1 COD: 2025 <ul style="list-style-type: none"> ➢ Chenderoh: 45MWp ➢ Temenggor: 300MWp
Paka Repowering	1,400MW	COD: 2030
New Combined Cycle Power Plant (Kapar)	2,100MW	COD: 2031
Co-firing of Hydrogen & Ammonia		
Solar Greenfield Development (UK)	102MWp	COD: 4Q2024
Corporate Green Power Programme (CGPP)	135MWp	COD: 2025
Centralised Solar Park (CSP)	5 x 150MWp	COD: 2026

GenCo



NED



2QFY2024 Key Highlights

Nenggiri Hydro Project

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



Diversion Tunnel No.1 completed

Project progress is on track to achieve COD

All capacity has been secured with offtakers

Preparation for lease agreement

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

2QFY2024 Key Achievements

2024 CAPEX



Regulated CAPEX

56%

utilisation equivalent to

RM3.6 bil

ET CAPEX

45%

utilisation out of
RM3.2 bil

Key Projects



Smart Meter Installation progress:



85%

Installed **509,422 units**

FY2024 Target:
600,000 units

Cumulative Installed to date:
4,193,132 units

Distribution Automation Penetration progress:



42%

1,173 substation

FY2024 Target:
2,812 units

Cumulative to date:
29,513 substations

Volt-Var Optimisation (VVO) progress:



35%

Achieved **49MVar**

FY2024 Target:
140MVar (Revised)*


Cumulative to date:
798.6MVar

**Reprioritisation of projects*

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

Data Centres

1HFY2024 Status

<p>9 Projects to be completed (ESA signed)</p> <p>~1,700MW Total maximum demand</p>	Completed	Under Construction
	<p>7 Projects</p> <p>~1,070MW</p> <p>2 projects completed ahead of time</p> 	<p>2 Projects</p> <p>~630MW</p>

Key Recognition



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

Achievements To Date

<p>26 Cumulative ESA</p> <p>~4,000MW Total maximum demand</p>	Completed	Under Construction	ESA Signed
	<p>16 Projects</p> <p>~1,700MW</p> <p>June 2024</p> <p>~190MW Load utilisation</p> <p>~RM100 mil Sales</p>	<p>2 Projects</p> <p>~630MW</p>	<p>8 Projects</p> <p>~1,670MW</p>

Outlook

<p>Supply Application Stage</p> <p>21 Projects</p> <p>~3,200MW Total maximum demand</p>

2QFY2024 Key Achievements

8.8MWp

Paramit Malaysia Sdn Bhd



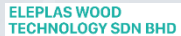
- To install 707kWp rooftop solar PV at their premise in Bukit Minyak, Pulau Pinang.
- Target to be delivered by 4QFY2024.

Off Grid Solar, Chini



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

Eleplas Wood Technology Sdn Bhd



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

Latex Manufacturing Sdn Bhd



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

Green Point Precision Sdn Bhd



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

Partnership with Sime Darby Property



4.4MW
(14 SDP sites*)

2024 Target Completion

960kWp
10 sites

Progress

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

*4 sites to be completed in 2025

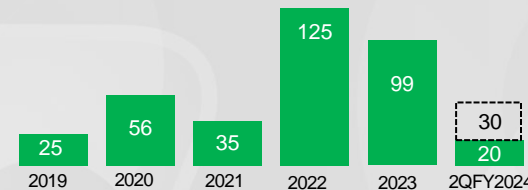
Secured Capacity

GSPARX achievement since inception (2019)

2,698

Projects secured

360MWp



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

2QFY2024 Status



20MWp

Secured Capacity



160MWp

2024 Target

NEM 3.0 NOVA

82%

Quota Approved

1,100MW¹

Total Quota Allocation (2021- 2024)

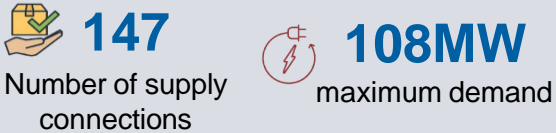
EV Ecosystem

Green Lane Supply Connections

Committed



Potential



Data since inception (November 2022)

YTD Electricity Sales (CPO)



Potential Demand from EV



Key Highlights

TNB Charge Points



Commissioned



Cumulative Target
66 DC by 2024

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

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

*2CPs at each location



Award Recognition



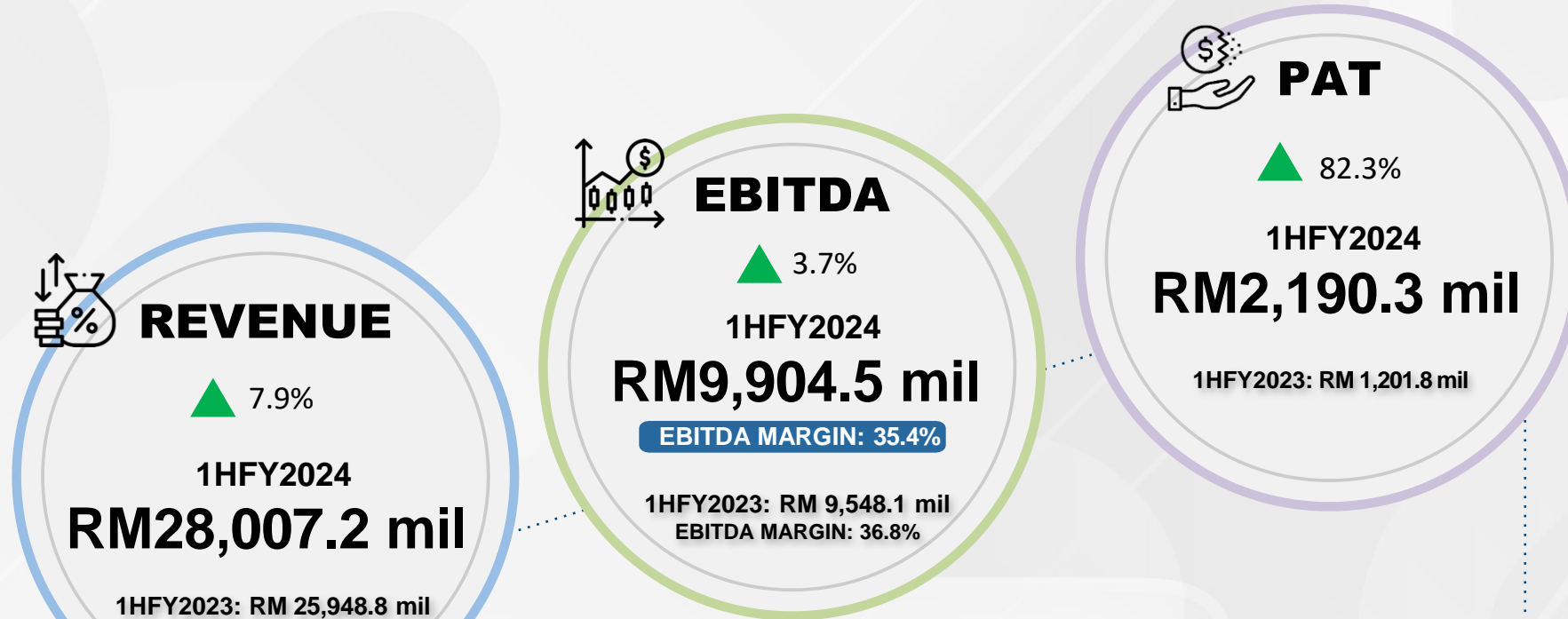
myTNB
Best Public Utilities App
(2024 PC.com Readers Choice Awards)



~7 mil users
subscribed to the MyTNB app

PERFORMANCE UPDATES (CFO)

1HFY2024 higher PAT was driven by improved overall performance



Improved overall performance driven by:

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

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

Equivalent Plant
Availability Factor, EAF
(Generation)
%



1HFY2024
78.7%
2024 Target: 78.6%



Improved overall
performance by power plants

System Minutes
(Transmission)
Minutes



1HFY2024
0.0001

2024 Internal Threshold: 1.5



World class network
performance safeguarded our
regulated business earnings

SAIDI
(Distribution Network)
Minutes

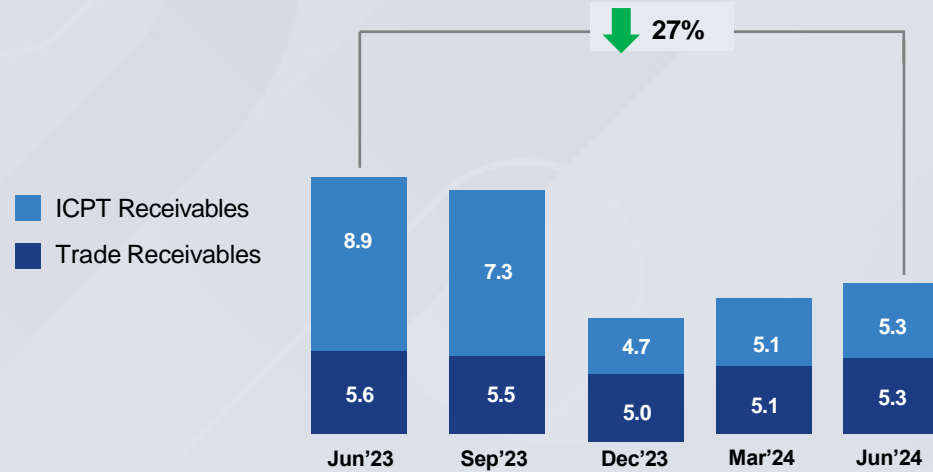


1HFY2024
23.92

2024 Internal Threshold: 50.0

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

Receivables (RM bil)



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

* Source: globalCOAL Newcastle index

1

ICPT Cost Recovery for FY2024

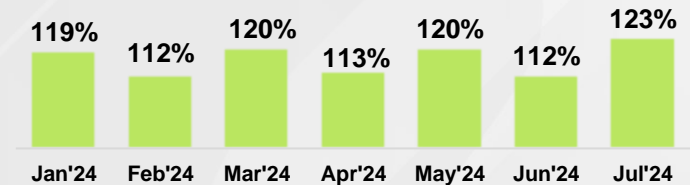
TNB will recover ICPT cost from the Government:

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

2

Strong Collection Trend

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



3

S&P Global Ratings

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

MARC

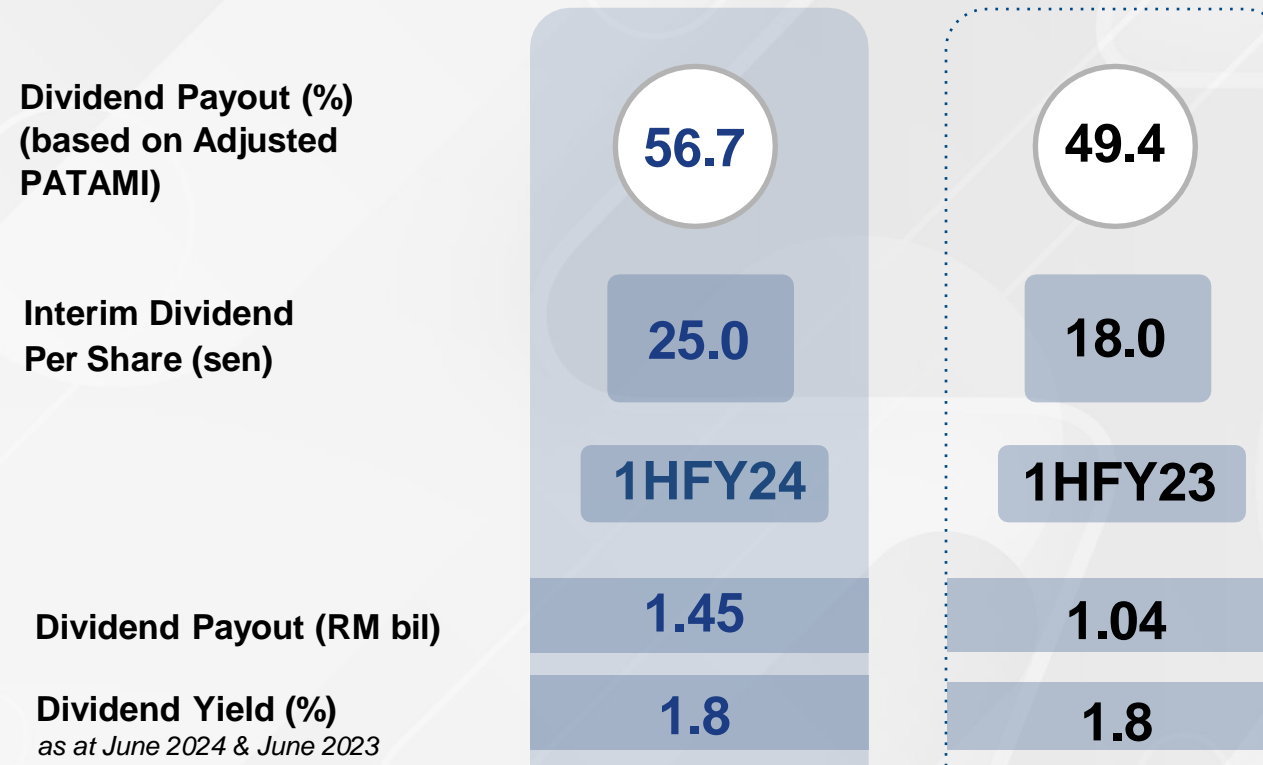
Assigned **“Gold” rating** to TPGSB’s Sustainability Sukuk Framework (July 2024)

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

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

Dividend Policy

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



FORWARD GUIDANCE (DCEO)



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



Electricity Demand

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



Group CAPEX Forecast

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

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

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



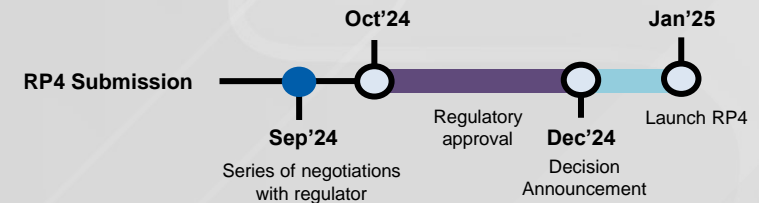
Capital Management

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



Regulatory Period 4

RP4 proposal assessment is on track



Delivering Value to our Shareholders

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



Sustainable Growth

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

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Appendix

1HFY2024

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

Y-o-Y analysis

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

Y-o-Y analysis:

1 Higher Group revenue driven by sales demand growth of 8.4% and additional revenue mainly from UK operations.

2 Reduction in ICPT by RM1.3 bil due to decrease in coal price.

3 Refer Operating Expenses slide.

4 Lower forex translation loss due to strengthening of MYR.

5 Lower finance cost due to repayment of loans and interest capitalisation.

Q-o-Q analysis

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

Q-o-Q analysis:

1 Higher Group revenue driven by sales demand growth of 4.2%.

2 Higher ICPT due to higher fuel costs.

3 Refer Operating Expenses slide.

4 Gain in forex translation due to strengthening of MYR.

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

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

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

¹ MFRS16 impact:

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

Higher Group revenue driven by overall healthy demand growth

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

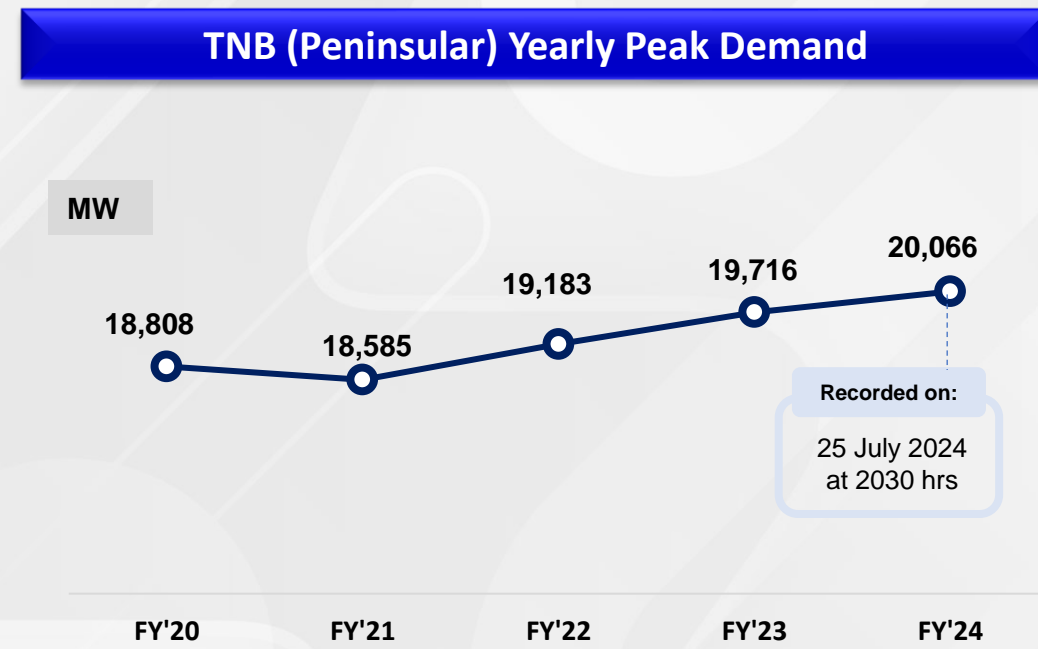
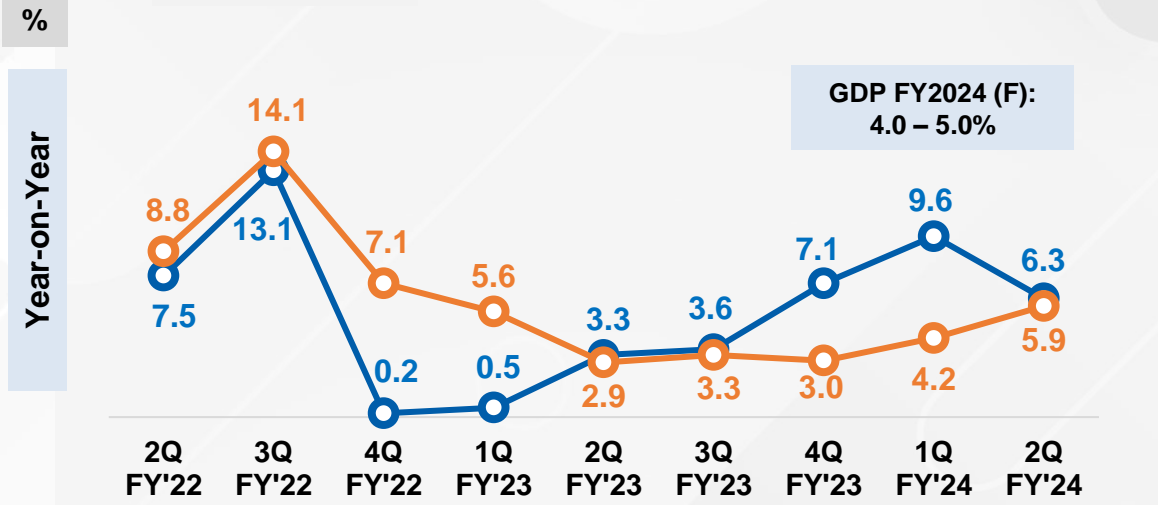
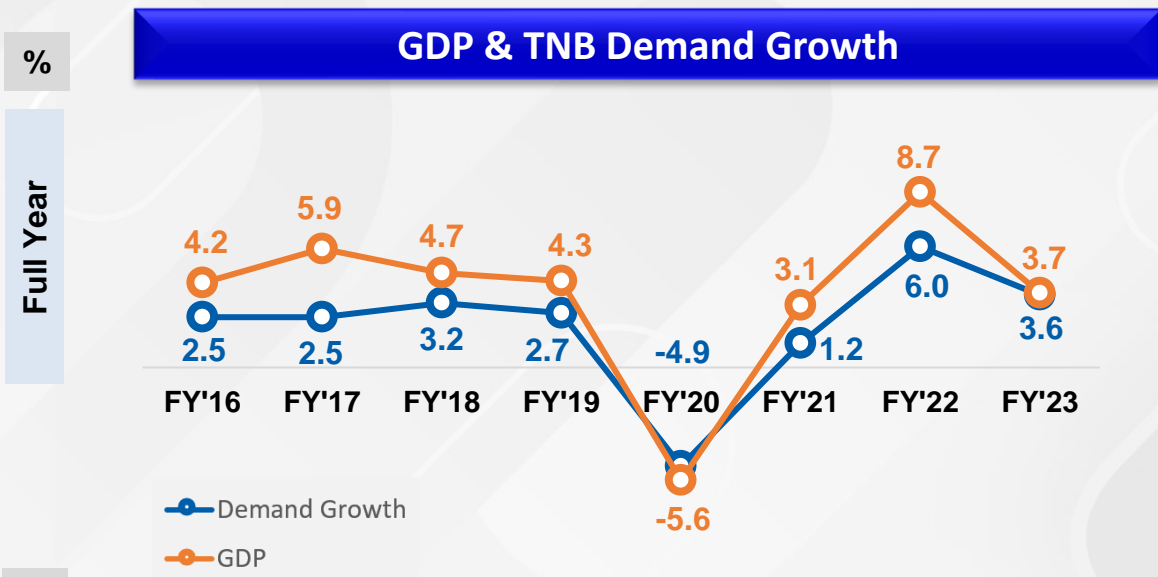
1 Higher revenue driven by higher demand growth across all business units.

2 Refer Other Regulatory Adjustment slide.

3 Higher revenue recorded by subsidiaries.

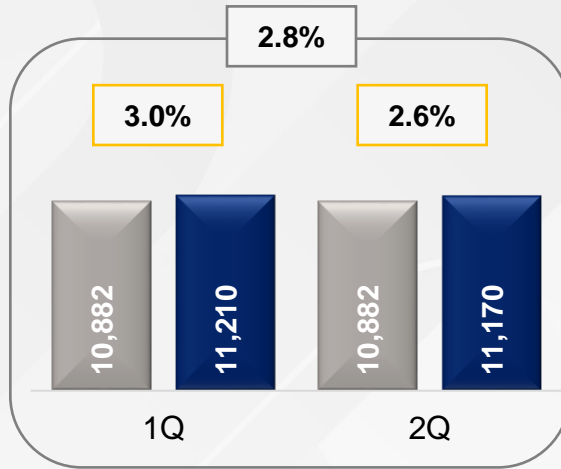
*Refer International Investments slide for details

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



Increased demand across all sectors mainly contributed by commercial and domestic

Industrial



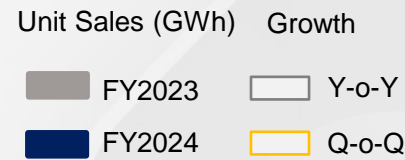
1HFY'24 main contributors for the increase in industrial & commercial sectors:

Industrial

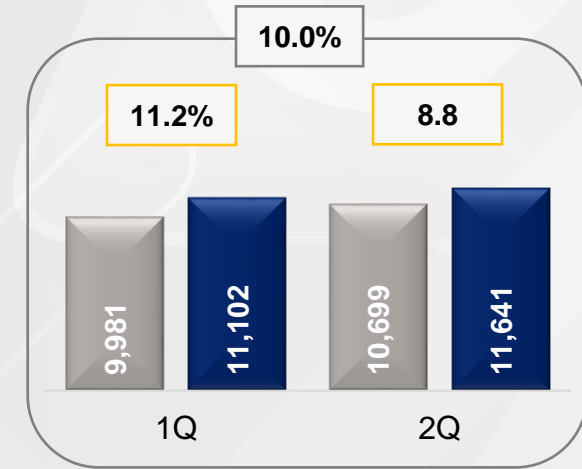
- Utility electrical, iron & steel and miscellaneous consumer products

Commercial

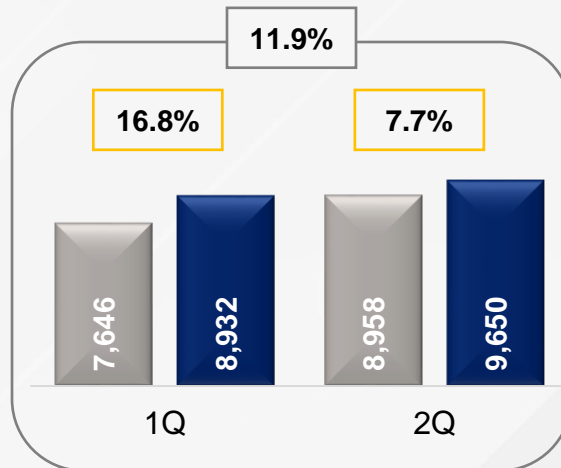
- Retails, business services and miscellaneous consumer products



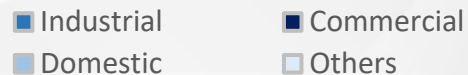
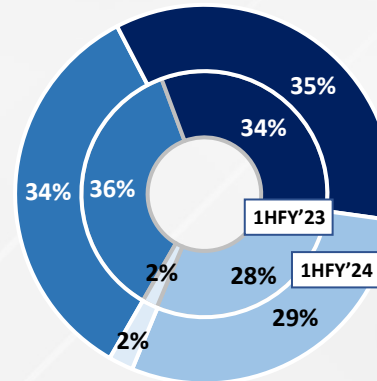
Commercial



Domestic

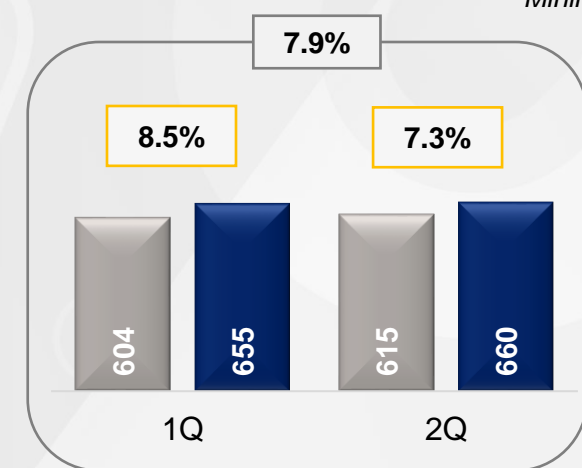


Sector Mix (%) 1HFY'24 vs 1HFY'23



Others*

*includes Agriculture, Mining & Public Lighting



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

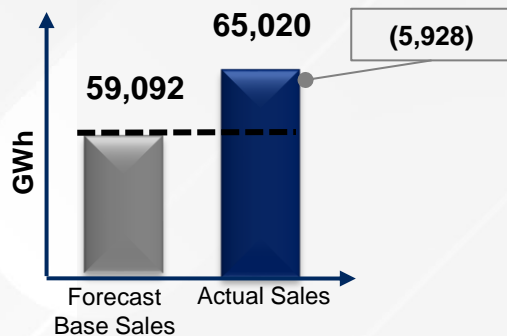
Components of Other Regulatory Adjustment

	1QFY'24 RM mil	2QFY'24 RM mil	1HFY'24 RM mil	1HFY'23 RM mil
Revenue Adjustment for Revenue Cap & Price Cap	(412.4)	(684.1)	1 (1,096.5)	(419.5)
Refund Related to Regulated Business	(66.7)	(52.2)	(118.9)	(138.9)
Regulatory Adjustment for SESB*	10.7	(2.9)	7.8	(12.7)
TOTAL	(468.4)	(739.2)	(1,207.6)	(571.1)

*SESB has implemented IBR framework starting 1 January 2022

Revenue Cap

1HFY'24 Variation in Sales (in GWh)



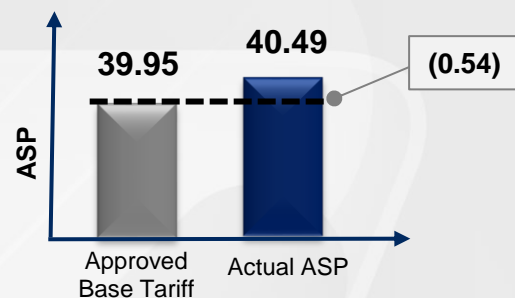
- The allowed annual revenue for revenue cap entities is based on 118.1TWh full year demand growth. Any excess/shortfall is adjusted through revenue adjustment mechanism.
- For 1HFY'24, higher actual sales has led to amount to be returned via revenue adjustment mechanism.

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

Numbers manually computed will not match due to decimal variance

Price Cap

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



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

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

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

	2QFY'24	1QFY'24	Variance (2QFY'24 vs 1QFY'24)		1HFY'24	1HFY'23	Variance (1HFY'24 vs 1HFY'23)	
	(RM mil)	(RM mil)	RM mil	%	(RM mil)	(RM mil)	RM mil	%
Non-TNB IPPs Costs	4,694.8	4,233.4	461.4	10.9	8,928.2	7,709.3	1,218.9	15.8
Capacity Payment	36.7	41.3	(4.6)	(11.1)	78.0	(91.4)	169.4	>100.0
Energy Payment	4,658.1	4,192.1	466.0	11.1	8,850.2	7,800.7	1,049.5	13.5
TNB Fuel Costs	4,552.9	4,334.9	218.0	5.0	8,887.8	10,558.2	(1,670.4)	(15.8)
Fuel Costs	4,514.5	4,351.4	163.1	3.7	8,865.9	11,188.5	(2,322.6)	(20.8)
Fuel Price Adjustment	38.4	(16.5)	54.9	>100.0	21.9	(630.3)	652.2	>100.0
Total OPEX - Fuel and Power Purchase	9,247.7	8,568.3	679.4	7.9	17,816.0	18,267.5	(451.5)	(2.5)
Staff Costs	966.5	952.0	14.5	1.5	1,918.5	1,940.7	(22.2)	(1.1)
Repair & Maintenance	801.0	692.2	108.8	15.7	1,493.2	1,345.5	147.7	11.0
TNB General Expenses	434.2	429.1	5.1	1.2	863.3	789.3	74.0	9.4
Subs. General Expenses	992.8	660.8	332.0	50.2	1,653.6	893.3	760.3	85.1
Total OPEX - Non Fuel	3,194.5	2,734.1	460.4	16.8	5,928.6	4,968.8	959.8	19.3
Total Operating Expenses (without Depreciation)	12,442.2	11,302.4	1,139.8	10.1	23,744.6	23,236.3	508.3	2.2
Depreciation & Amortisation	2,858.3	2,780.2	78.1	2.8	5,638.5	5,597.3	41.2	0.7
Total Operating Expenses	15,300.5	14,082.6	1,217.9	8.6	29,383.1	28,833.6	549.5	1.9

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

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

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

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

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

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

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

Table C – Fuel Costs Related Data

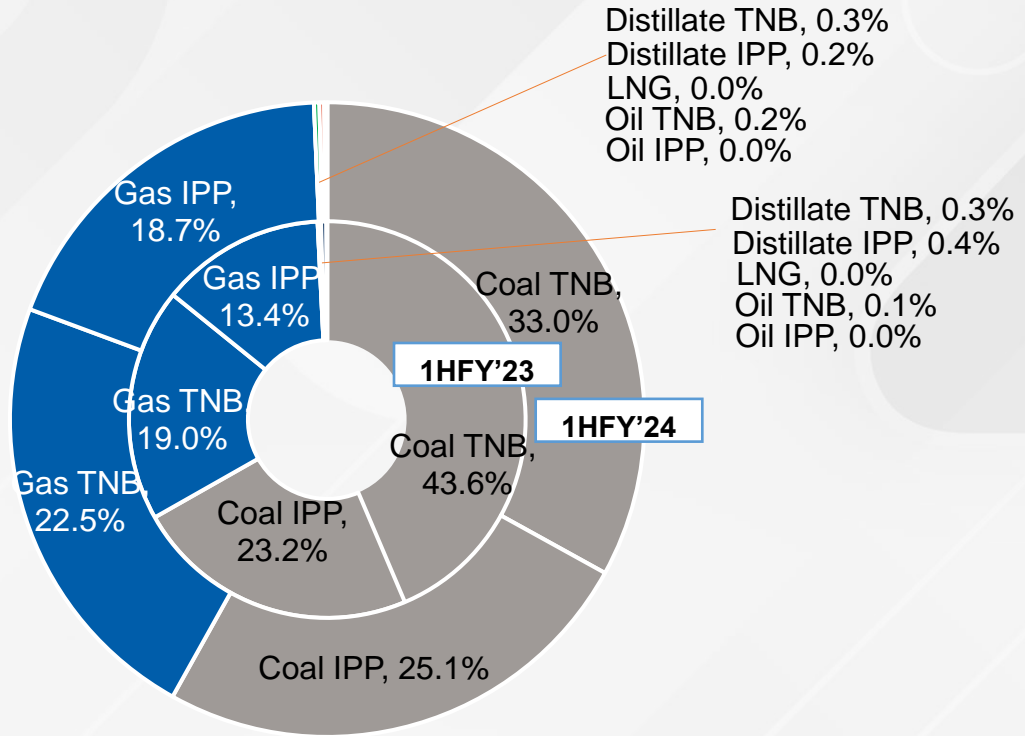
Fuel statistics	1HFY'24	1HFY'23
Average Coal Price Delivered (USD/MT)(CIF)	112.9	156.4
Average Coal Price Delivered (RM/MT)(CIF)	533.4	697.4
Coal Consumption (mil MT)	16.4	16.4
Gas Reference Market Price (RM/mmbtu)	1QFY'24	1QFY'23
	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 44.7	Tier 2 : 62.1
	2QFY'24	2QFY'23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

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

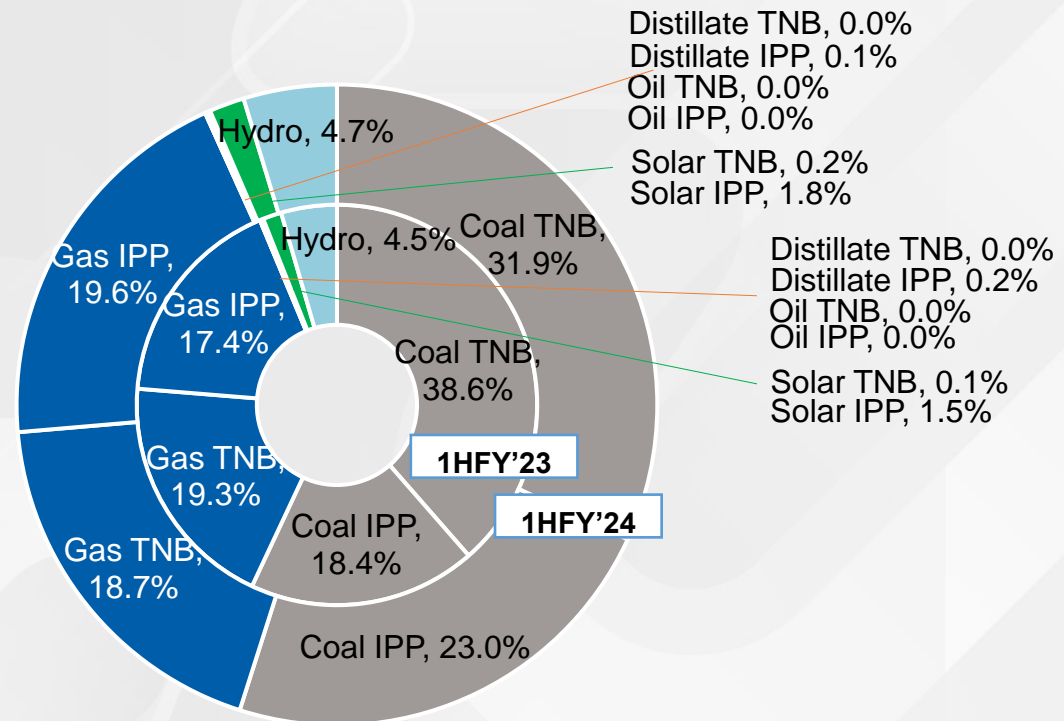
	1HFY'24		1HFY'23		Variance	
	USD/MT	%	USD/MT	%	USD/MT	%
FOB	103.2		146.5		(43.2)	(29.5)
Freight	9.2		9.5		(0.2)	(2.3)
Others	0.4		0.5		(0.1)	(12.8)
CIF	112.9		156.4		(43.5)	(27.8)

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

Fuel Costs



Units Generated



% indicates generation market share

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

Note: Fuel Costs exclude solar and hydro

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

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

Fuel Type	2QFY'24		1QFY'24		Variance 2QFY'24 vs 1QFY'24	
	RM mil	%	RM mil	%	RM mil	%
Coal	4,605.6		4,201.5		404.1	9.6
Gas	3,013.5		3,235.0		(221.6)	(6.8)
Distillate	19.0		58.7		(39.7)	(67.6)
Oil	10.5		13.4		(2.9)	(21.6)
Total	7,648.6		7,508.6		140.0	1.9

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

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

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

Table C – Fuel Costs Related Data

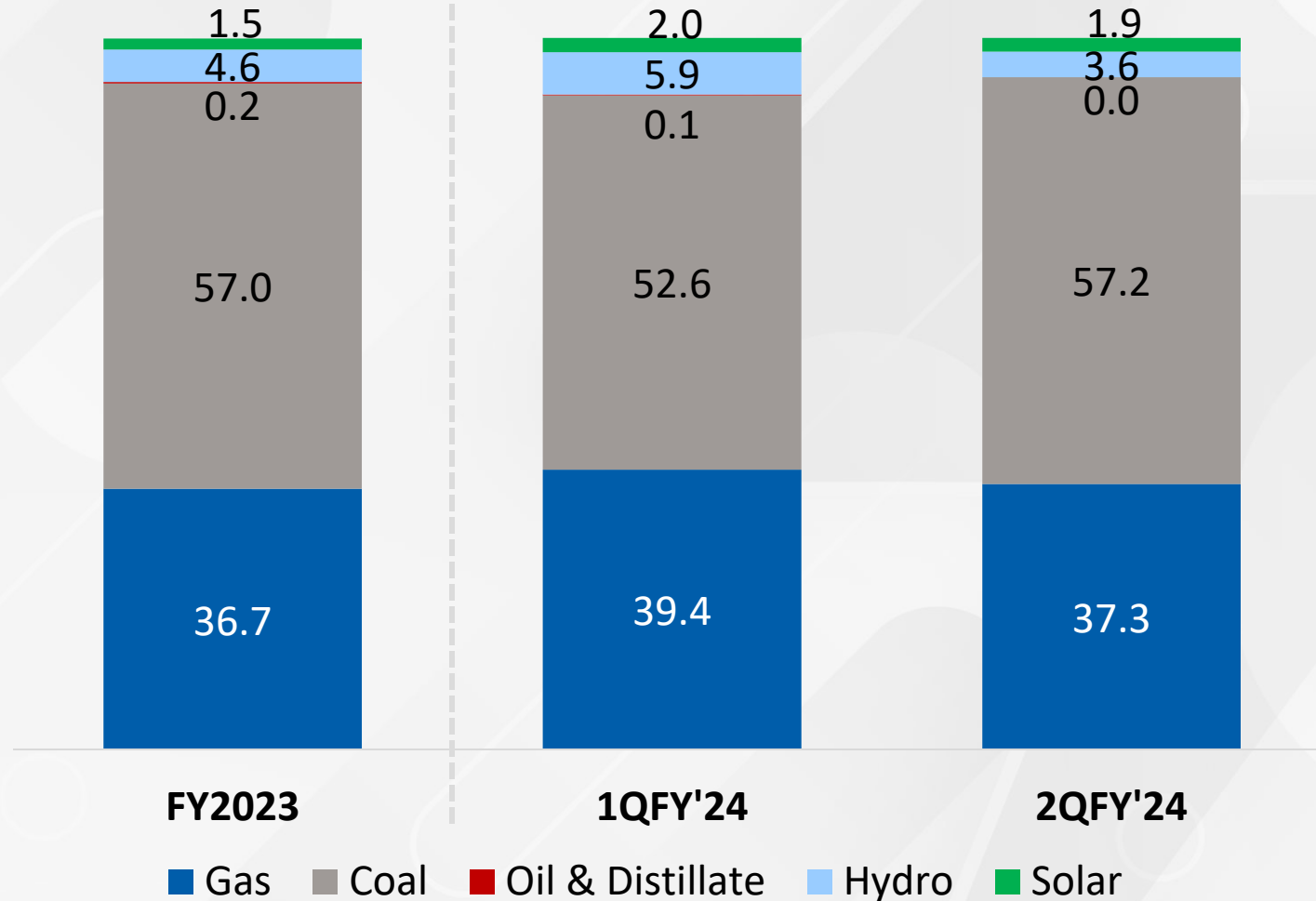
Fuel statistics	2QFY'24	1QFY'24
Average Coal Price Delivered (USD/MT)(CIF)	112.1	113.7
Average Coal Price Delivered (RM/MT)(CIF)	530.5	536.3
Coal Consumption (mil MT)	8.7	7.7
Gas Reference Market Price (RM/mmbtu)	2QFY'24 Tier 1 : 35.0 Tier 2 : 47.4	1QFY'24 Tier 1 : 30.0 Tier 2 : 44.7
Daily Average Piped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

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

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

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

Generation Mix for Industry (%)

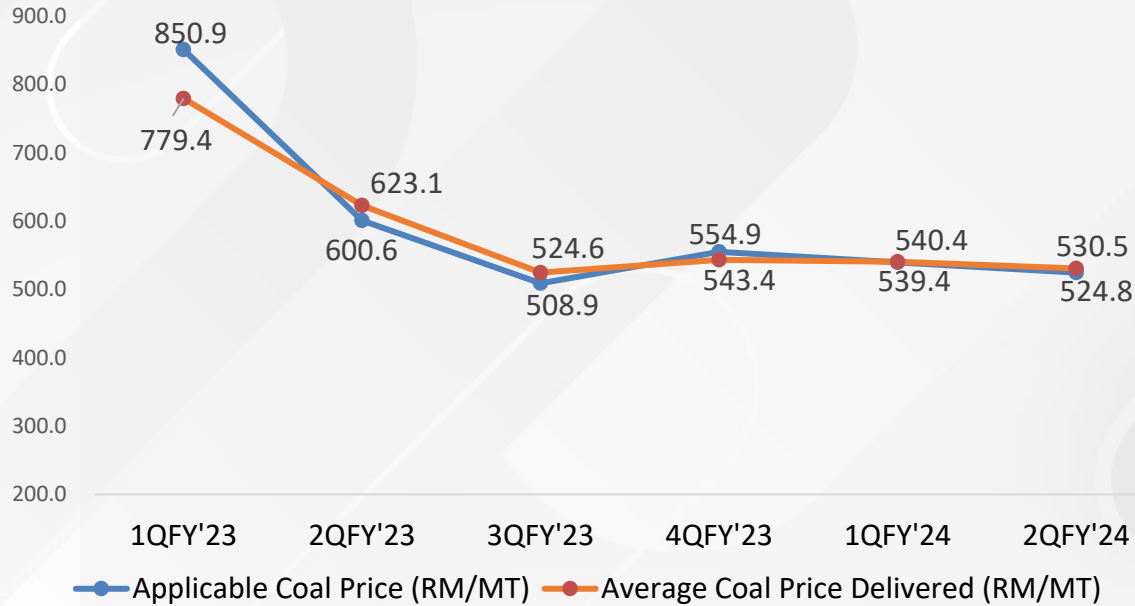


TNB is neutral to volatility in fuel costs under the ICPT framework

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

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

Coal Price Trending



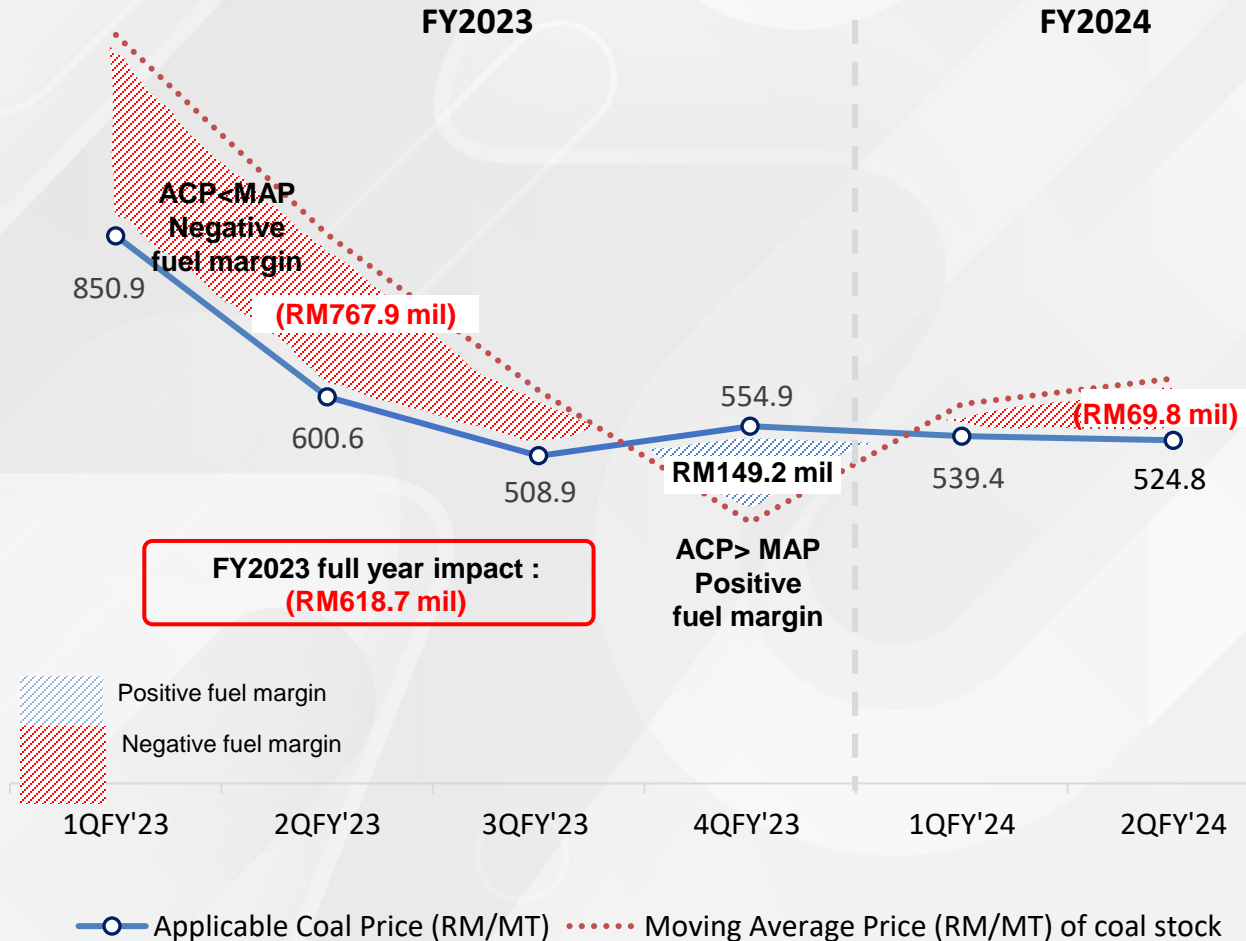
Coal Price & Applicable Coal Price (ACP) comparison

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

* Based on internal conversion

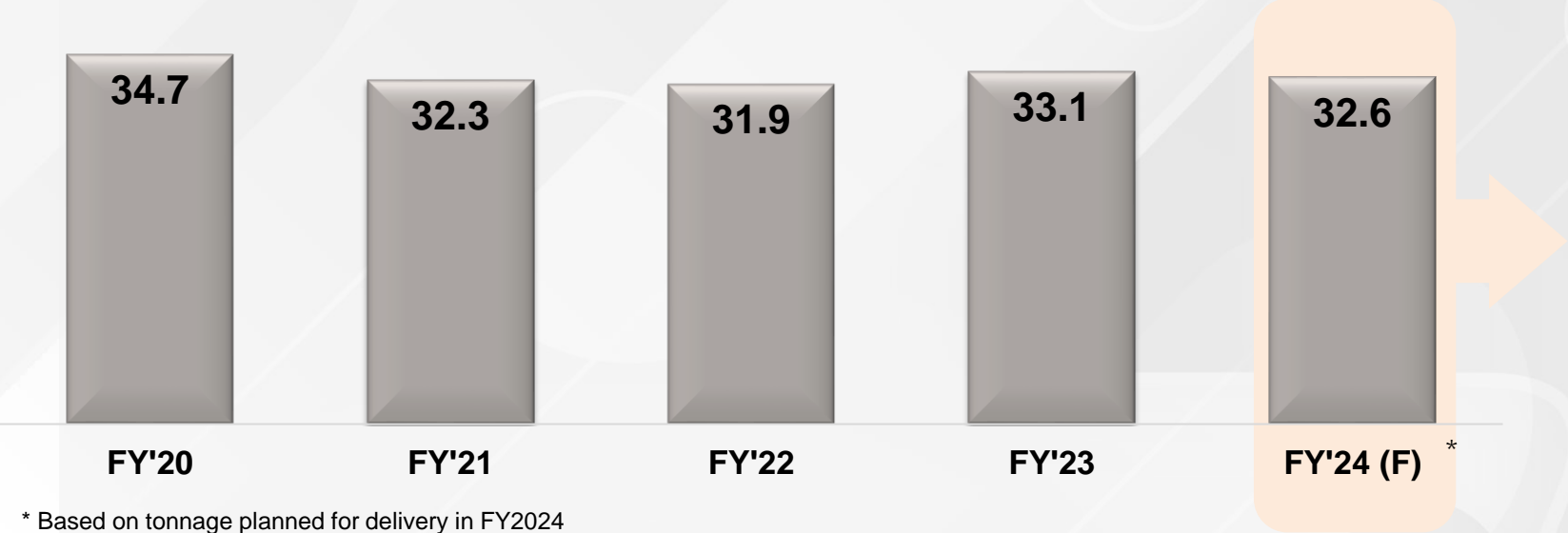
- **Fuel Price Adjustment (FPA)** is the difference between the Applicable Coal Price (ACP) billed to generators and the actual coal price paid to supplier (delivered) by TNBF. The difference is caused by higher or lower coal price or due to currency exchange.
- ACP is set by Energy Commission on a monthly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

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



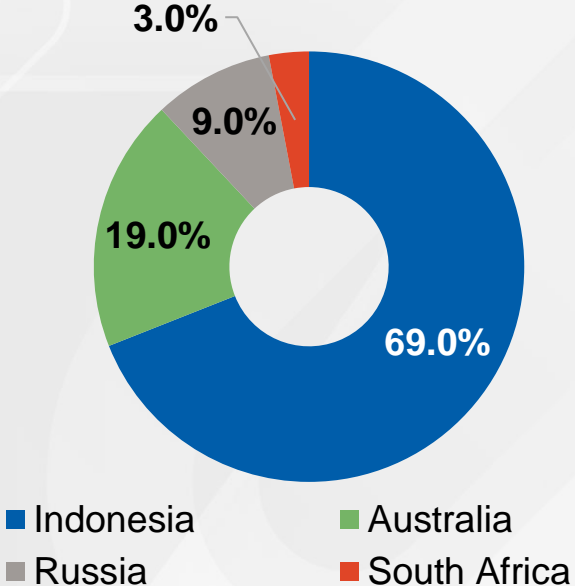
Industry coal requirement forecast for FY2024

Coal Consumption (mil MT)



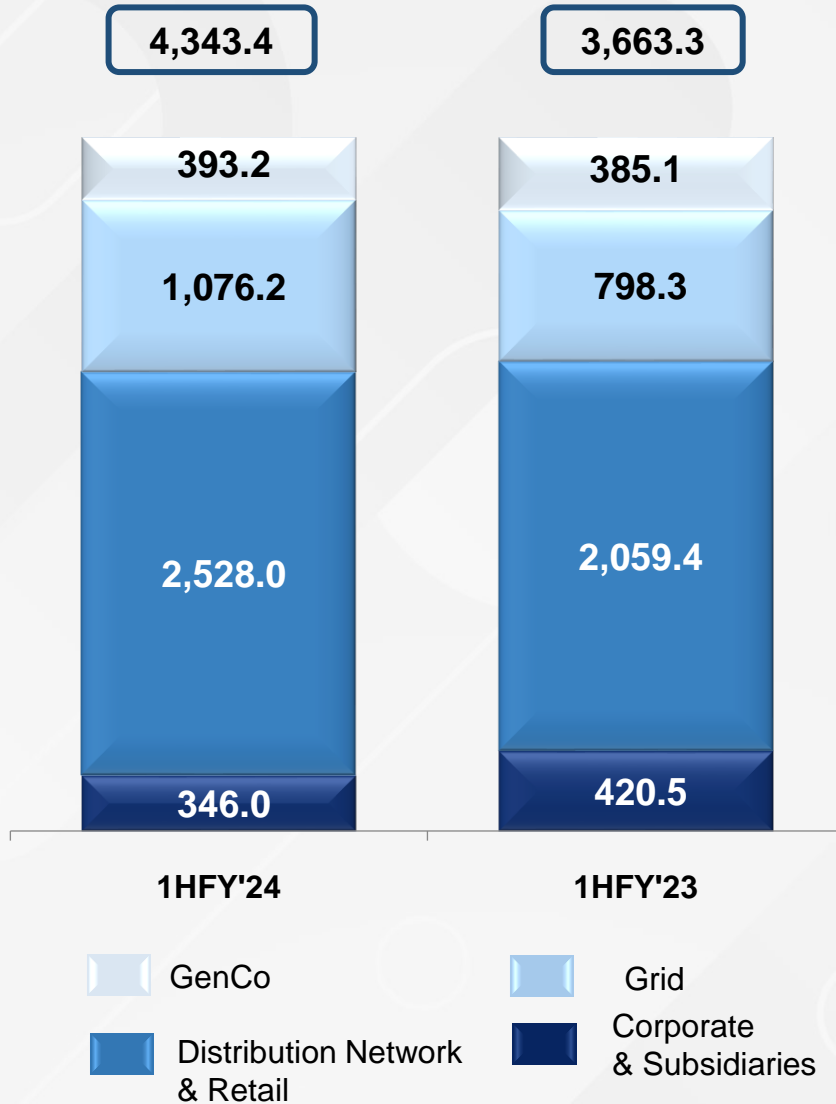
* Based on tonnage planned for delivery in FY2024

Source Country Mix



Group CAPEX

RM mil





Regulated CAPEX and Regulated Asset Base (RAB)

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

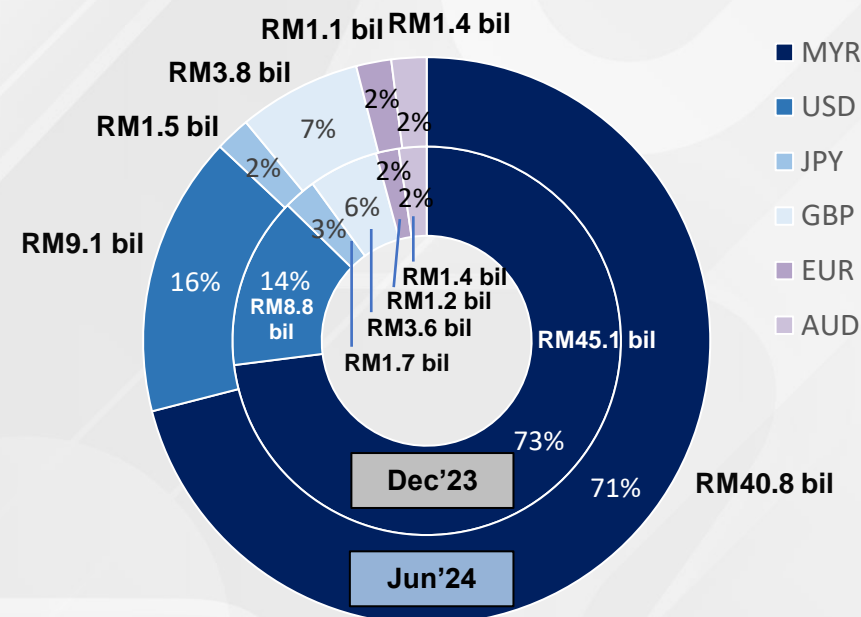
Total RAB (RM mil)	
Actual As at 30 June 2024	Approved FY2024
66,155.6	66,603.6
Regulatory net returns: RM2,252.3 mil	

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

Gearing improved to 48.4% as at 1HFY2024

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

Loan Breakdown



4.84%

(FY'23: 4.75%)

**Effective Average
Cost of Borrowing****



93:7

(FY'23: 95:5)

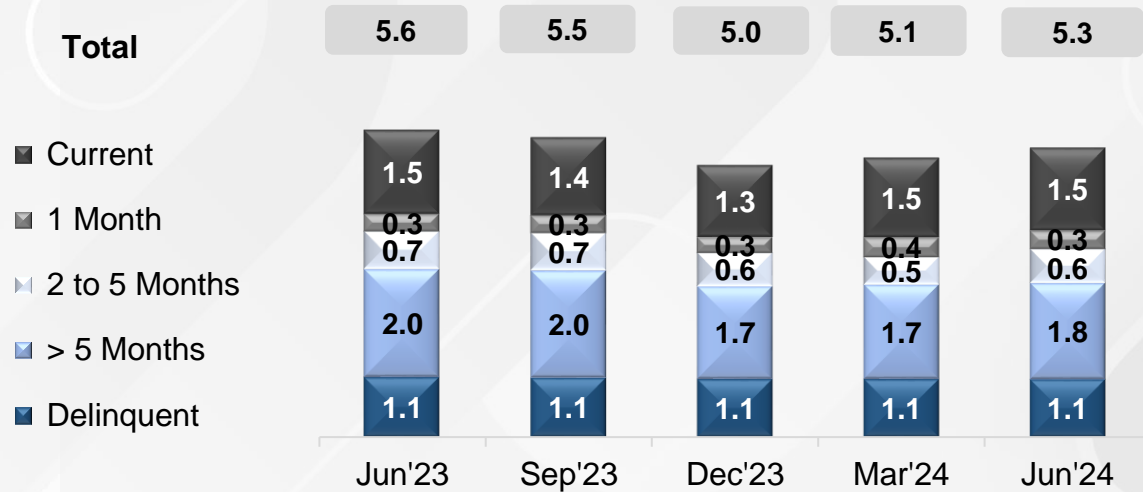
Fixed : Floating
Final Exposure

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

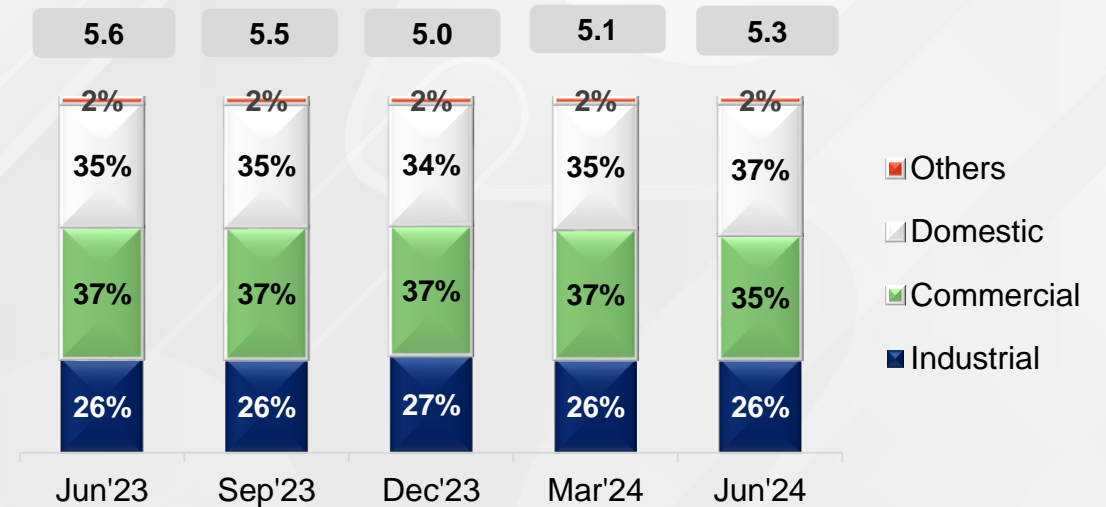
* Net Debt excludes deposits, bank and cash balances and investment in UTF
 ** Inclusive of interest rate swap

Trade receivables as at 1HFY2024

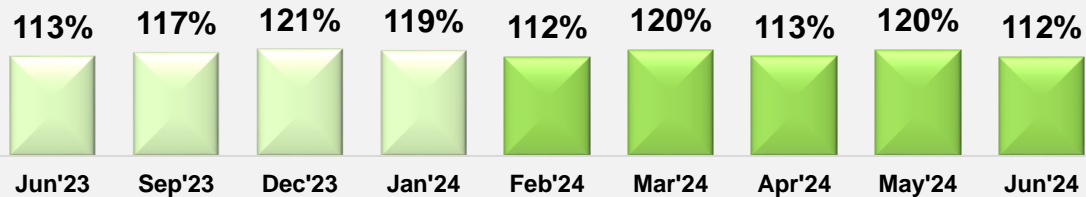
Trade Debtors Ageing (RM bil)



Trade Receivables By Sectors (RM bil)



Strong collection trend



Cash flow

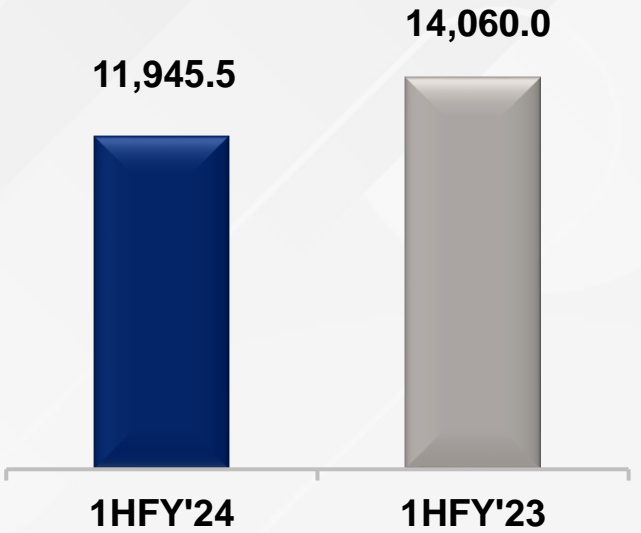
- We continuously monitor our cash flow position on a daily basis and remain prudent on our working capital management.
- **S&P: Credit Rating upgraded to A- (May'24)**
- **MARC: Affirmed TNB corporate credit rating at AAA with a stable outlook (Aug'24)**

Domestic generation business performance

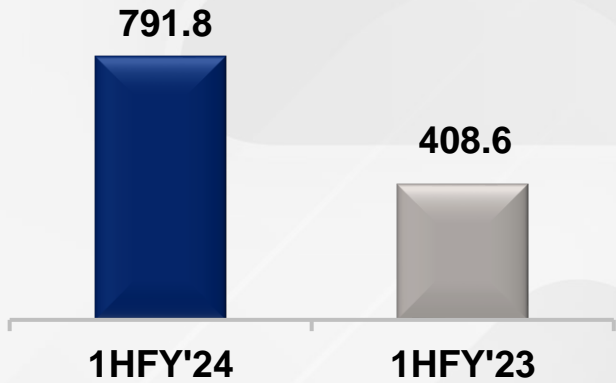
Overall improved performance by power plants

RM mil

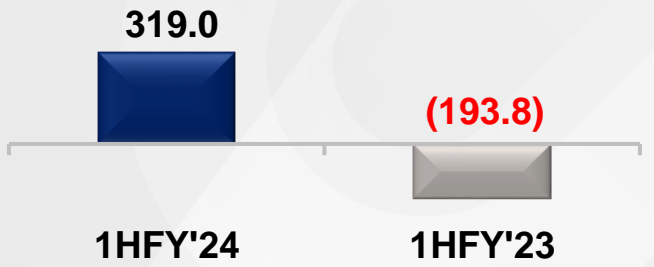
REVENUE



EBIT



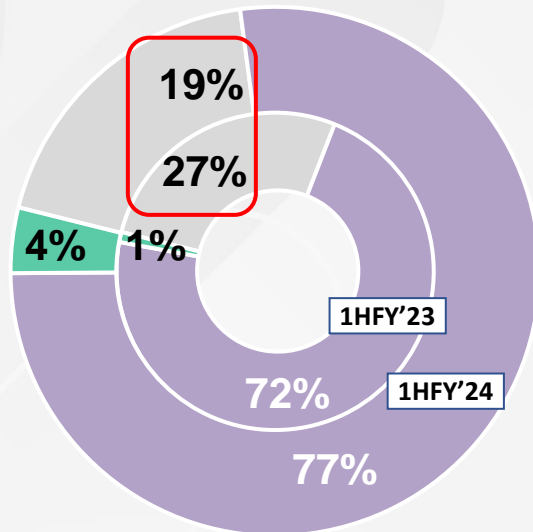
PROFIT AFTER TAX



Note: Includes generation related subsidiaries

Revenue from coal recorded below 25% due to M4 outage

Actual Group Revenue*



■ RE ■ Coal ■ Others**

* Total revenue includes ICPT

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



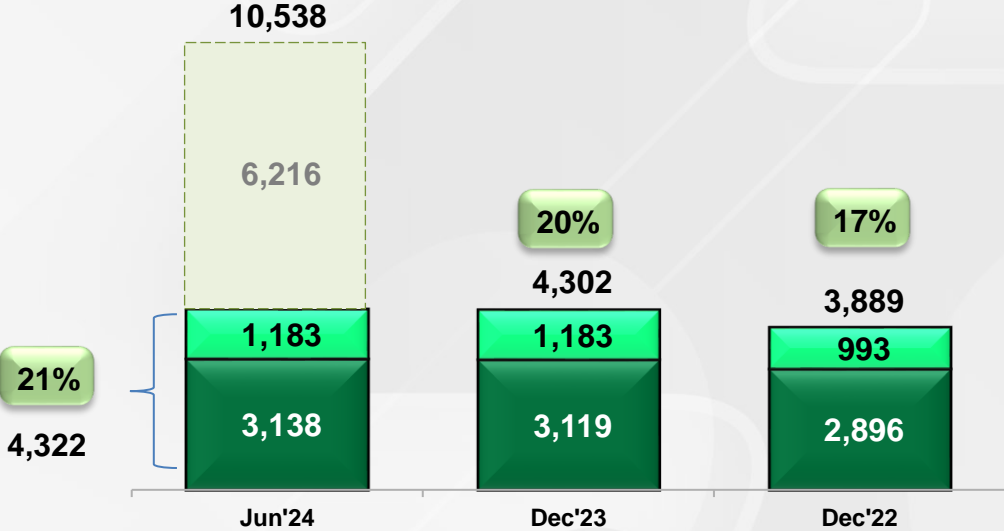
**Long-term aspiration:
To be coal-free by 2050**

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

Our RE journey is progressing well

TNB RE Portfolio Renewable capacity (MW)

- Secured capacity
- % RE in TNB's portfolio
- International
- Domestic



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

TNB International Sdn Bhd (TNBI)

Vantage RE



Spark Renewables



Technology Focus:



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

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

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

Financial Performance

Higher EBITDA Y-o-Y from:

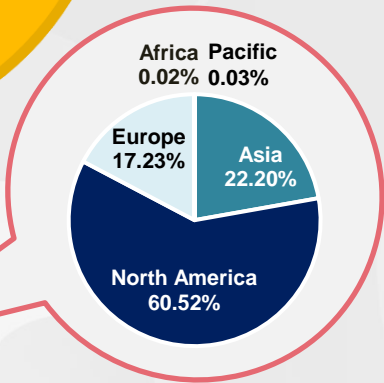
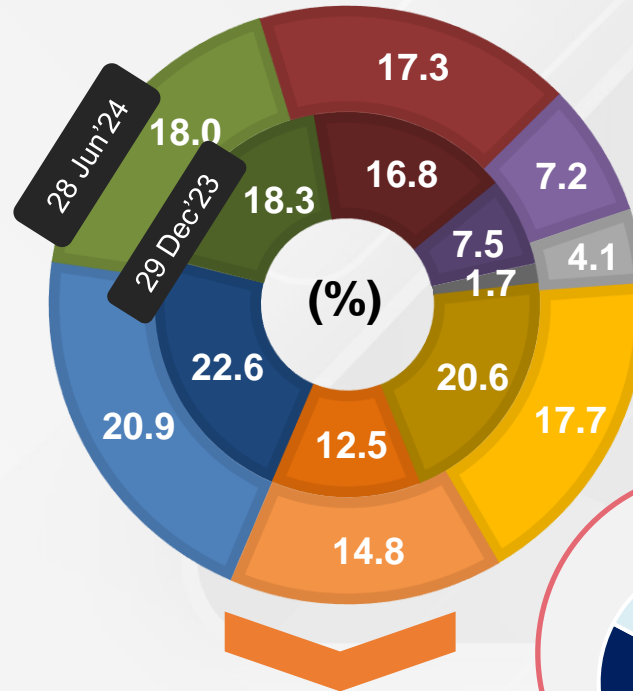
- Additional contribution from newly acquired solar portfolio in the Ireland (276MW) in December 2023 and higher generation from the wind assets due to higher wind speeds.

Outlook

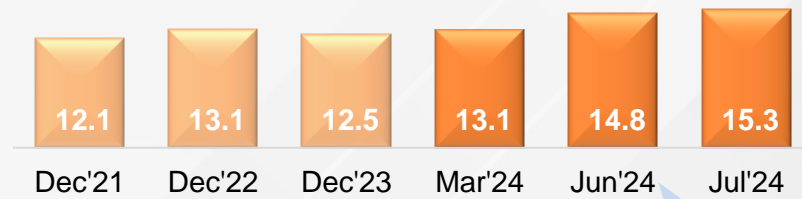
- TNB is committed to grow its presence in RE market and the current focus is on converting development pipelines into operational assets.
- In addition, TNB's international RE platforms are also exploring alternative revenue mechanisms, such as Contract-for-Difference (CfD) scheme, Corporate Power Purchase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

Shareholdings

- 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: 14.7%
Retail: 0.1%

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Thank you

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