

# INVESTOR PRESENTATION



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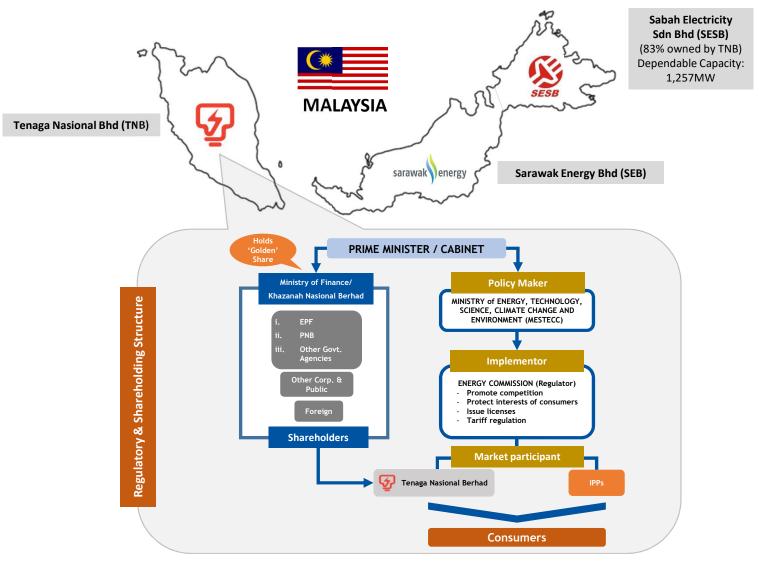
INTRODUCTION TO TENAGA

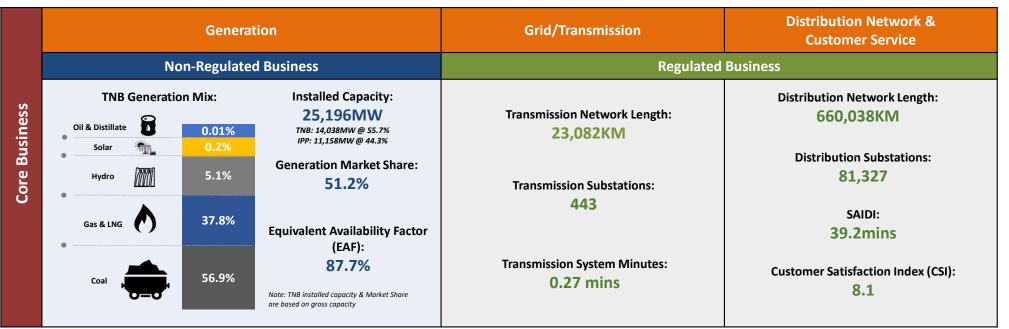
REGULATORY

**BUSINESS STRATEGY & DIRECTION** 

CAPITAL MANAGEMENT

FINANCIAL & TECHNICAL HIGHLIGHTS

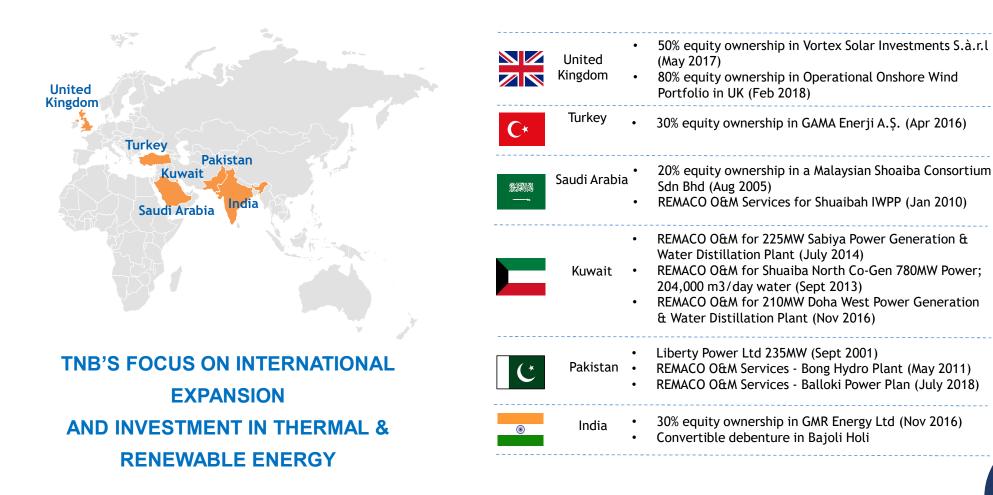


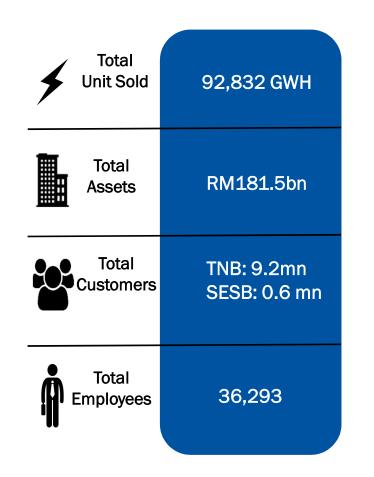


Source: TNB Data / Info as at September 2019

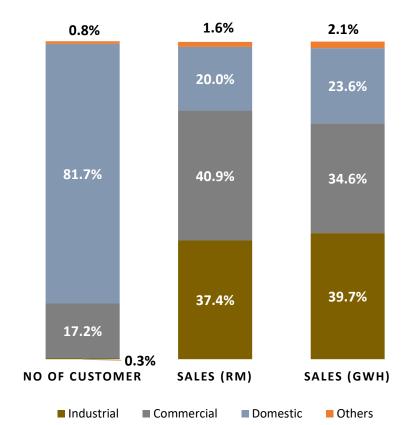


Expanding Global Footprint To Achieve Aspiration – TNB is currently present in more than 5 countries





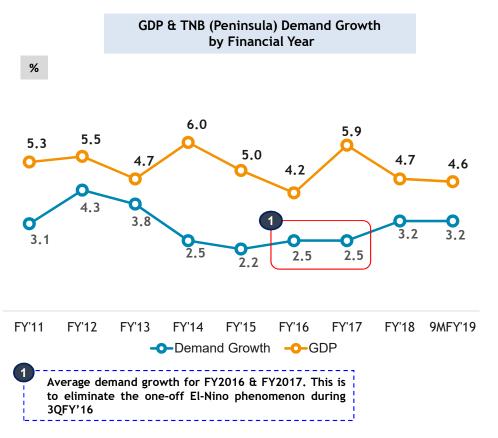
### TNB Sectoral Sales Analysis\*



Note: Data / Info as at 9MFY19 (September 2019)

\* Peninsular Malaysia only (TNB exclude SESB and other subsidiaries)

### Steady Electricity Demand in line with GDP Growth

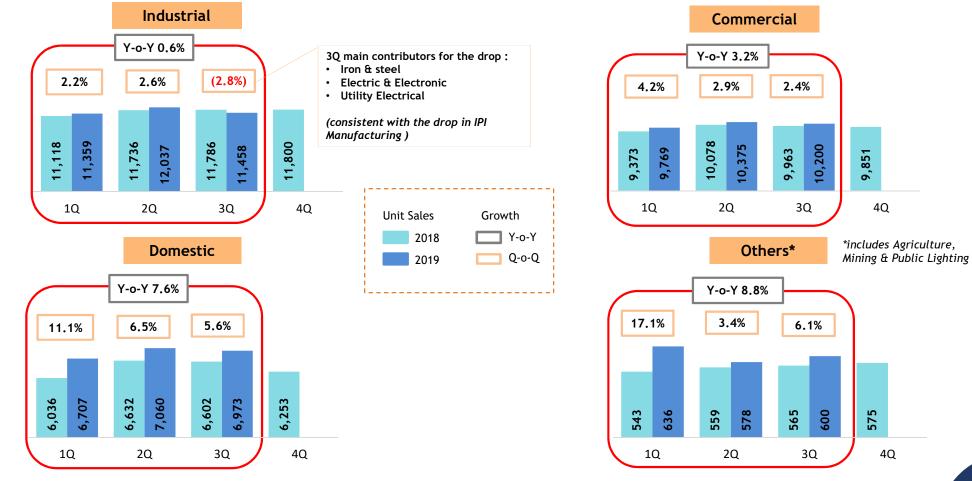


#### TNB (Peninsula) Yearly Peak Demand MW 18,566 18,338 17,788 17,790 Recorded at: 18 Apr'19 at 1430hrs 16,901 16,822 16,562 15,826 15,476 0 FY'11 FY'12 FY'13 FY'14 FY'15 FY'16 FY'17 FY'18 9MFY'19

#### Note:

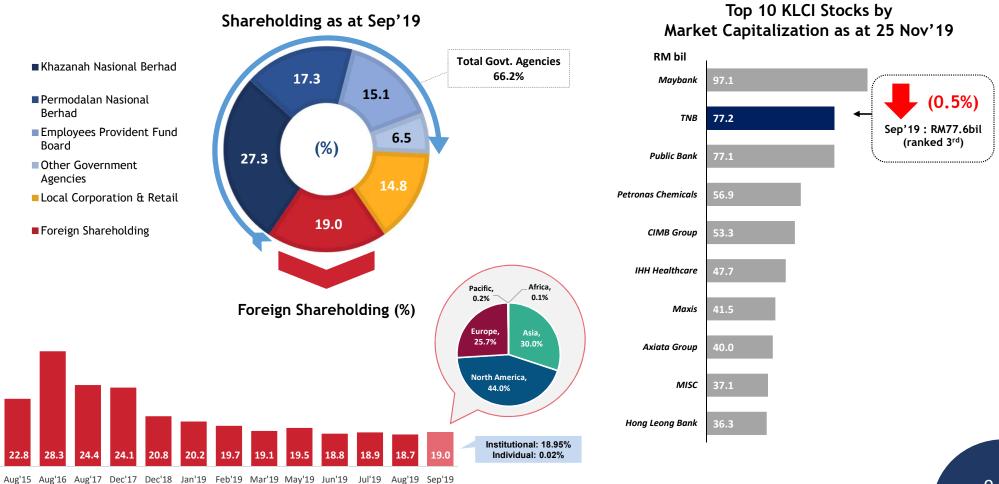
- i. Data / Info as at 9MFY19 (September 2019)
- ii. Peninsular Malaysia only (TNB exclude SESB and other subsidiaries)

### Stable Y-o-Y Growth for All Sectors (GWh)



**Note:** Data / Info as at 9MFY19 (September 2019) \* Peninsular Malaysia only (TNB exclude SESB and other subsidiaries)

#### **TNB Shareholding**



**Composition of BOD** 



CHAIRMAN TAN SRI LEO MOGGIE



EXECUTIVE DIRECTOR / CEO DATUK SERI AMIR HAMZAH BIN AZIZAN

> Non-Independent Non-Executive Directors (Total =3)



NORAINI BINTI CHE DAN

Expertise: Audit & Finance



Independent Non-Executive Directors (Total = 5)

GEE SIEW YOONG

Expertise: Audit & Finance



ONG AI LIN

Expertise: Audit & Finance



GOPALA KRISHNAN A/L K.SUNDARAM

Expertise: Law



JUNIWATI BINTI RAHMAT HUSSIN

Expertise: Project Management, Corporate Planning and Human Resource



DATUK AHMAD BADRI BIN MOHD ZAHIR (MoF)



AMRAN HAFIZ BIN AFFIFUDIN (Khazanah)



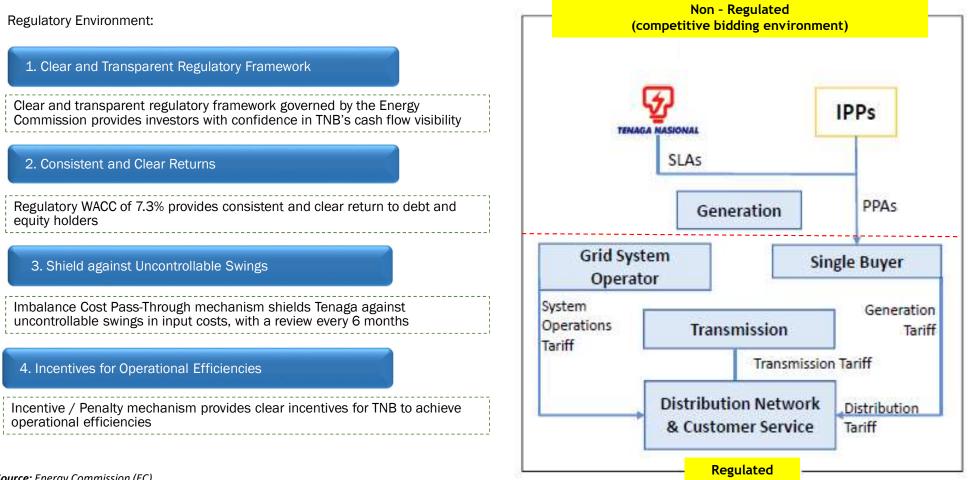
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INTRODUCTION TO TENAGA REGULATORY BUSINESS STRATEGY & DIRECTION CAPITAL MANAGEMENT

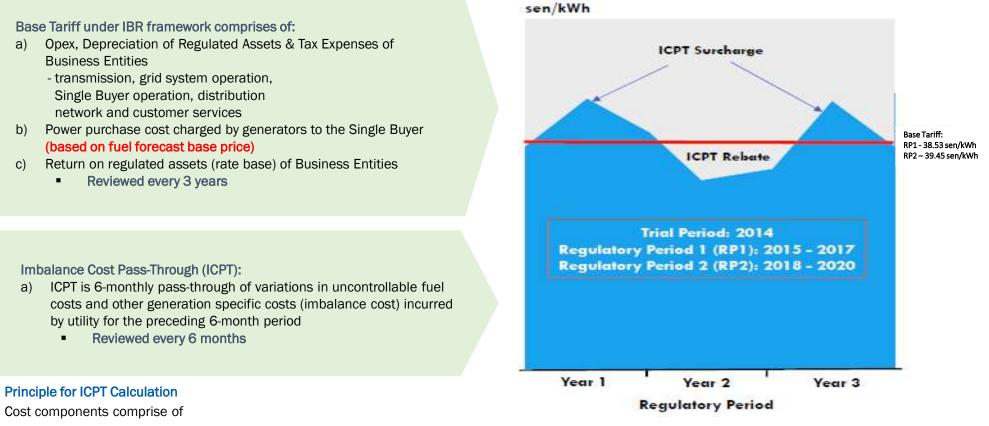
FINANCIAL & TECHNICAL HIGHLIGHTS

A Mechanisms For Tariff Setting With Incentives To Improve Efficiency & Greater Transparency



Source: Energy Commission (EC)

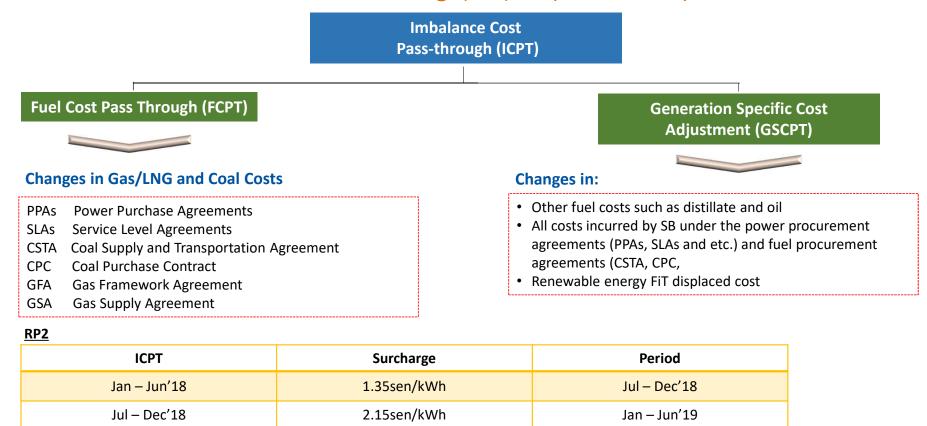
### Imbalance Cost Pass-Through (ICPT) Mechanisms Ensures TNB Remain Neutral



• The ICPT is calculated based on an estimated actual fuel cost and generation specific costs for a particular six (6) months period against the corresponding baseline costs in the Base Tariff.

Source: Energy Commission (EC)

Imbalance Cost Pass-Through (ICPT) Comprises Two Components



Jul – Dec'19 Jan – Jun'20

Jan – Jun'19	2.55sen/kWh	
Jul – Dec'19	2.00sen/kWh	

Source: Energy Commission, company presentations, company fillings

## New Features in Electricity Tariff Review for RP2 (2018-2020)

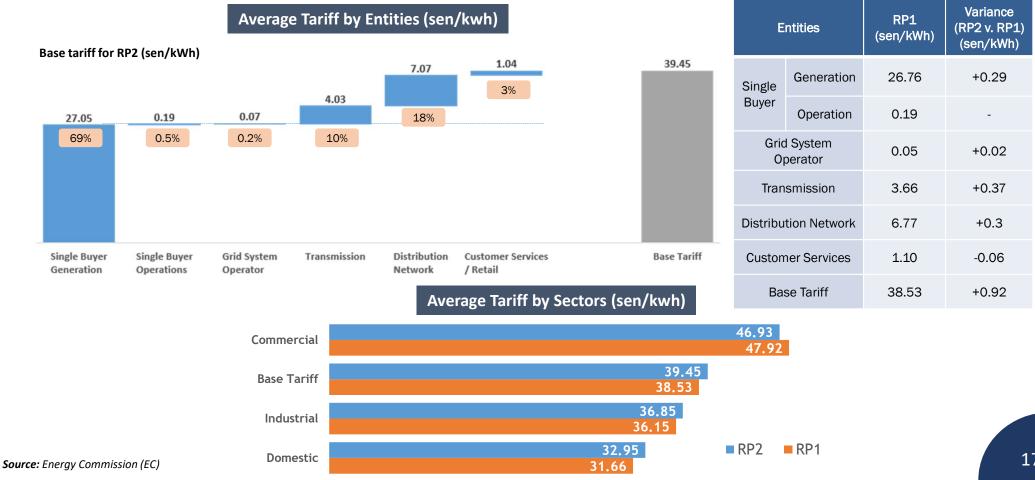
More efficient and reliable electricity supply	Support Government's initiatives and aspirations	New addition in Key Performance Indicators	Separation of Distribution Networks and Customer Services
<ul> <li>Efficient and reliable electricity supply at the lowest efficient cost;</li> <li>Enhancement in safety and reliability with smart grid capabilities.</li> </ul>	<ul> <li>Supporting Government's initiatives in green energy and sustainability for example AMI, Distribution Automation, Group Relamping of streetlight, etc.</li> <li>Continue the gas price subsidy rationalization by gradual removal of gas price subsidy;</li> </ul>	<ul> <li>New performance indicators on each business entity that are in line with Government's policies;</li> <li>Enhancement on KPI mechanisms and principles (symmetric and asymmetric).</li> </ul>	<ul> <li>Separation of these business entities will enhance the system reliability and consumer experience;</li> <li>This will increase the productivity and consumer satisfaction.</li> </ul>

### **IBR Entities**

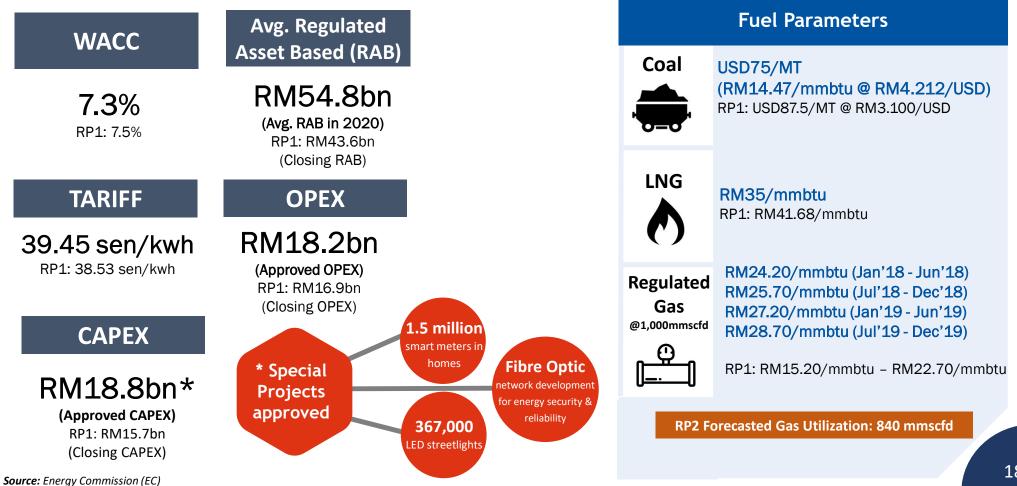
Generation TNBG / IPP/ RE Developer			Gov	erned under PPA	VSLA/REPPA
				Regulate	d Under IBR
Ri	ng-fenced entiti	es		Combined er	ntities in RP1
Single Buyer Generation	<b>b</b> Single Buyer Operations	2 Grid System Operator	3	4 Distribution Network (Revenue-Cap)	5 Customer Services (Price-Cap)
(Actual Cost)	(Revenue-Cap)	(Revenue-Cap)	(Revenue-Cap)	(Revenue-Gap)	(r nuc-Gap)
			<u>1</u>	1, these 2 entity are grou	

Source: Energy Commission (EC)

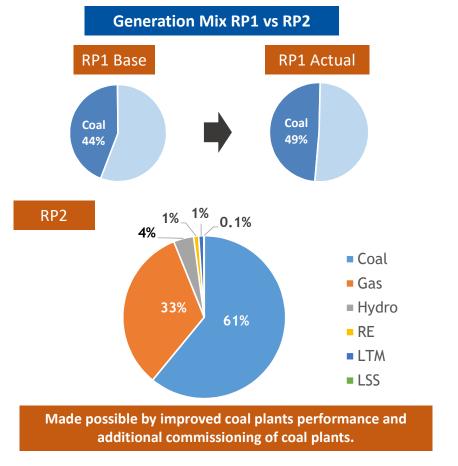
### New Base Tariff Under IBR Mechanism RP2

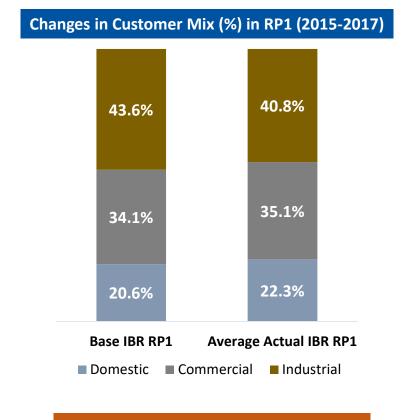


**RP2** Parameters



### **Generation and Customer Mix**



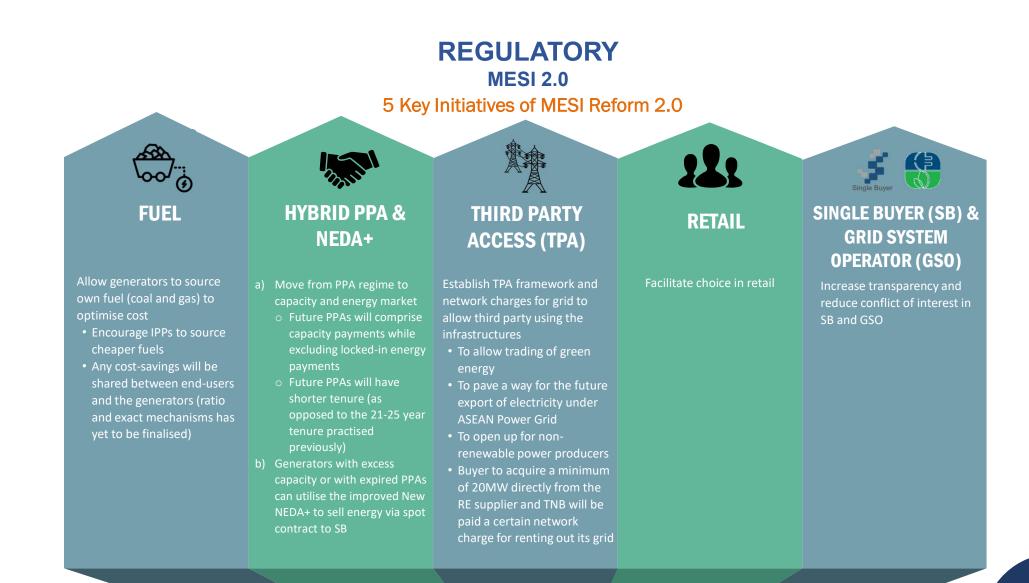


**RP2 Forecasted Demand Growth: 1.8 – 2.0%** 

LTM – Laos, Thailand & Malaysia Interconnection; LSS – Large Scale Solar

Source: Energy Commission (EC)

Note:



Source: The Edge Financial Daily article: Govt. to Liberalise Power Industry, 17th Sentember 2019

## REGULATORY MESI 2.0

### MESI Reform 2.0 Key Initiatives Timelines

									TIN	NELI	NES				
			2019					2021				2023	2029		
	KEY INITIATIVES				Q 4Q	1Q 2	Q 3Q	4Q 10	Q 2Q	3Q 4Q	1Q 2	Q 3Q 4	1Q 1Q 2	2Q 3Q	4Q 2029
		MyPower to come up with draft on rules, incentive mechanisms, and amendments to regulatory control													
	FUEL	Energy Commission (EC) expected to approved and published these rules													
i	Ę	Pilot project							<u>a</u>						
		Full roll-out													
		MyPower to come up with the energy and capacity markets' design and rules													
ø	PPA	EC to approve the design and rules													
A 4	HYBRID	EC will hold the first auction for the capacity market (hybrid PPA)													
SRID PP/ NEDA+	ΗĂ	The entry of the capacity market which will mark the beginning of the hybrid market till 2045, when the last batch of the current													
HYBRID PPA NEDA+		PPA ends - 2029													
Ŧ	NEDA+	EC will roll out an improved NEDA+ to incentivise more power producers with excess capacity or expired PPAs													
		EC and TNB to determine interim network charges based on RP2 to allow green energy power producers to ride on the grid													
		Once interim network charges are decided, third party 100MW green contract will be piloted to last till the end of the 3 year RP3													
	РА	MyPower and EC to develop the rules / guidelines for the TPA with regards to market participation.													
i	<b>-</b>	EC is expected to approve and submit RP3 to the government for endorsement, including network charges													
		EC to seek legal opinion on existing legislation TPA and other reform initiatives by end-2019. The new legislation (if necessary													
		depending on legal opinion) will be tabled by end of 2022													
		EC and TNB will announce grid's green rider initiative													
		MyPower will detail and complete a retail regulatory framework to be approved by EC by 4Q202													
	KETAIL	1) Itemised billing based on RP3 will be rolled-out together with new tariff design and approved network charges							0						
i	KE	2) Electricity time of use (which details different prices for the use of electricity at different times of the day) will be piloted							<u> </u>						
		Pilot of opening up of retail to take place after the roll out of retail regulatory framework													
		The industry is expected to get ready for gradual price-based retail													
~*	0	EC will make first disclosure of the government's Power Planning Plan													
SB	GSO	MyPower will present a report on enhanced governance of SB and GSO													
•/		The enhanced ring-fenced governance to start in 1Q2021													

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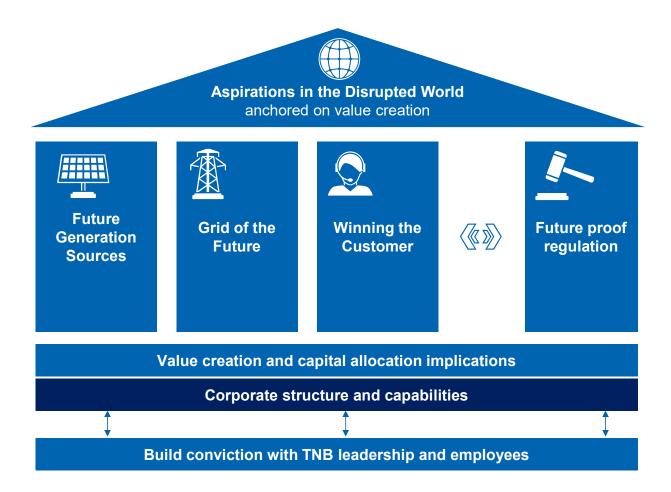
REGULATORY

**BUSINESS STRATEGY & DIRECTION** 

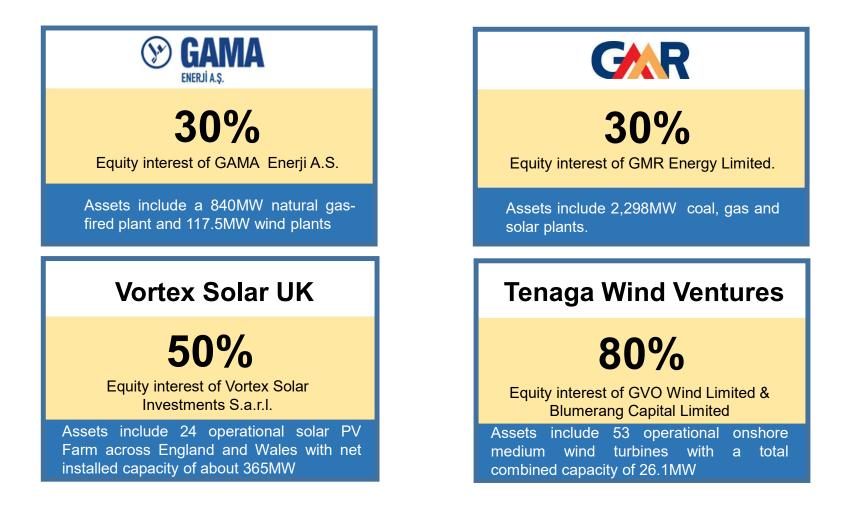
CAPITAL MANAGEMENT

FINANCIAL & TECHNICAL HIGHLIGHTS

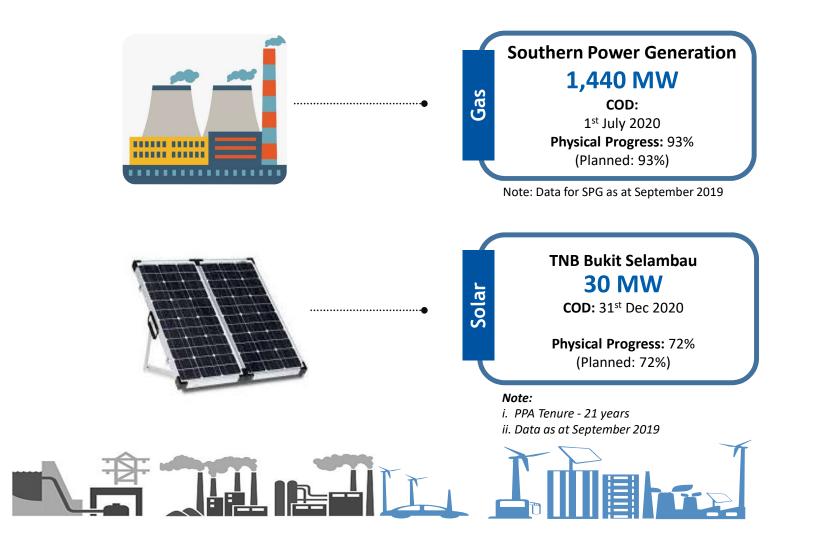
Reimagining TNB is TNB's strategic aspiration – a key enabler is the corporate structure



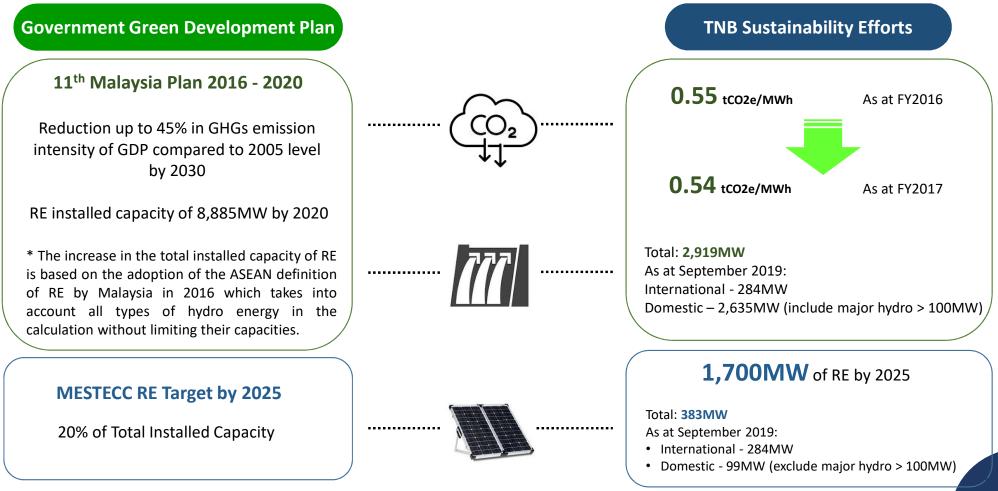
International Acquisition - Four International Acquisitions to Support Aspiration



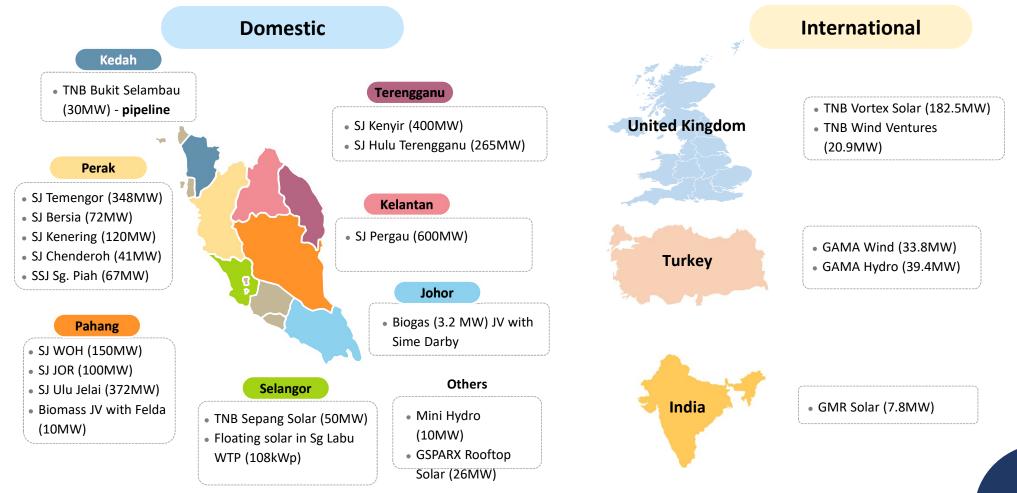
**Generation Projects** 



Sustainability - Renewable Energy (RE) & Green Policy



Sustainability - TNB's Renewable Energy (RE) Assets



Sustainability – TNB's Environment Initiatives



**Increase** in total GHG emissions mitigation from **2,359,770** to **5,030,079** tCO2e through the used of hydro, renewable energy and efficient technology power plant. (*Data as at FY2017*)



The latest coal generation plants using ultra-supercritical technology consume less fuel per MWh electricity produced in comparison to conventional coal power plant further contributing to lower carbon emissions.



50MW Large Scale Solar (LSS), cut emissions by approx. 64,000 tCO2e/year, additional 30MW LSS to further reduce emissions after COD in Dec 2020





To develop Green House Gas Emission Management System (GEMS), an online system to record and analyse raw emission data from TNB assets



Development on microalgae initiative to reduce carbon dioxide (CO2)

### Sustainability – TNB's Green Development

#### **UNITEN's Smart UniverCity**

- ✓ To create a sustainable ecosystem which provide competitive advantage for TNB in moving into smart city environment.
- ✓ The project focuses on customer experience, renewable energy, energy efficiency and artificial intelligence.
- □ TNB Centre of Excellence (CoE) for Solar Energy at the Large Scale Solar (LSS) site in Sepang



✓ The CoE will become a training centre for solar energy development and technology, catering for TNB employees and external participants from public and private sectors

#### □ Introduction of Electric Buses for UNITEN



✓ The project aims to develop a feasible business model for the operation of electric buses within the campus, such as vehicle leasing between the Fleet Management and UNITEN.

- Expansion of Electric Vehicle Charging Network
- ✓ To expand the existing charging station infra (around 250 stations) under the ChargEV programme (managed by MGTC).

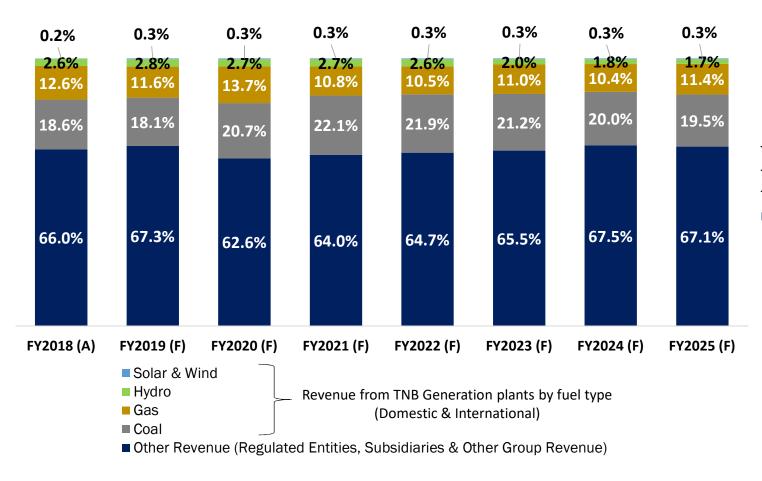
#### Maverick - Showcase of Net Zero Energy Home

✓ Showcasing Net Zero Energy Home Living in residential areas in Cyberjaya, the project provides a physical experience for customers to visualise how to self generate their own electricity.



- Smart Street Light Showcase Project at UNITEN Putrajaya Campus
- A street lighting system integrated with communication facilities that allow it to perform various functions such as brightness control, surveillance and digital street signs.

Sustainability – Breakdown of TNB's Generation Revenue



The Group will continuously strive to ensure that the revenue from the coal generation plants **does not not exceed 25%** 

Sustainability - TNB's Social & Governance Initiatives







Allocated **RM10 million** for **1,000** students from low-income families in the fields of Science, Technology, Engineering and Mathematics (STEM)



**816** students (596 local & 220 abroad universities) awarded Yayasan Tenaga Nasional (YTN) scholarship



UNITEN produced **3,145** graduates with **93.7%** employability rate within 6 months



**880** trainees under Government's PROTÉGÉ initiative, compared to 500 trainees in FY2017



**54** students receive **RM1,500/year** (2018-2020) & are fullysponsored to attend value-added self-development programmes



TNB's contribution of **RM6 million** included sponsorships to the Malaysian Hockey Confederation





Obtained ISO 37001:2016 Anti Bribery Management System certification

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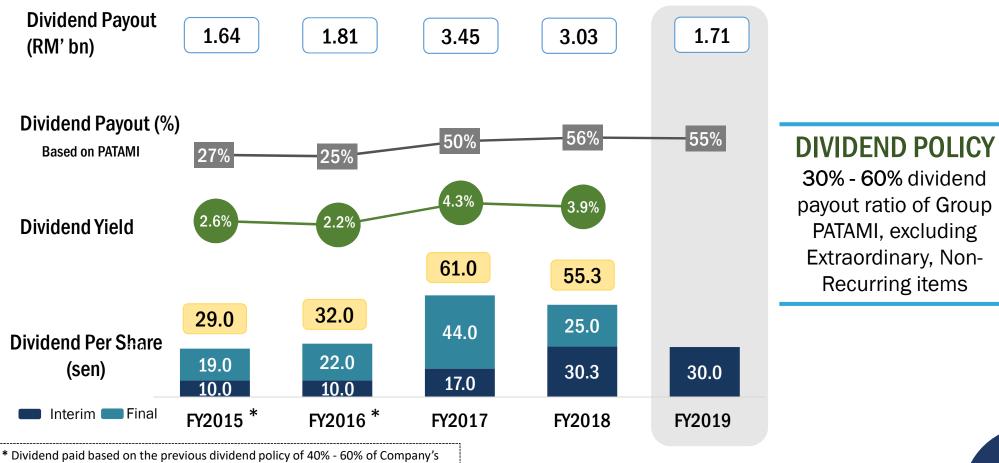
**BUSINESS STRATEGY & DIRECTION** 

**CAPITAL MANAGEMENT** 

FINANCIAL & TECHNICAL HIGHLIGHTS

# **CAPITAL MANAGEMENT**

Highest Dividend Payout at 56% of Adjusted PATAMI

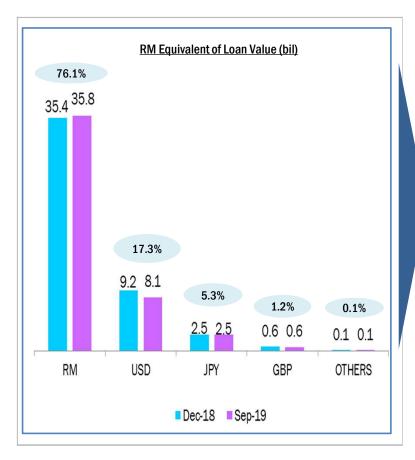


Annual Free Cashflow from Operations less Normalised Capex and Interest Servicing

3<u>3</u>

# **CAPITAL MANAGEMENT**

### Gearing Level Registered at 44.4%



Statistics	30 <sup>th</sup> Sept'19	31 <sup>st</sup> Dec'18
Total Debt (RM' Bil)	1 47.0	47.8
Net Debt (RM' Bil)	30.3	29.6
Gearing (%)	44.4	44.8
Net Gearing (%)	28.6	27.7
Fixed : Floating	98:2	95:5
Final Exposure	98:2	95:5
Weighted Average Cost of Borrowing	2 5.04	4.98
Final Exposure	5.05	4.99

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

Cash Position	30 <sup>th</sup> Sept'19	31 <sup>st</sup> Dec'18	Closing FOREX	30 <sup>th</sup> Sept'19	31 <sup>st</sup> Dec'18
(RM bn)	202ehr 19	ST. Dec 19	USD/RM	4.19	4.14
Company	ipany 11.1		100YEN/RM	3.88	3.75
0	107	10.0	GBP/RM	5.15	5.27
Group	16.7	18.2	USD/YEN	107.99	110.28

Lower mainly due to repayment of Mizuho Loan (USD300mil) amounting of RM1,242.5mil

<sup>2</sup> Increase due to repayment of Mizuho Loan with lower interest rate

Note:

Debt consists of Principal + Accrued Interest + Accounting Treatment (FRS139)

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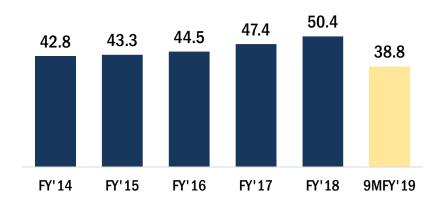
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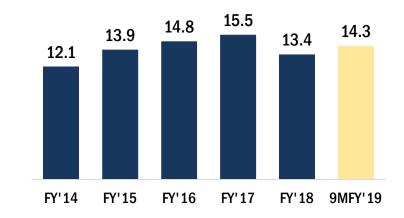
## **FINANCIAL & TECHNICAL HIGHLIGHTS**

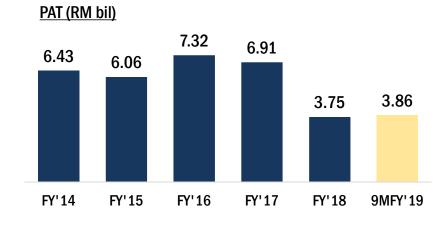
### Steady Financial Results Continued into 9MFY'19





EBITDA (RM bil)





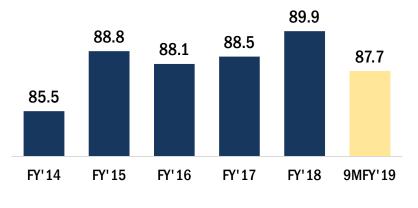
Note: FY2019 is after MFRS16 implementation

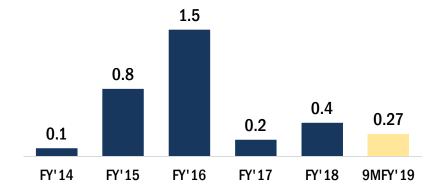
## **FINANCIAL & TECHNICAL HIGHLIGHTS**

### **Consistent Technical Performances**

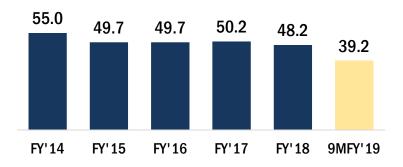
<u>EAF (%)</u>











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# THANK YOU

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