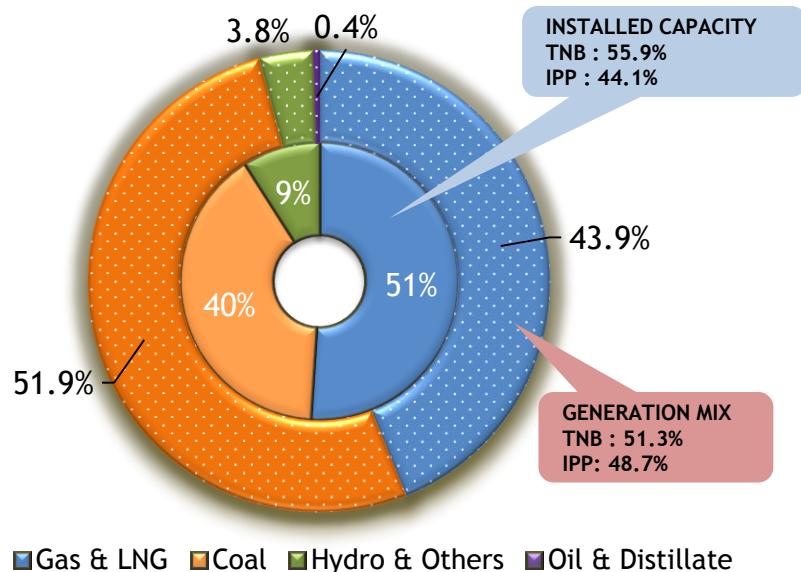
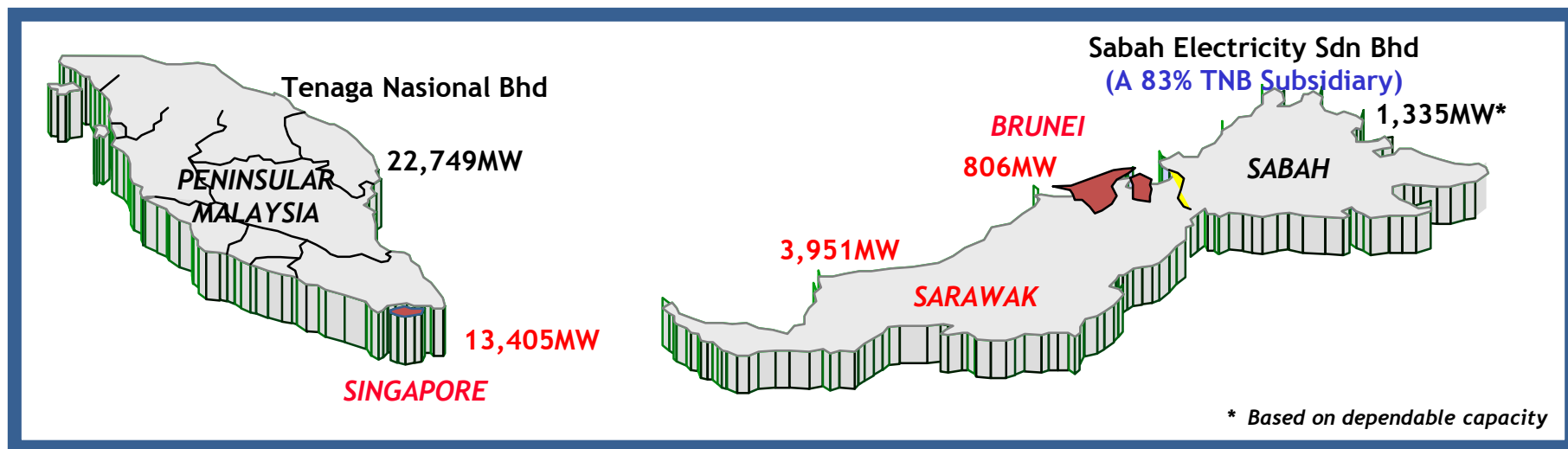


TNB HANDBOOK

1. INTRODUCTION TO TENAGA
2. INTRODUCTION TO MESI
3. TARIFF
4. BUSINESS STRATEGY & DIRECTION
5. DIVIDEND POLICY
6. FINANCIAL HIGHLIGHTS

INTRODUCTION TO TENAGA

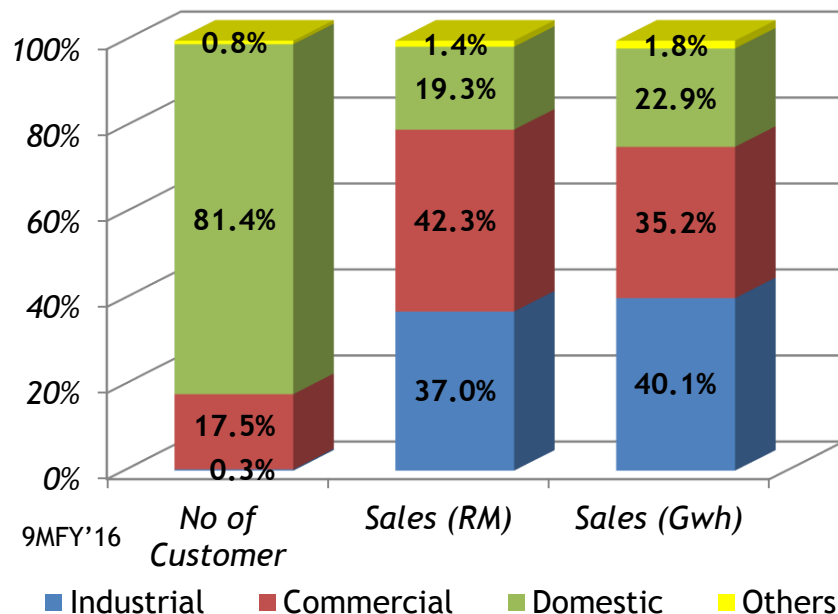
Three Major Utilities in Malaysia



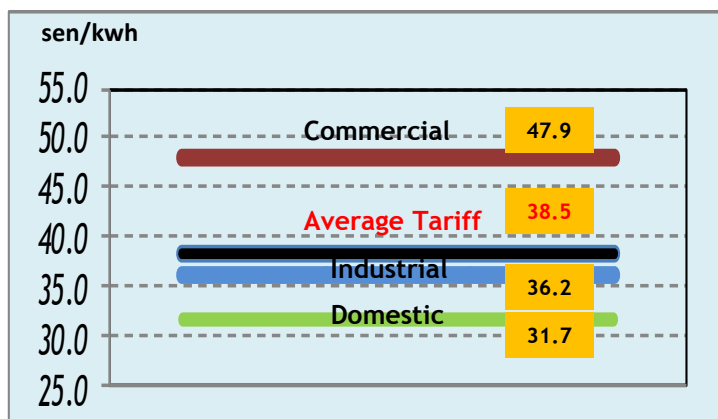
	FY'12	FY'13	FY'14	FY'15	9MFY'16
TNB - Peninsula Installed Capacity (MW)	11,462	11,462	10,814	11,708	12,718
Total units sold (Gwh)	102,132	105,479	108,102	110,837	86,018
Total customers (mn)	8.36	8.35	8.64	8.94	9.18
Total employees ('000)	33.6	35.0	36.1	36.0	35.7
Total assets (RM bn)	88.5	99.0	110.7	117.1	130.0

INTRODUCTION TO TENAGA

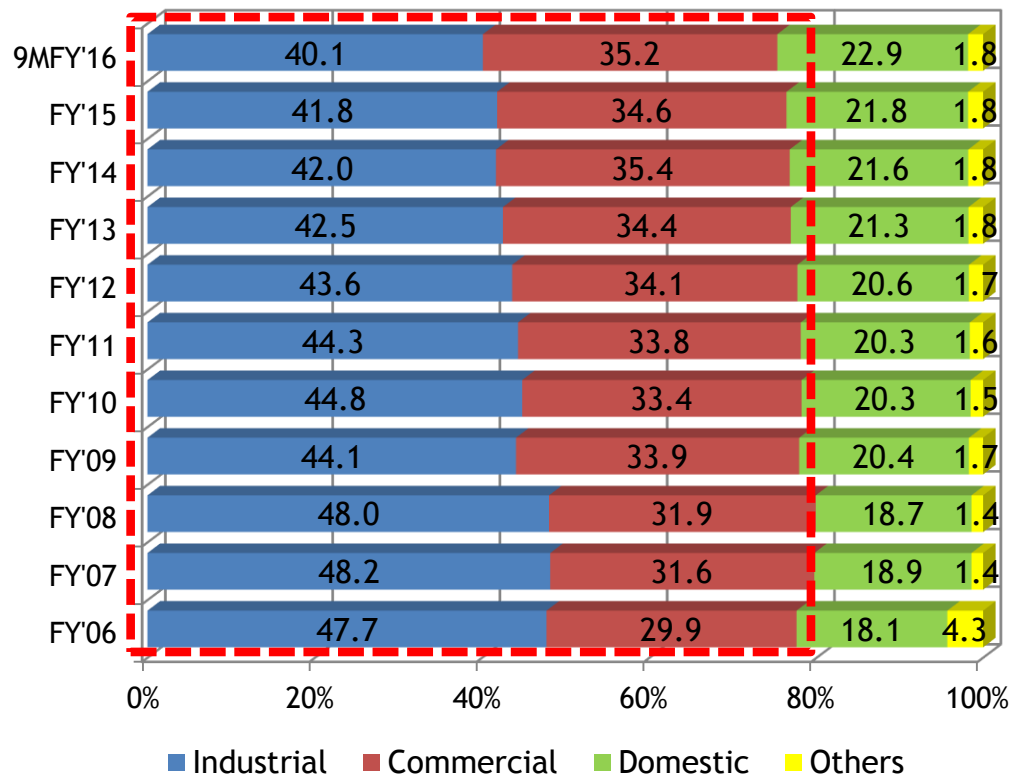
No of Customer vs. Sales Value vs. Unit Sales



Average Base Tariff by Sector



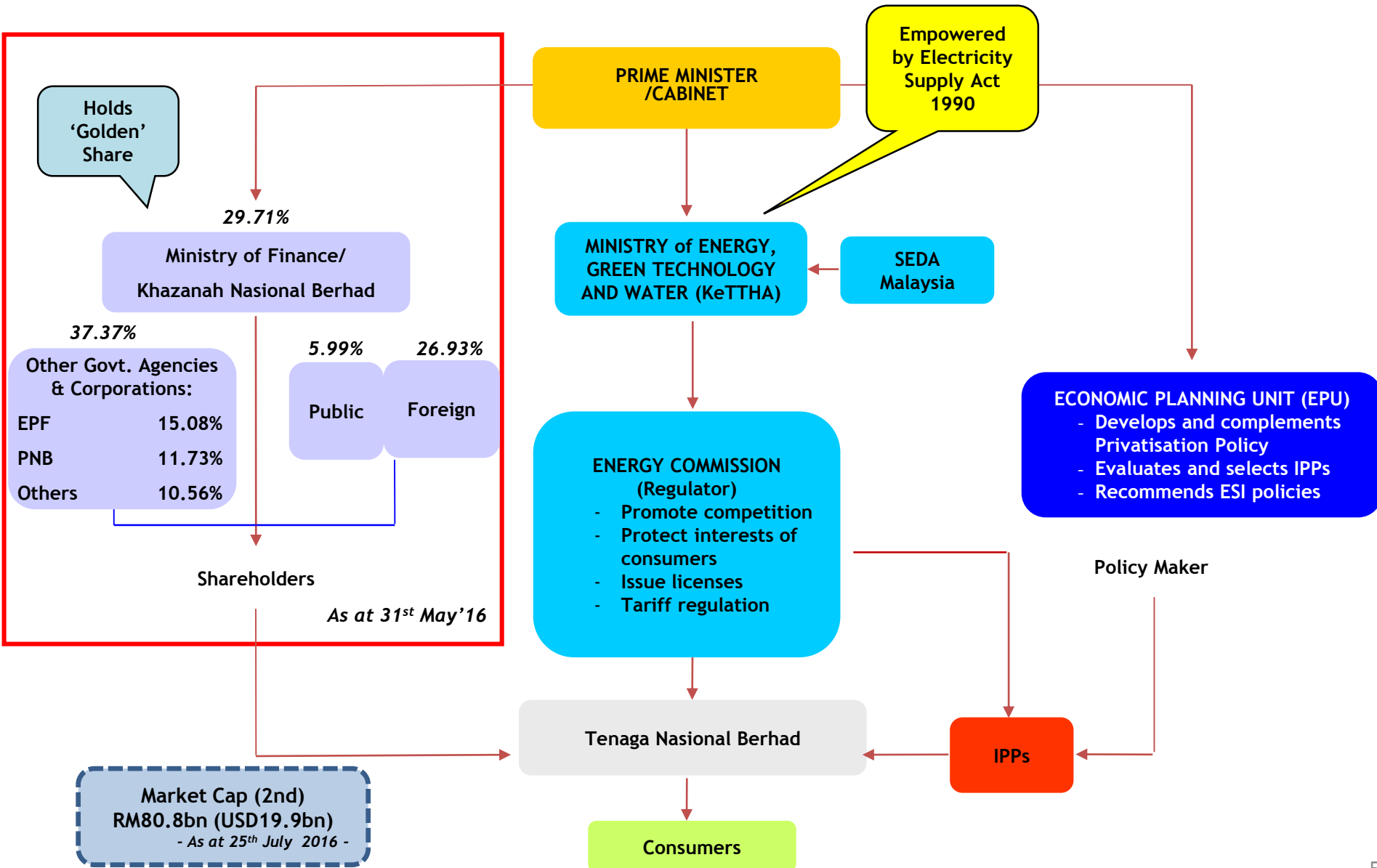
Sectoral Sales Analysis (Gwh)



- Shift from Industrial-based to Service-based economy
- Increasing market share from Commercial sector
- Commercial sector contributes the highest electricity sales margin

INTRODUCTION TO TENAGA

Industry Regulatory Framework



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TRANSFORMATION INITIATIVES BY GOVERNMENT

Aimed at Delivering a Reliable, Transparent, Efficient and Sustainable ESI

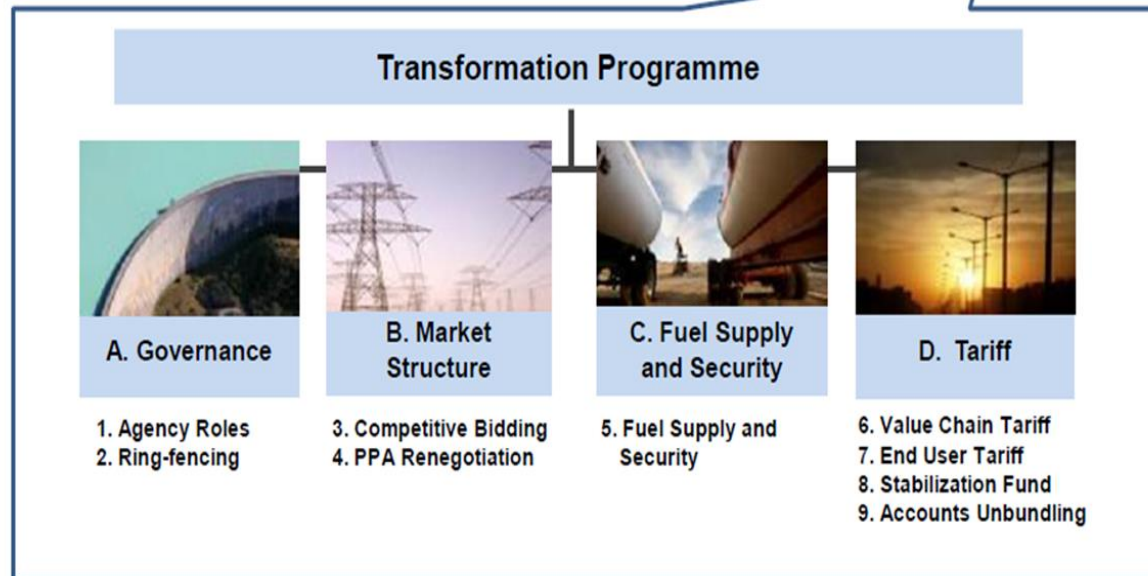
*New
Energy
Policy*



Jun - Dec 2008
Khazanah's MESI Study

Jan - Dec 2009
KeTTHA-led syndication

4 Dec 2009
Cabinet endorsement to
transform ESI



1st Gen IPP /
Restricted
Bidding

Subsidy
Rationalisation
Programme

FCPT
Mechanism

LNG
Importation

Nuclear Energy
Capacity
Building

National RE
Policy & Action
Plan

FIT & RE Fund

Legal &
Regulatory
Framework
Enhancement

INCENTIVE BASED REGULATION (IBR)

The Move Towards Better Regulation

IBR mechanism to strengthen the following:

 The Economic Regulatory Framework for Regulating TNB

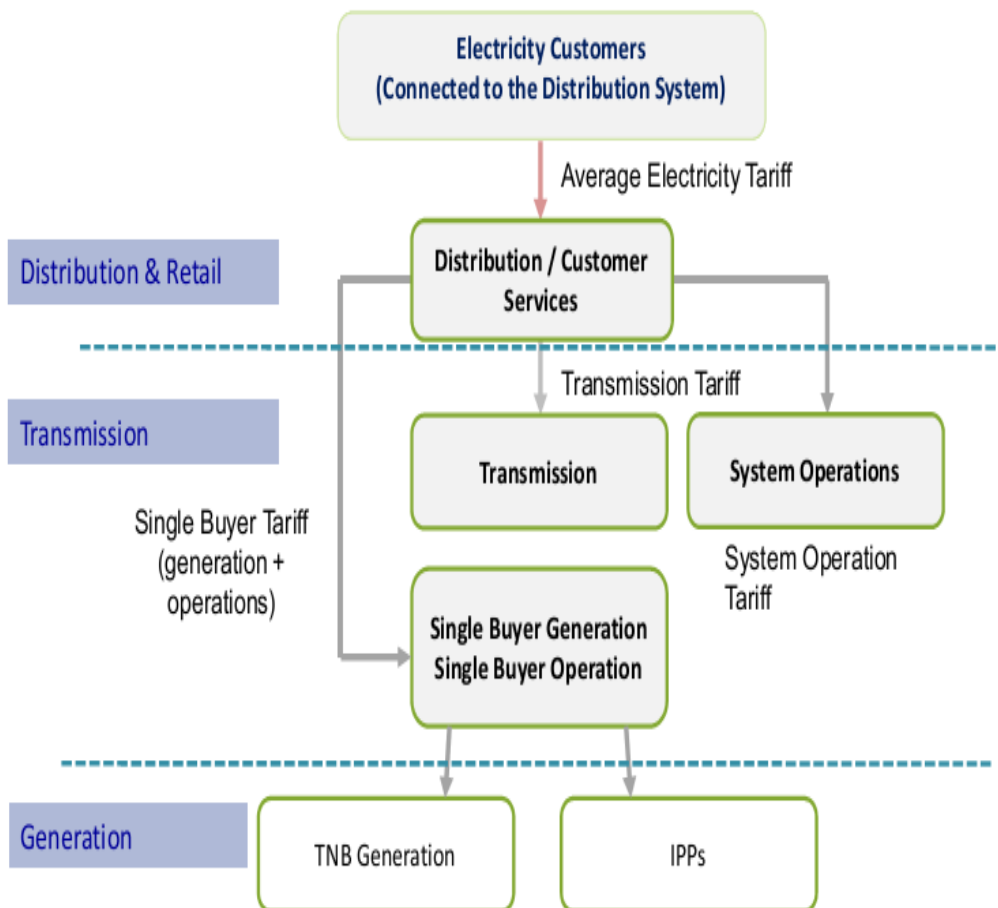
 The Tariff Setting Mechanism and Principles for Tariff Design

 Incentive Mechanisms to Promote Efficiency and Service Standards

 The Process of Tariff Reviews

 Creation of Regulatory Accounts and Its Annual Review Process

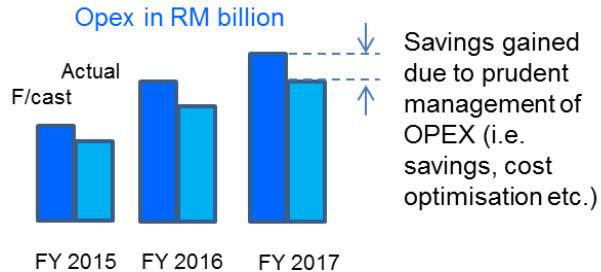
5 Business entities under IBR
(Accounting Separation)



11 Regulatory Implementation Guidelines (RIGS) were Developed for IBR Implementation

INCENTIVE BASED REGULATION (IBR)

Economic Regulation Methodology to Promote Efficiency And Transparency



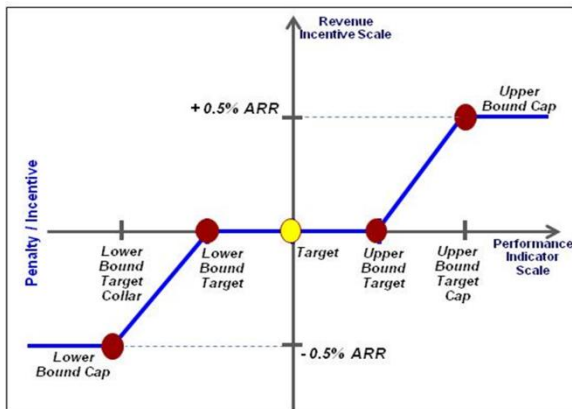
Operational Efficiencies

- Rewarded for seeking efficiencies in operational and capital expenditure



Financial Efficiencies

- Rewarded for maintaining an efficient capital structure



Performance Efficiencies

- Rewarded for delivering improvements in network performance

INCENTIVE BASED REGULATION (IBR)

Regulatory WACC for TNB under IBR (FY2014 - 2017) is 7.5%

WACC Parameters	Actual market Parameters	TNB's Proposal	Recommendation
Stock T_{NB} Beta	0.92[1]	1.435	1.435 [[4]
Market Return (R_m)	8.8%[2]	12.3%	8.8%
Risk free (R_f)	4.0%	4.0%	4.0%
Market Risk Premium ($R_m - R_f$)	4.8%	8.3%	4.8%
Debt Margin (D_m)	2.19%	2.24%	2.24%
Tax Rate	25.0%	25.0%	25.0%

Weighted Cost of Capital Calculation

	Actual market Parameters			TNB's Proposal			Recommendation		
Capital Structure	Cost	Capital Structure	Weighted Cost	Cost	Capital Structure	Weighted Cost	Cost	Capital Structure	Weighted Cost
Cost of Equity (K_e)	8.38%	60.5%	5.1%	15.91%	45.0%	7.16%	10.85%	45.0%	4.88%
Cost of Borrowing (K_b)[3]	6.18%	39.5%	1.8%	6.24%	55.0%	2.57%	6.24%	55.0%	2.57%
Weighted Cost of Capital			6.9%			9.7%			7.5%

Note:

[1] Based on beta for the period 2004-2012

[2] R_m - Market return of 10 yrs KLSE Index

[3] Average Gearing (2004-2011) is 39.5%

[4] Adjusted to reflect optimal gearing.

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TARIFF

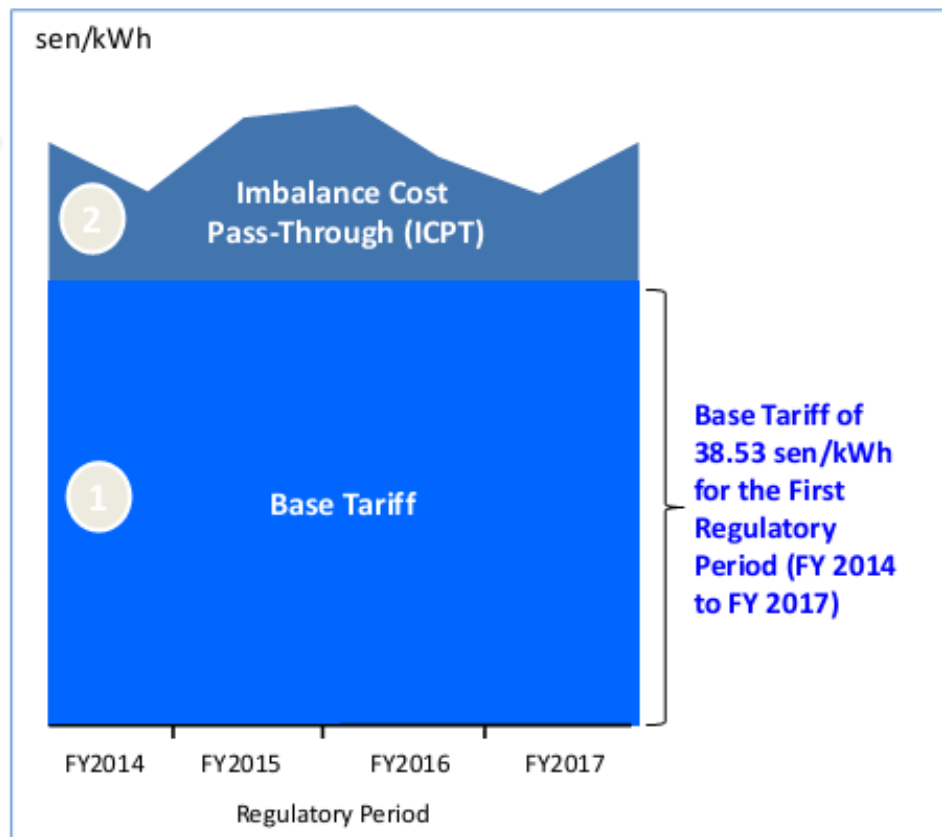
Electricity Tariff Review = Base Tariff + Imbalance Cost Pass-Through (ICPT)

Imbalance Cost Pass-Through (ICPT):

- Tariff adjustment to reflect uncontrollable fuel costs and other generation costs (difference between forecast and actual cost of procuring electricity that is beyond the control of utility)

Base Tariff under IBR framework reflects:

- CAPEX and OPEX of
 - transmission, distribution, system operation (SO) and single buyer operation (SB)
- Power purchase cost charged by generators (including base price for fuel) to the SB
- Return on regulated asset (rate base) of transmission, distribution, SO and SB business units



Principle for ICPT Calculation

Cost components comprise of:

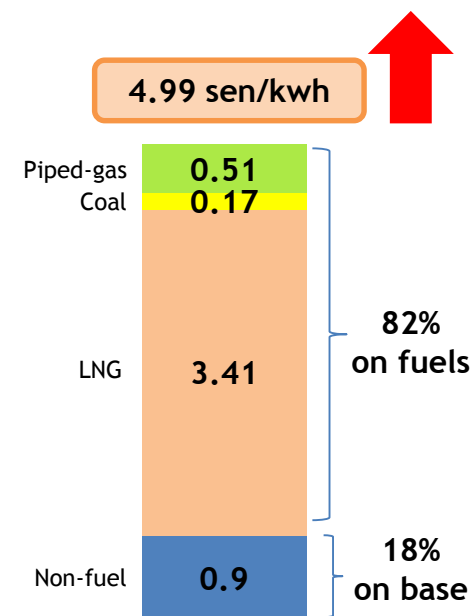
- Actual vs forecast cost of fuels & other generation costs for the preceding 6-month period; and
- Piped gas price increase of RM1.50/mmBtu for the next 6-month period

Note 1 : CAPEX = Capital expenditure
Note 2 : OPEX = Operational expenditure

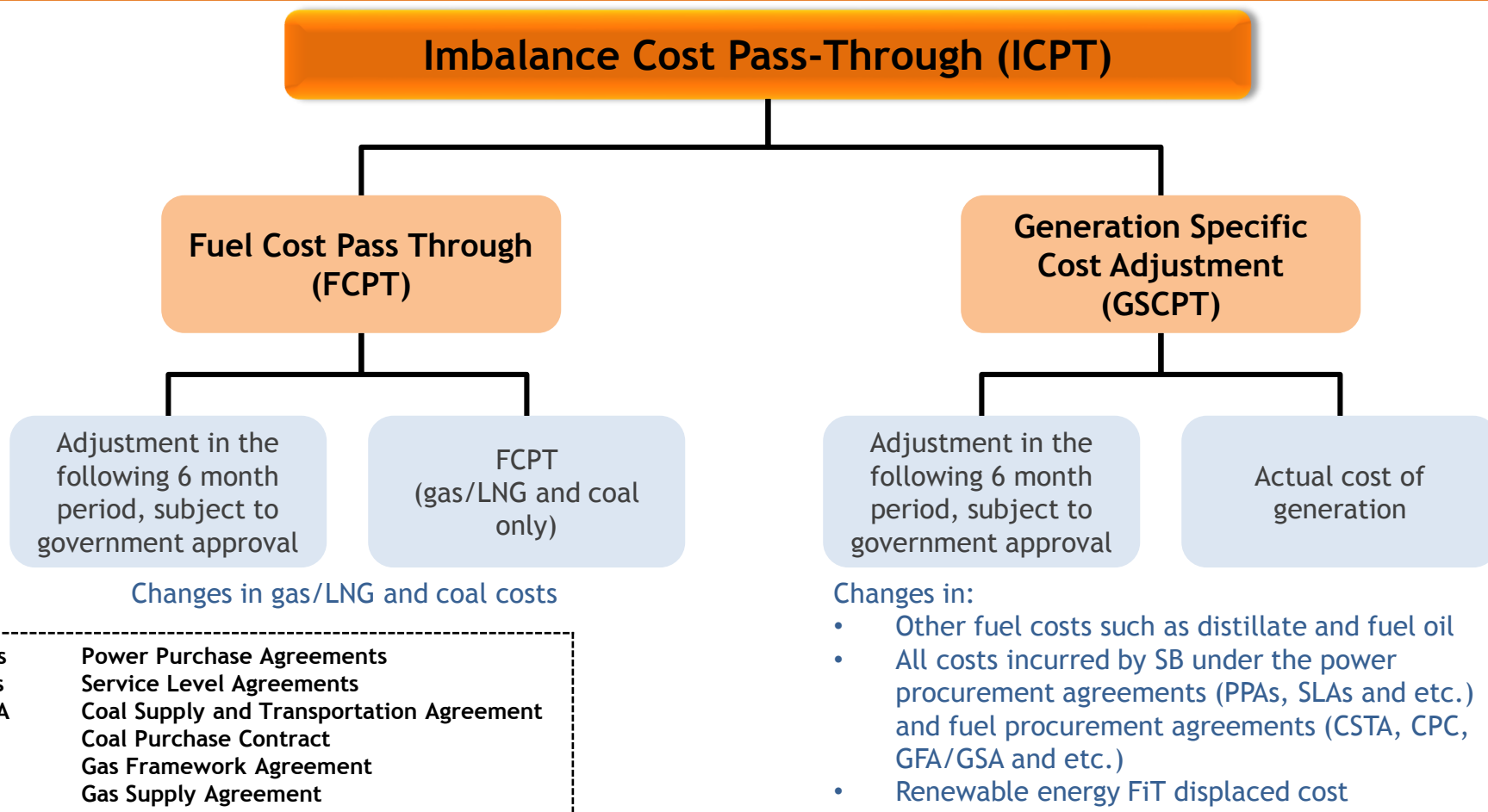
TARIFF

Average Base Tariff of 38.53 sen/kwh is Effective from 1st January 2014

Tariff Components	sen/kWh	% increase
Average Tariff (Jun 2011)	33.54	
Fuel Components:		
<ul style="list-style-type: none"> Piped-gas regulated price (from RM13.70/mmBTU to RM15.20/mmBTU @1,000 mmscfd) 	0.51	1.52
<ul style="list-style-type: none"> Coal (market price) (from USD85/tonne to USD87.5/tonne CIF@CV 5,500kcal/kg) 	0.17	0.51
<ul style="list-style-type: none"> LNG RGT market price at RM41.68/mmBTU (for gas volume > 1,000 mmscfd) 	3.41	10.17
Non-fuel component (TNB Base Tariff)	0.90	2.69
AVERAGE BASE TARIFF EFFECTIVE 1st JANUARY 2014	38.53	14.89



Imbalance Cost Pass-Through (ICPT) Comprises Two Components



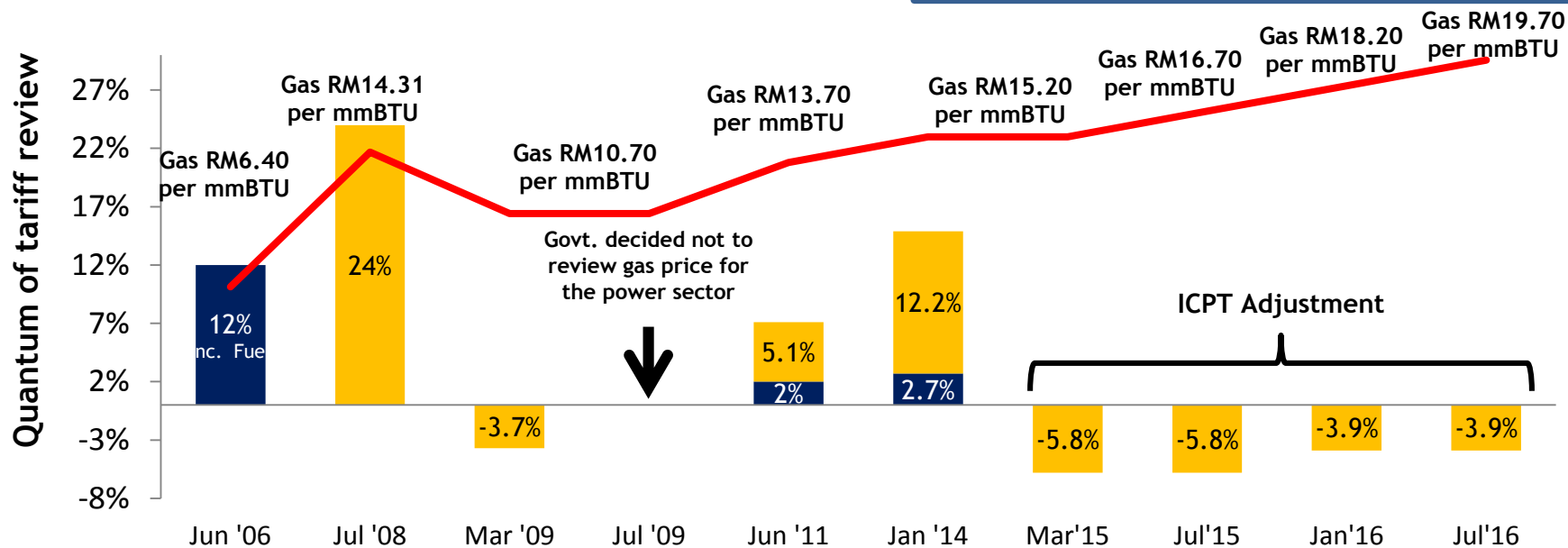
ICPT	Announcement	Rebate	Period
Jan - Dec'14	RM727 mn	2.25sen/kwh	Mar - Jun'15
Jan - Jun'15	RM1,086 mn	2.25sen/kwh	July - Dec'15
Jul - Dec'15	RM762 mn	1.52sen/kwh	Jan - Jun'16
Jan - Jun'16	RM758 mn	1.52sen/kwh	Jul - Dec'16

TARIFF

Frequency of Review & Underlying Assumptions

IBR
ICPT

Approval date	May 2006	Jun 2008	Feb 2009	Jun 2009	May 2011	Dec 2013	Feb 2015	Jun 2015	Dec 2015	Jun 2016
Effective date	Jun 2006	Jul 2008	Mar 2009	Jul 2009	Jun 2011	Jan 2014	Mar 2015	Jul 2015	Jan 2016	Jul 2016
Quantum	12%	23 - 24%	(3.7%)	Neutral	7.1%	14.9%	(5.8%)	(5.8%)	(3.9%)	(3.9%)
Gas (RM/mmbtu)	6.40	14.31	10.70	10.70	13.70	15.20	15.20	16.70	18.20	19.70
Coal (USD/MT)	45.00	75.00	85.00*	85.00*	85.00*	87.50**	87.50**	87.50**	87.50**	87.50**
Average Tariff (sen/kWh)	26.2	32.5	31.3	31.3	33.5	38.5	38.5	38.5	38.5	38.5



* Forex (RM/USD) = RM3.6

**Forex (RM/USD) = RM3.14

■ Base tariff adjustment

■ Fuel adjustment

— Gas price

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BUSINESS STRATEGY & DIRECTION

20-Year Strategic Plan

THE PLAN LAYS DOWN THE PATH TOWARDS
REALISING OUR VISION OF GLOBAL LEADERSHIP
It builds upon the progress of T7

**GLOBAL
LEADERSHIP 2025**

- Excel in:
 - All business areas
 - Reputation as a strong business partner
 - Ability to continue to create shareholder value
- Tenaga acknowledged as amongst the most admired companies globally

**OVERSEAS
INVESTMENT 2020**

- Improved financial position and human resource readiness
- Venture into power/energy related investments in the international arena

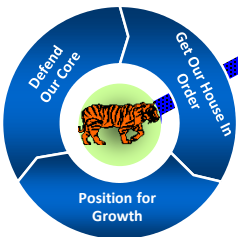
**GEOGRAPHICAL
EXPANSION
(SERVICES) 2015**

- Expand works and services related to the energy sector
- Creation of new revenue stream leveraging on Tenaga's knowledge and competencies in the energy business

**SERVICE
EXCELLENCE 2010**

- Improve Core Operations under T7 Strategy
- Place Tenaga as the best performing company in Malaysia by 2007 and as the Regional best by 2010

T7



Where We Are Now...

TNB TODAY

- Tenaga is a strong player in the growing ASEAN region
- Fresh industrial reforms has resulted in a more transparent regulatory environment
- Management team focused on addressing complexities and unlocking value
- A new forward looking strategy centered on growth

New Strategic Direction & Focus...

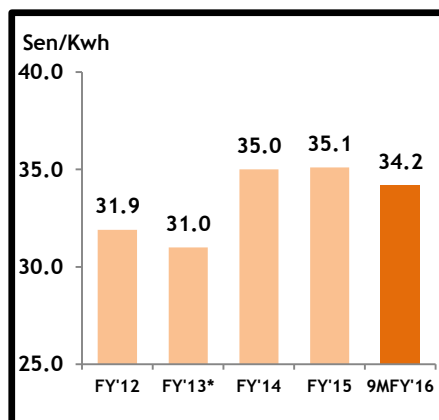
TNB TOMORROW

- Will further strengthen efforts to optimise operation efficiencies
- Is set to grow the company in key emerging markets
- Capitalises on the technological disruption and evolution currently confronting the utility sector
- Unlock value across the value chain, from the generation segment to segments beyond the meter

Financial & Technical 5-Year Performance

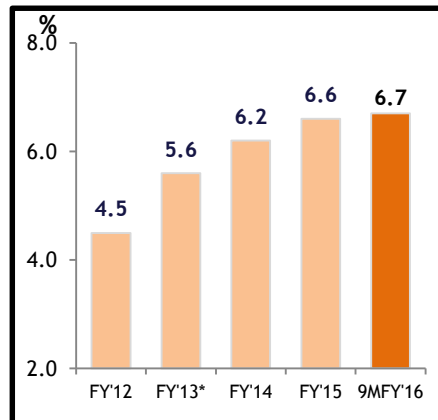
FINANCIAL PERFORMANCE

1 COMPANY CPU (sen/kwh)#



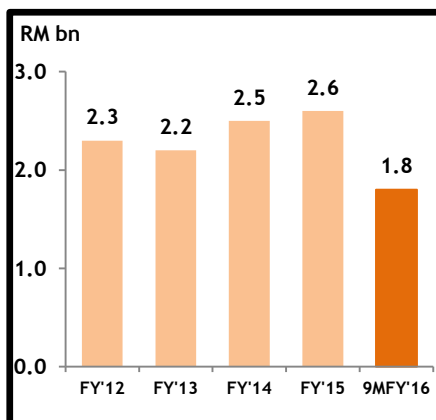
Exclude Finance Cost

2 ROA



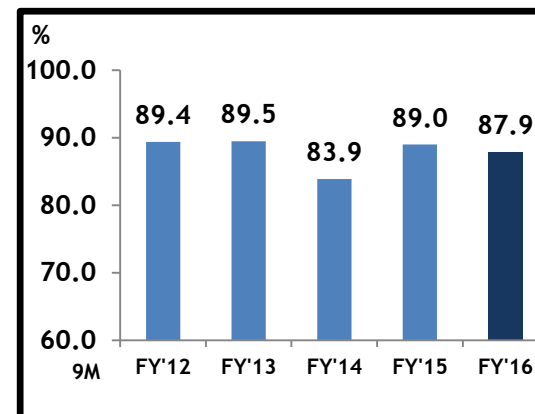
* FY13 - restated

3 REVENUE FROM NON-REGULATED BUSINESS

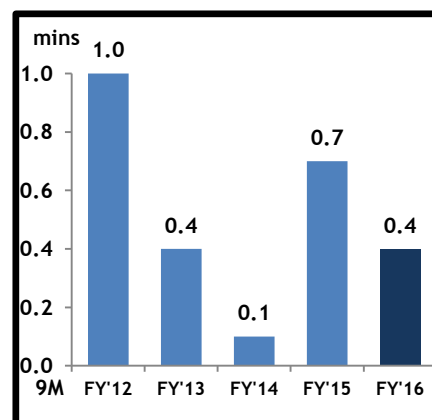


TECHNICAL PERFORMANCE

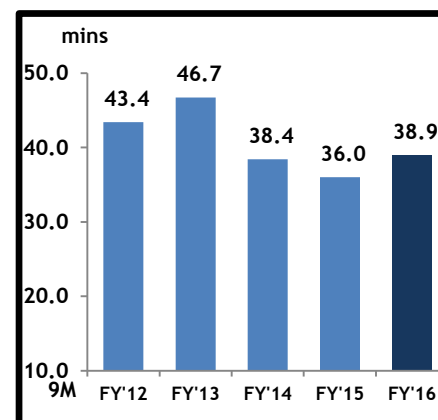
1 EQUIVALENT PLANT AVAILABILITY FACTOR (EAF)



2 SYSTEM MINUTES



3 SAIDI



Global Drivers

TNB Direction

1

Future DEMAND GROWTH will come from cities in EMERGING MARKETS



Regional growth strategy targeting emerging markets

2

Technological disruptions will impact demand and create new opportunities



Grid digitalization and new business approach to capitalize on customer relationship

3

Technology evolution in renewable generation



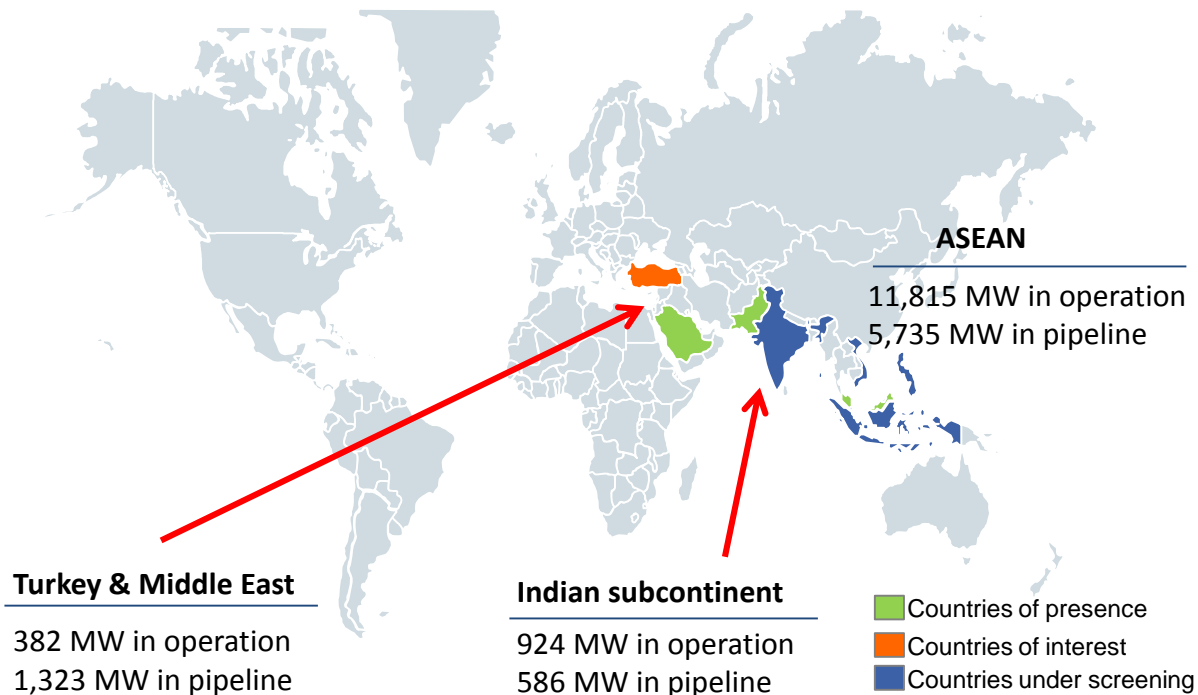
Planned increase penetration in renewable generation

TNB New Strategic Direction and Focus

Growth drivers

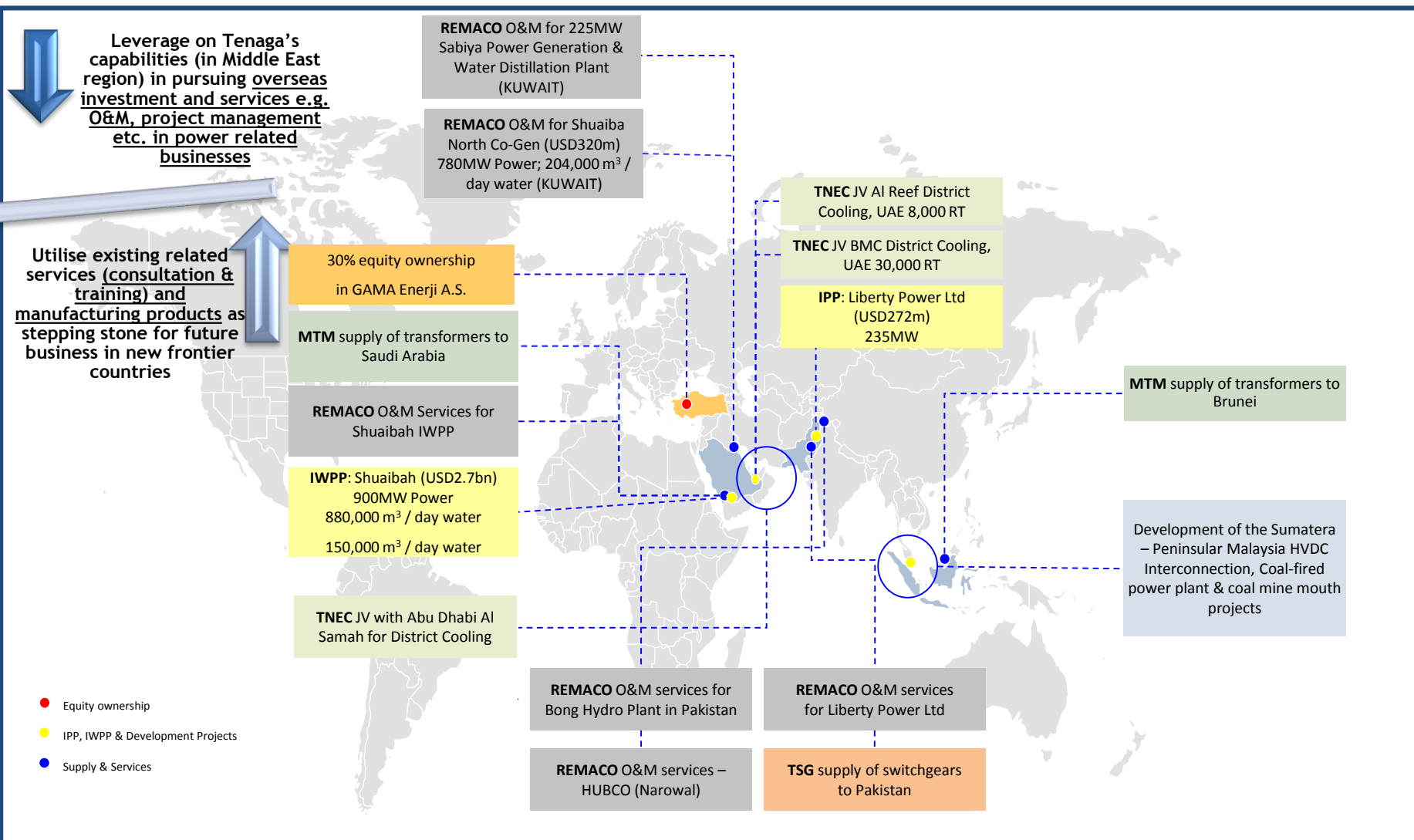
1. Global economic centre of gravity is shifting east and south from Europe towards Asia
2. 2.5 billion people will live in Asian cities by 2025
3. ~400 emerging market cities will generate 50% of global GDP growth in 2025
4. Emerging economies will grow 75% faster than developed nation by 2025

TNB direction



TNB is Positioning to Expand Into Key Growth Areas

TNB International Footprint in Energy Related Businesses



Note: REMACO is a 100% owned subsidiary with a focus on O&M; MTM is a wholly owned subsidiary manufacturing transformers; TSG is a subsidiary manufacturing high voltage switchgears; TNEC is a wholly owned subsidiary providing project services and developing energy related projects; ILSAS provides training & programs related to electricity supply sector for local and international participants.

2 KEY THEMES : TECHNOLOGY DISRUPTION

Growth drivers

Technological advancements will impact demand and create new business opportunities



Battery storage is emerging as the “new power plant” of the future

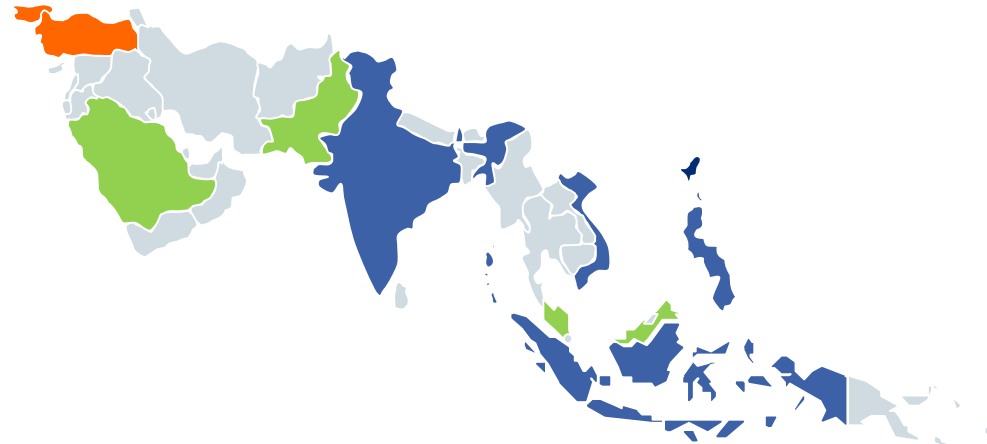


Large scale innovations in infrastructure (smart grid, metering, IoT)



Innovation technology (energy efficiency, analytics) will create market for integrated services

TNB direction



■ Countries of presence
■ Countries of interest
■ Countries under screening

Market Population: ~2.2 billion

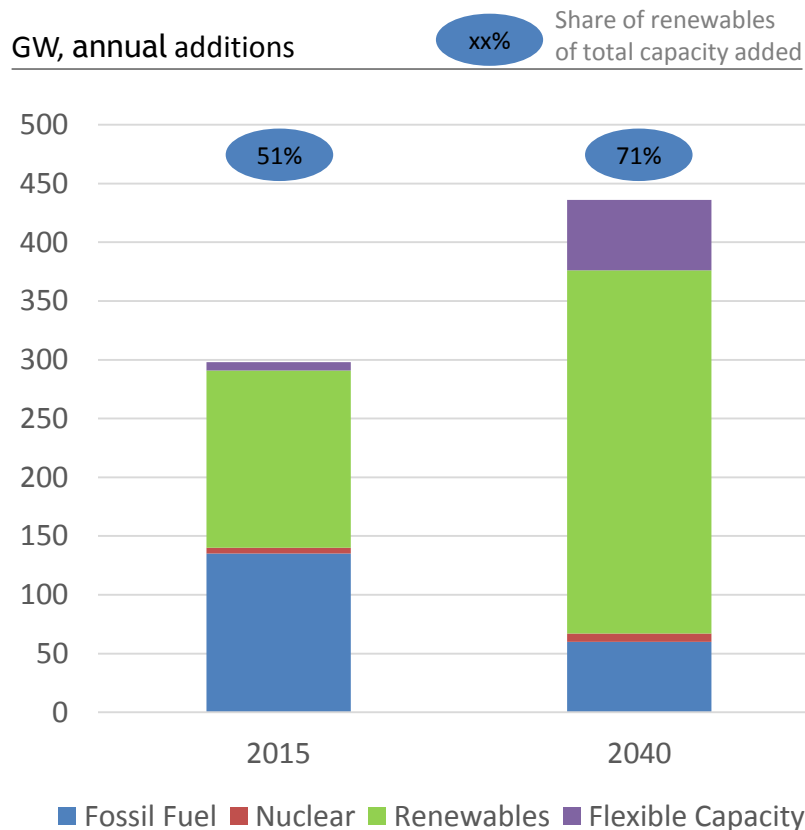
Technology Advancement Will Allow TNB to Further Unlock the Value of Our Potential Customers

3 KEY THEMES : RENEWABLE GENERATION

The Malaysian Government has Committed to COP21 Targets & Renewable Energy is Critical to Achieve This Effort

Growth drivers

Renewables will represent up to ~70% of new capacity additions globally by 2040...

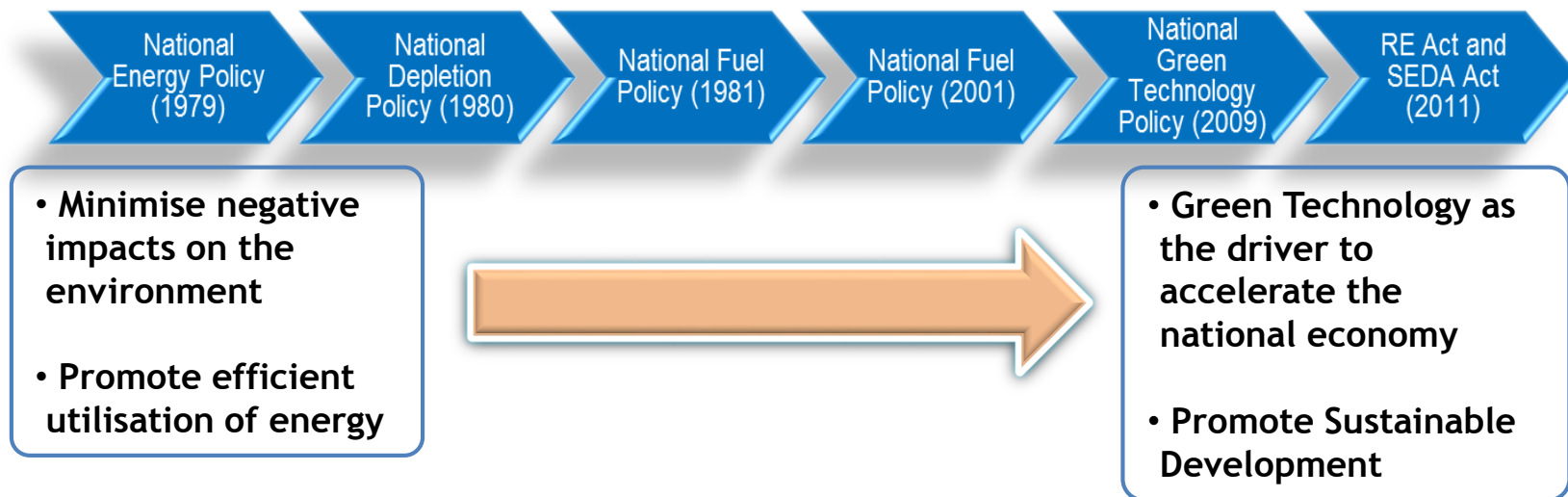


TNB direction

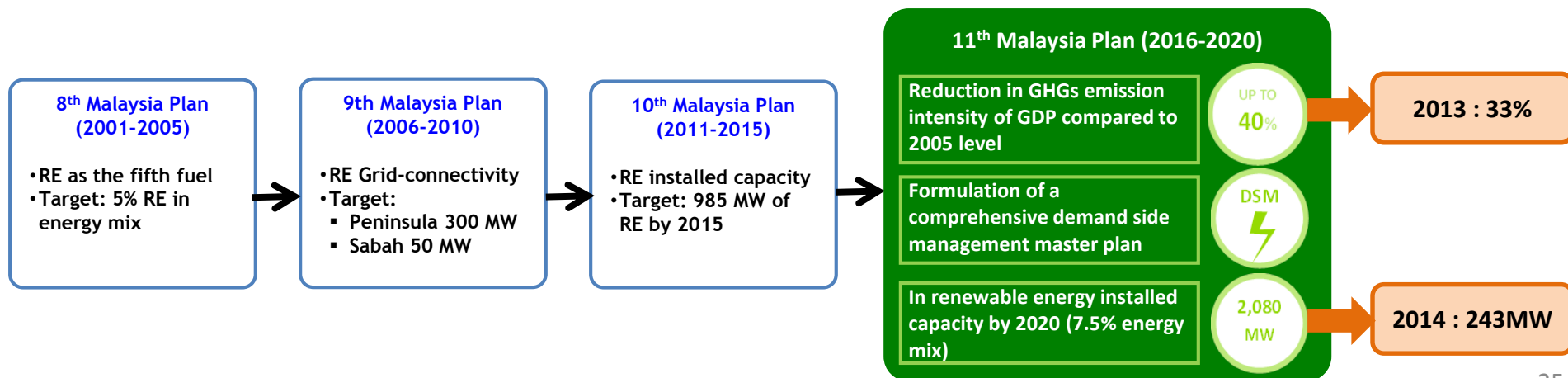
1. Malaysia is looking to add ~2GW of renewable generation by 2020
2. ASEAN region will require large investment in RE to deploy ~50GW of renewable generation by 2025
3. Tenaga Nasional is positioning to tap both its domestic market and the ASEAN regional market

Government Green Policy & Initiatives

Evolution on National Energy Policies



Government Green Development Plan



TNB Green Policy

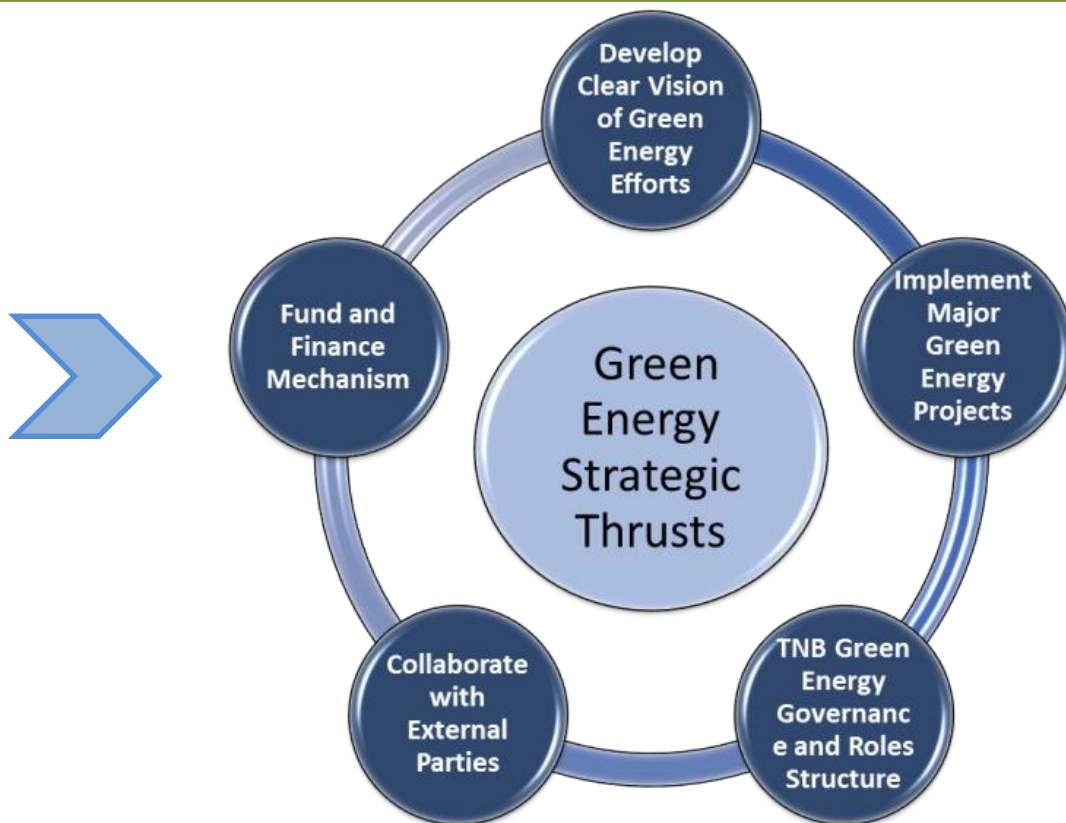
“TNB is committed to support the national green agenda and minimise the environmental impact of our business by applying sustainable, efficient operations and delivering green energy through the application of appropriate technologies and investments”

**TNB RE Targets
by 2020****Domestic**

- 60-80% of national targets by 2020 (1,248 -1,664 MW)

International

- In accordance to TNB Investment policy and guidelines on ventures, M&A and bidding for Green Energy Projects



TNB Green Initiatives

Major Green Projects

- 1) Ultra-supercritical technology for coal plants
 - 10% less CO₂ emission compared to conventional subcritical technology
- 2) Carbon footprint study - supply side (2012)
 - Preliminary assessment of Carbon Inventory for TNB Thermal Power Plants
 - Recommendation on the most suitable methodology of measuring Carbon Footprint for TNB power plants
- 3) R&D projects for enhancing power plants efficiency
- 4) Smart Grid (SG) Project
- 5) Various District Cooling (DCS) & Thermal Energy Storage (TES) projects

Renewable Energy Projects

- 1) Non FiT and Off-grid installation:
 - Solar Hybrid project
 - 850kW in RPS Kemar, Perak.
- 2) FiT projects:
 - JV project with Felda Global Ventures
 - 10MW Biomass (Jengka)
 - JV with Sime Darby
 - 2MW Biogas Hadapan Palm Oil Mill
 - 2MW Remington Palm Oil Mill
 - JV with Amcorp Power Sdn Bhd
 - 20MW Mini Hydro at Sg Liang, Pahang
 - Floating solar pilot project in Negeri Sembilan

Demand Side Management (DSM) Programs

- Special tariff rates for DCS & TES
- Thermal energy storage
- DSM study on Enhanced Time of Use (ETOU) & interruptible scheme
- Development of training & capacity building centres
- Pilot Electric Vehicles (EV) charging terminal

Energy Efficiency (EE) Programs

- Energy audits & power quality services by TNB Energy Services, a subsidiary of TNB
- Pilot Home Energy Report (HER) Programme
- TNB EE Managers Programs
- TNB EE campaigns
- TNB participation in EE awareness programs

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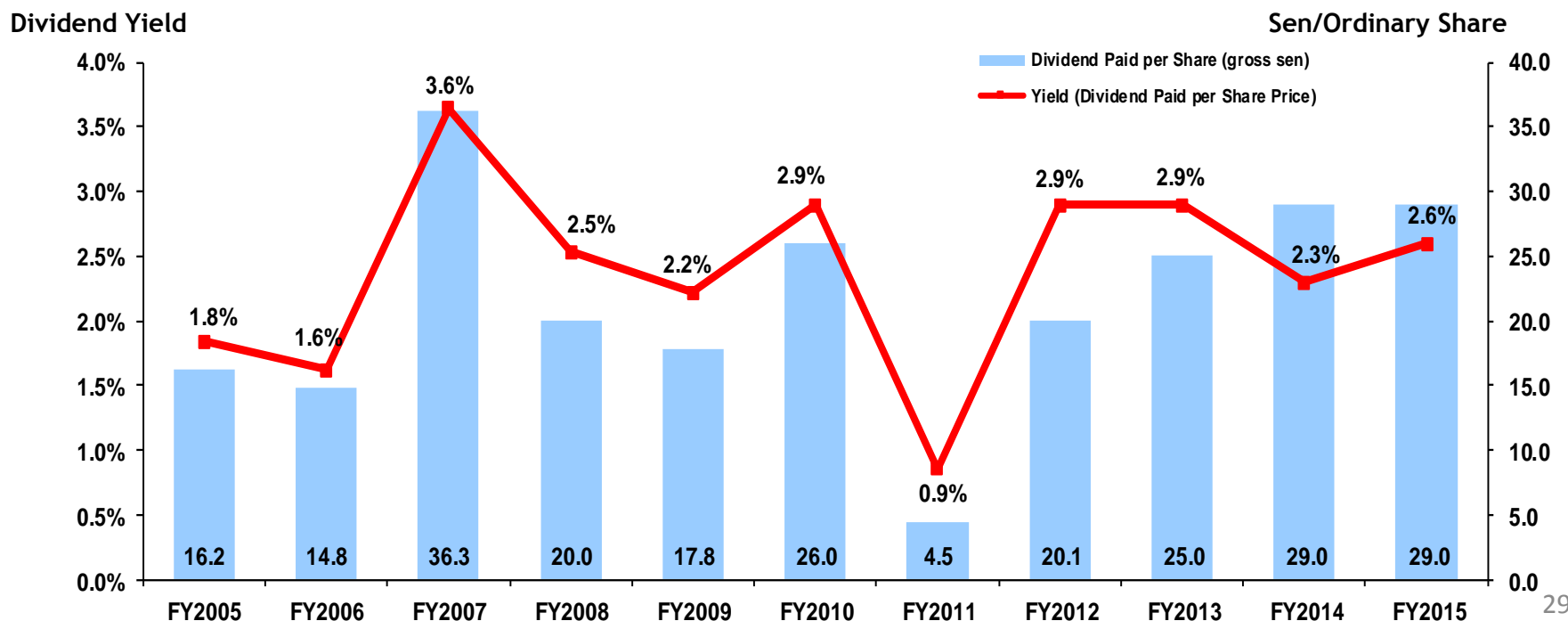
DIVIDEND

Policy and Yield

Tenaga is committed to pay out dividend based on its Dividend Policy whereby:
*Dividend is paid out based on **40%-60%** of its Company's Annual Free Cashflow;
 Cashflow from Operations less Normalised Capex and Interest Servicing*

1HFY2016

Interim Single-Tier Dividend
 of 10.0 sen per ordinary share



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ELECTRICITY GROWTH IN PENINSULA

4.5% Growth in Electricity Demand

UNITS SALES		FY2015				FY2016		
		1Q	2Q	3Q	4Q	1Q	2Q	3Q
Industrial	Gwh	10,973	10,976	10,761	11,009	11,101	10,820	10,604
	Growth (%)	3.1	1.6	1.7	0.1	1.2	(1.4)	(1.5)
Commercial	Gwh	9,018	8,860	8,990	9,361	9,369	9,404	9,804
	Growth (%)	3.4	3.1	1.4	2.0	3.9	6.1	9.1
Domestic	Gwh	5,538	5,338	5,775	6,121	5,886	5,981	6,700
	Growth (%)	3.0	2.1	4.1	2.5	6.3	12.0	16.0
Others	Gwh	496	493	462	483	490	497	494
	Growth (%)	6.9	5.6	(0.9)	0.6	(1.2)	0.8	6.9
Total	Gwh	26,025	25,667	25,988	26,974	26,846	26,702	27,602
	Growth (%)	3.3	2.3	2.1	1.3	3.2	4.0	6.2

FY'15
2.2%

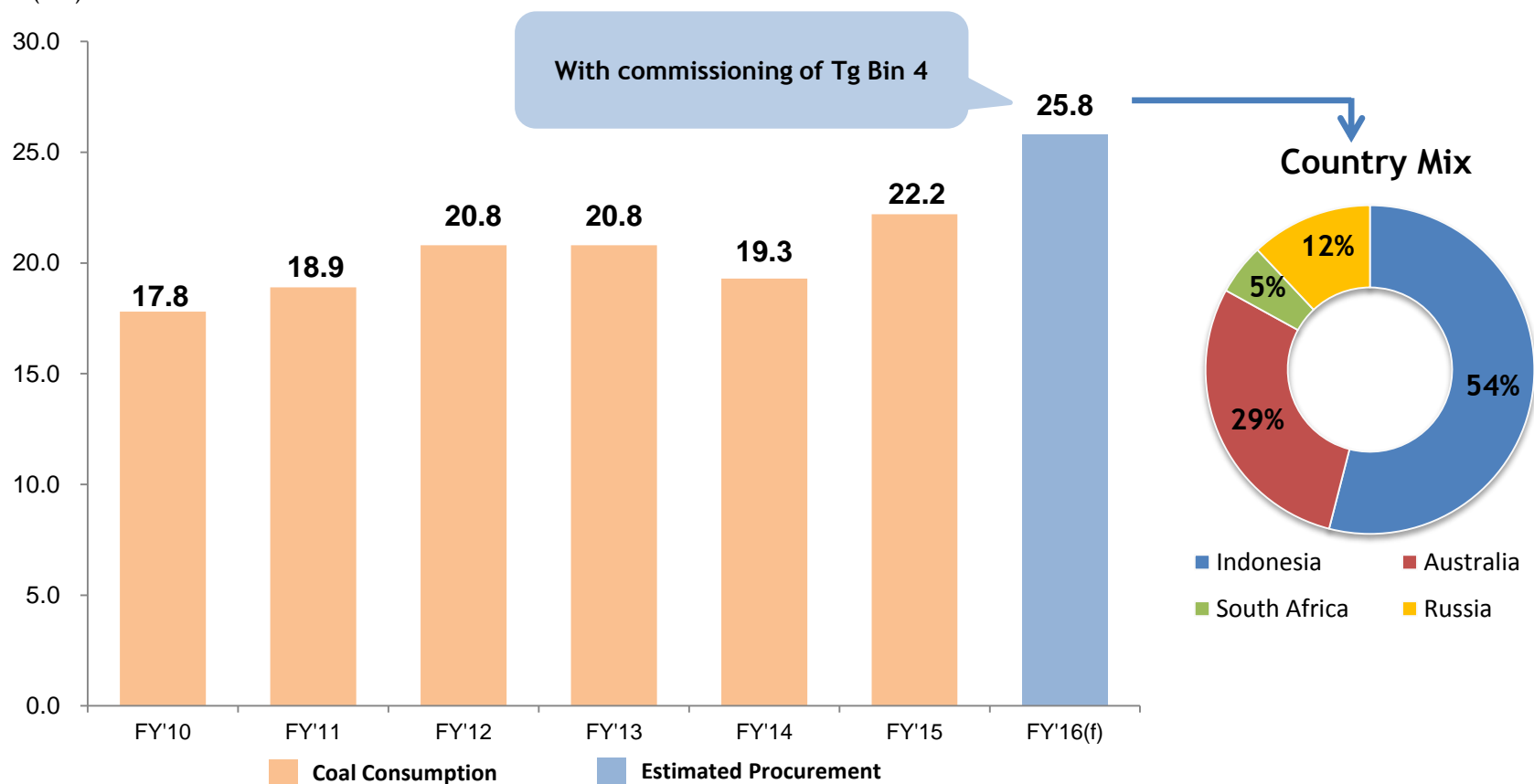
	9MFY'16	9MFY'15
Growth (%)	4.5	2.5

COAL REQUIREMENTS

Average Coal Price for 9MFY'16 was at USD56.2/MT @ RM234.7/MT

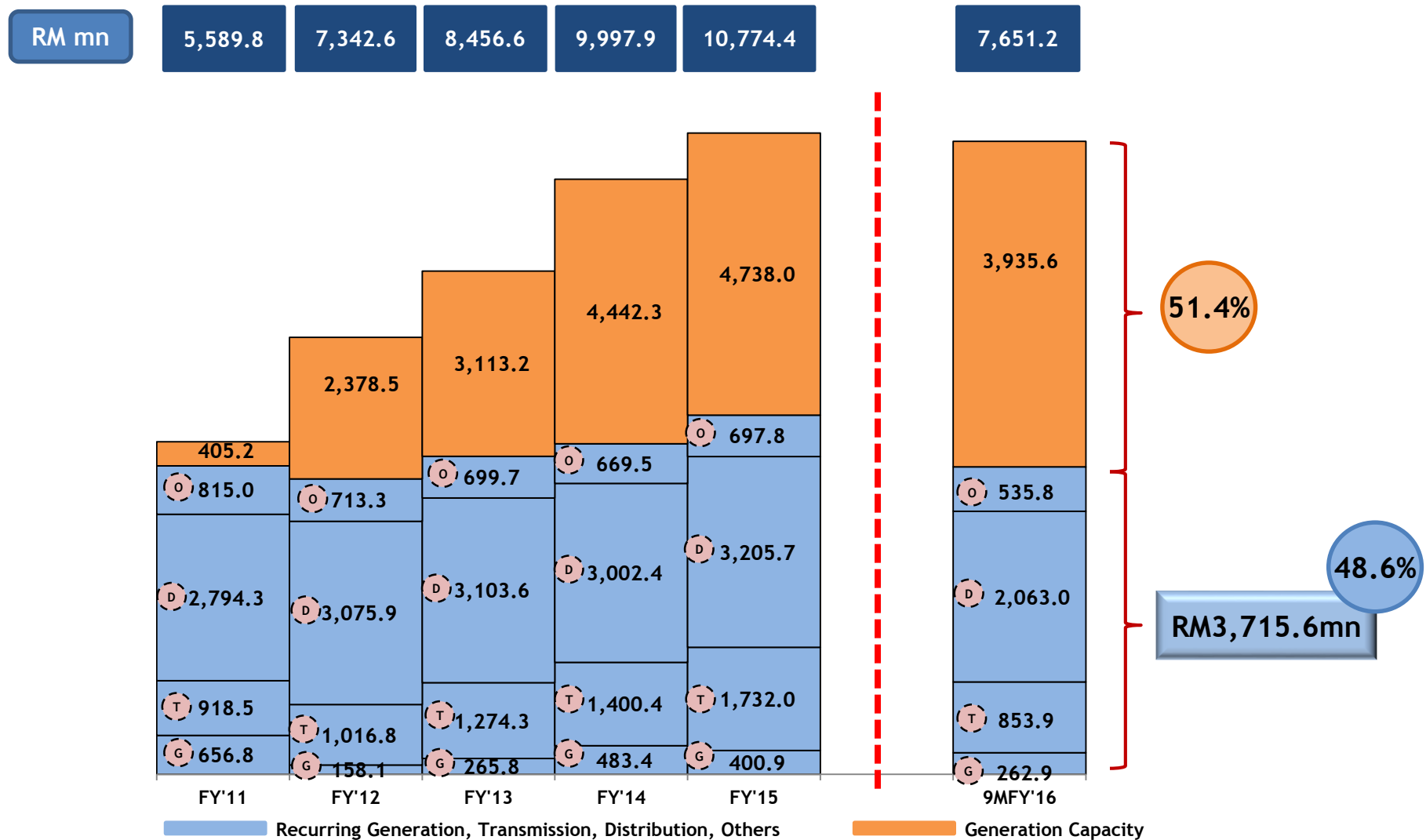
Average Coal Price (CIF)	FY'10	FY'11	FY'12	FY'13	FY'14	FY'15	9MFY'16
(USD/metric tonne)	88.2	106.9	103.6	83.6	75.4	66.0	56.2
(RM/metric tonne)	293.8	325.9	321.9	259.5	244.6	236.0	234.7

Tonne (mn)



CAPITAL EXPENDITURE

Major Projects Represent 51.4% of Total CAPEX



Janamanjung Unit 5

93%

1,000MW

COD Oct 2017

Hulu Terengganu Hydro (265MW)

COMPLETED

250MW

COD Dec 2015 (U1 & U2)

Tembat

15MW

*Aug 2016 (U3)
Sep 2016 (U4)*

97%

Connaught Bridge

COMPLETED

385MW

COD 27th Feb 2016

Jimah East Power

17%

2,000MW

*COD
Jun 2019 (U1)
Dec 2019 (U2)*

Ulu Jelai Hydro

98%

372MW

*COD
Jul 2016 (U1)
Sep 2016 (U2)*

Prai

COMPLETED

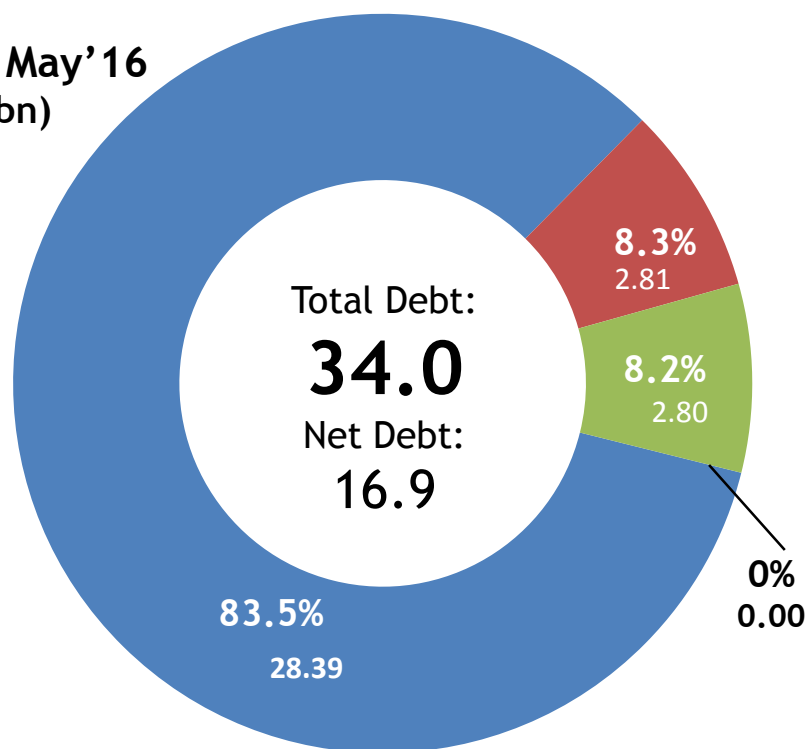
1,071MW

COD 20th Feb 2016

DEBT EXPOSURE & GEARING

Higher Debt due to Sukuk Issuance for Jimah East Power of RM8.98bn

31st May'16
(RM bn)



■ RM ■ YEN ■ USD ■ Others

“The Group is required to hedge a minimum of 50.0% of TNB’s known foreign currency exposure up to 12 months period. The Group uses forward exchange contracts and currency options contract to hedge its foreign currency risk. Most of the forward exchange contracts have maturities of less than three months”

HEDGING POLICY

Statistics	31st May'16	31st Aug'15
Gearing (%)	39.9	34.2
Net Gearing (%)	19.9	21.9
Fixed : Floating (%)	96.8 : 3.2	100.0 : 0.0
Final Exposure (%)	96.8 : 3.2	100.0 : 0.0
Weighted Average Cost of Debt (%)	5.09	4.80
Final Exposure (%)	5.09	4.80

Closing	31 st May'16	31 st Aug'15
USD/RM	4.13	4.19
100YEN/RM	3.73	3.47
USD/YEN	110.72	120.75

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

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THANK YOU