

TNB HANDBOOK

NON DEAL ROADSHOW, EUROPE

23rd - 27th JUNE 2014

Deutsche Bank



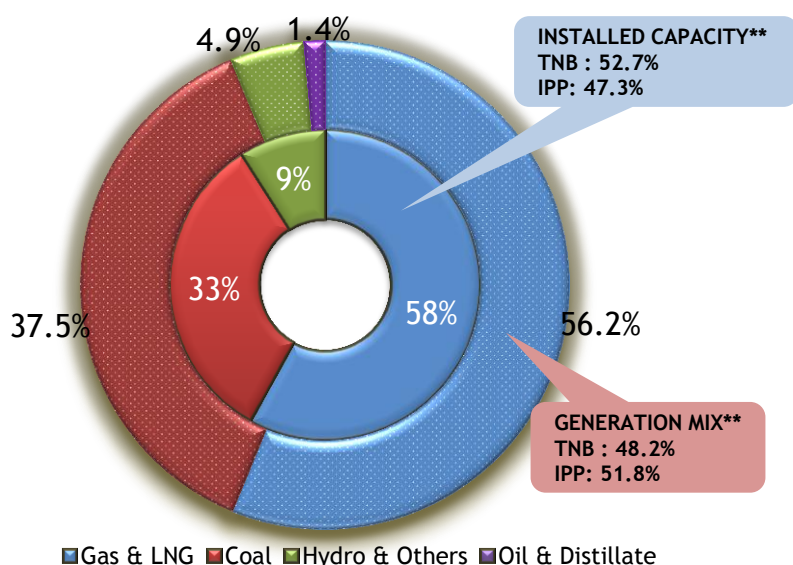
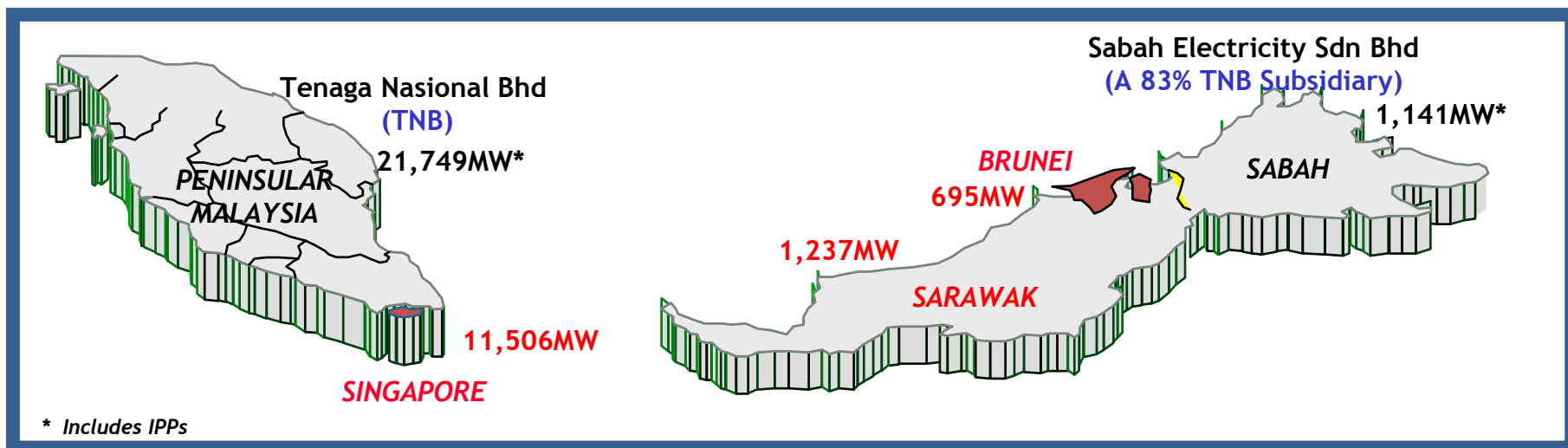
1HFY'14

PART ONE

1. INTRODUCTION TO TENAGA
2. INTRODUCTION TO MESI
3. TARIFF
4. KEY PERFORMANCE INDICATORS (KPIs)
5. BUSINESS STRATEGY & DIRECTION
6. DIVIDEND POLICY
7. OUTLOOK

INTRODUCTION TO TENAGA

Three Major Utilities in Malaysia



	FY'10	FY'11	FY'12	FY'13	1HFY'14
TNB - Peninsula Installed Capacity (MW)	11,530	11,530	11,462	11,462	11,462
Total units sold (Gwh)	95,197	97,888	102,132	105,479	52,975
Total customers (million)	7.87	8.11	8.36	8.35	8.49
Total employees	30,535	31,935	33,568	34,972	35,543
Total assets (RM billion)	75.9	79.1	88.5	99.0	104.7

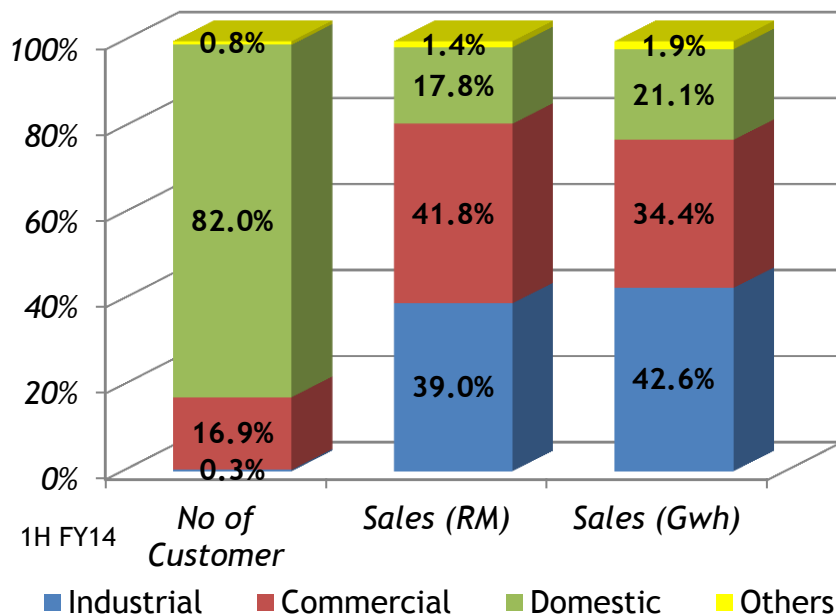
■ Gas & LNG ■ Coal ■ Hydro & Others ■ Oil & Distillate

Installed Capacity vs. Generation mix

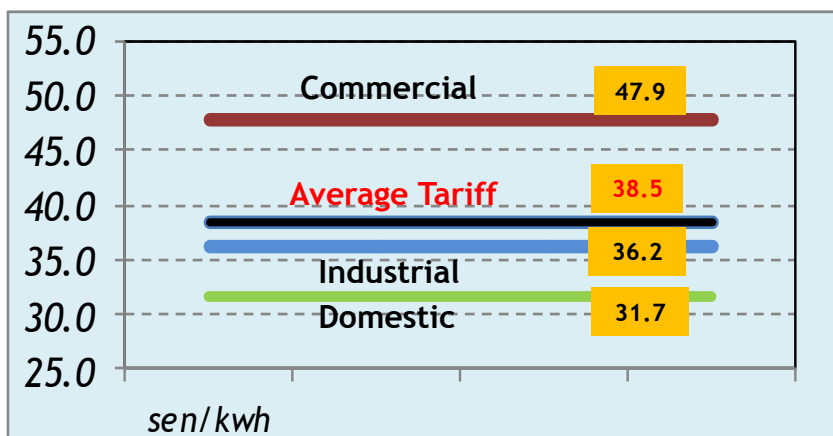
1HFY14**

INTRODUCTION TO TENAGA

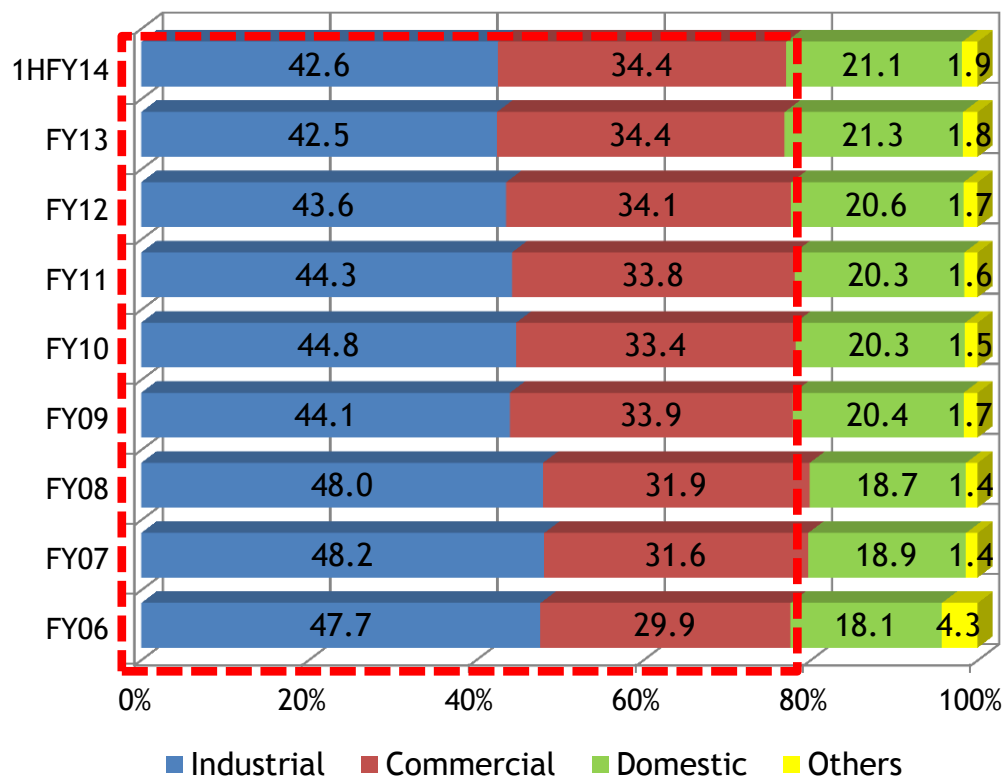
No of Customer vs. Sales Value vs. Unit Sales



Average Tariff by Sector



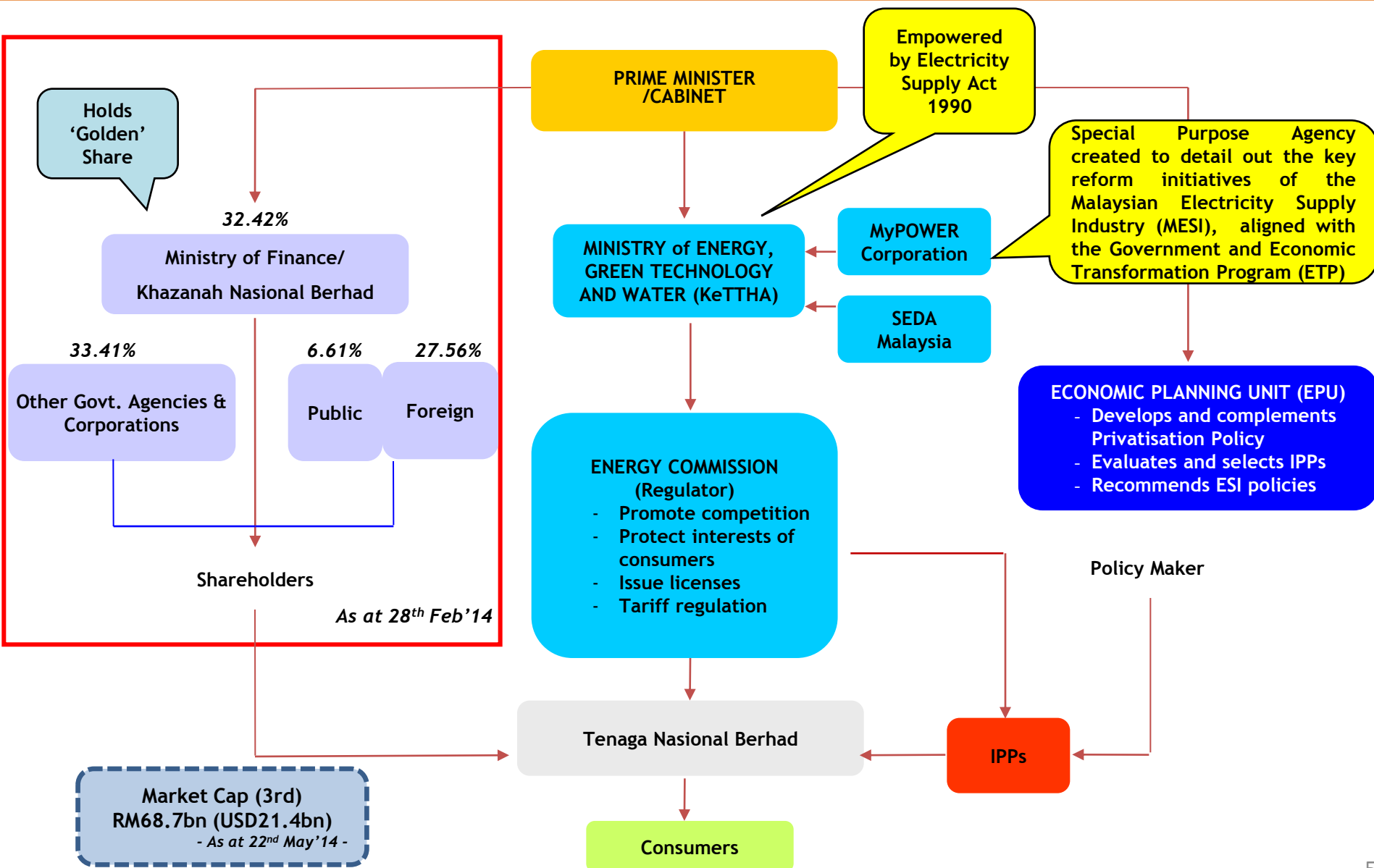
Sectoral Sales Analysis (Gwh)



- 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

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

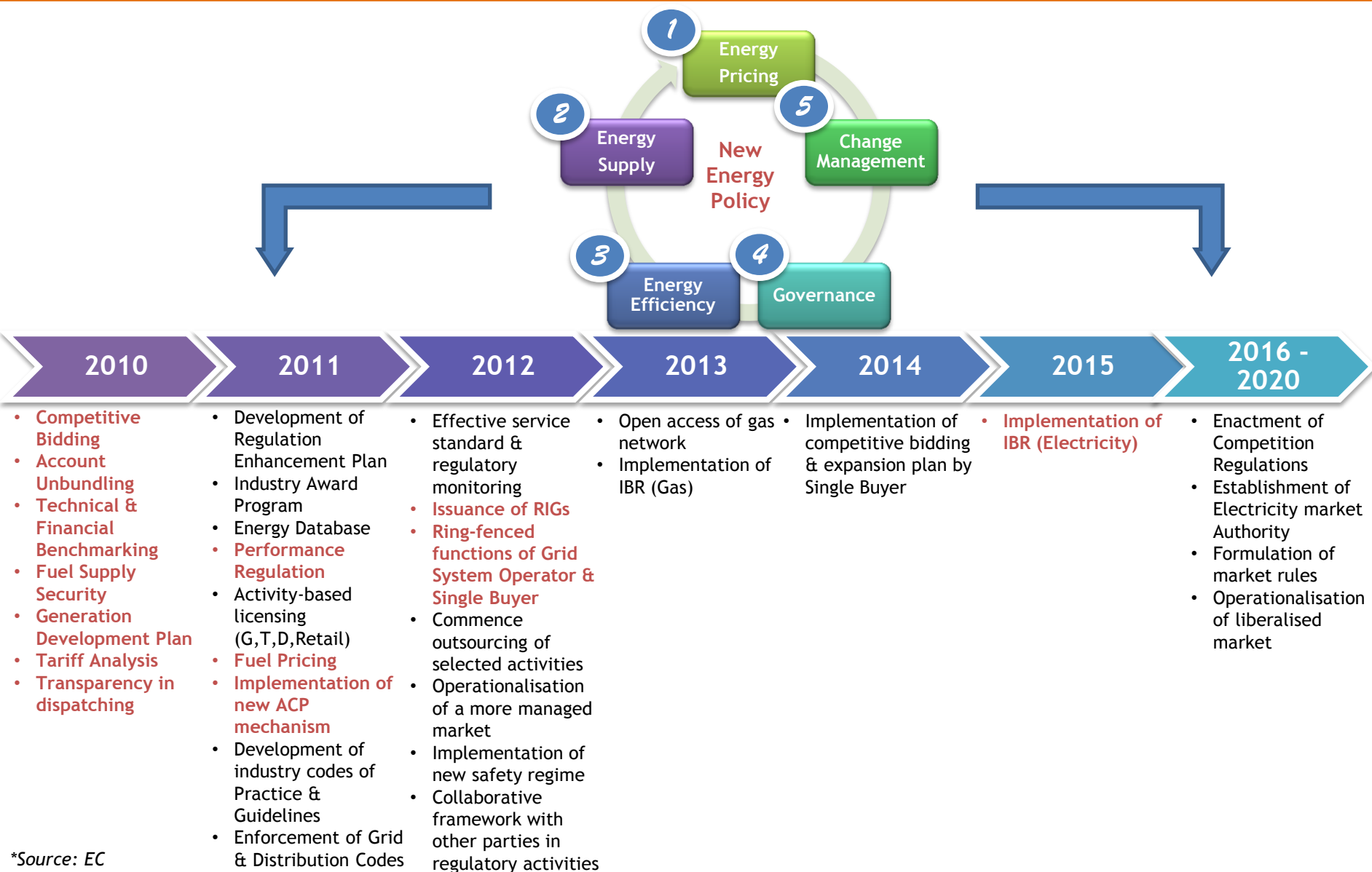
National RE
Policy & Action
Plan

FIT & RE Fund

Legal &
Regulatory
Framework
Enhancement

TRANSFORMATION PLAN : TIMELINE

The New Energy Policy Addresses, Economic Efficiency, Security of Supply and Social & Environmental Objectives



1 ENERGY PRICING - COMPETITIVE BIDDING

1

TRACK 1	1071 MW CCGT PRAI
COD	January 2016
LEVELISED TARIFF	34.7 sen/kWh
STATUS	<p>TNB has signed agreements for:</p> <ul style="list-style-type: none"> i. EPC - TNB Northern Energy Bhd & Samsung Engineering & Construction (M) Sdn Bhd ii. Long term Service - TNB Prai & Siemens AG iii. O&M - TNB Prai & REMACO <p>Notice to Proceed (NTP) issued on 2 May 2013</p>

2

TRACK 2	RENEWAL OF EXPIRING PLANTS : 2253 MW CCGT		
PLANTS	GENTING	SEGARI	TNB PASIR GUDANG
EXTENSION	10 years (to 2026)	10 years (to 2027)	5 years (to 2022)
LEVELISED TARIFF	35.3 sen/kWh	36.3 sen/kWh	37.4 sen/kWh
STATUS	Reduction rates of CP effective 1 March 2013 until expiry of current PPA		

3

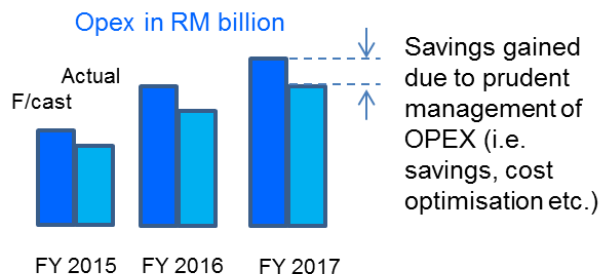
TRACK 3A	1 X 1000 MW COAL-FIRED
COD	October 2017
STATUS	<p>TNB has signed agreements on 16/8/13 for:</p> <ul style="list-style-type: none"> i. PPA with TNB Manjung Five Sdn Bhd "Manjung 5" to design, construct, own, operate & maintain the coal plant capacity (25 years term) ii. SFA "Shared Facilities Agreement" between TNB, Manjung 5 & TNB Janamanjung iii. CSTA "Coal Supply and Transportation Agreement" between TNB Fuel Services & Manjung 5. <p>EPC contract signed on 21/8/13 between: TNB Western Energy Bhd; a wholly owned subsidiary of Manjung 5 with Consortium of Sumitomo Corp, Daelim Industrial Co Ltd, Sumi-Power M'sia Sdn Bhd and Daelim M'sia Sdn Bhd.</p> <p>TNB Western Energy Sukuk has been issued out on 30th January 2014 for nominal value of RM3.655 billion.</p>
TECHNOLOGY	Ultra Super Critical Boiler Technology OEM to EPC is Hitachi

4

TRACK 3B	2 X 1000 MW COAL-FIRED
COD	October 2018 & April 2019
LEVELISED TARIFF	25.33 sen/kWh
STATUS	<ul style="list-style-type: none"> i. On 28/2/14, the Energy Commission has selected the Consortium of 1Malaysia Development Berhad - Mitsui Co.Ltd to build, own and operate a coal-fired power plant. ii. 2 units of IHI Ultra Super Critical Technology Steam Generator & 2 Units of Toshiba Turbo Generator.

3 + 4 EFFICIENCY AND GOVERNANCE

Incentive Based Regulation (IBR) - Economic Regulation Methodology to Promote Efficiency And Transparency



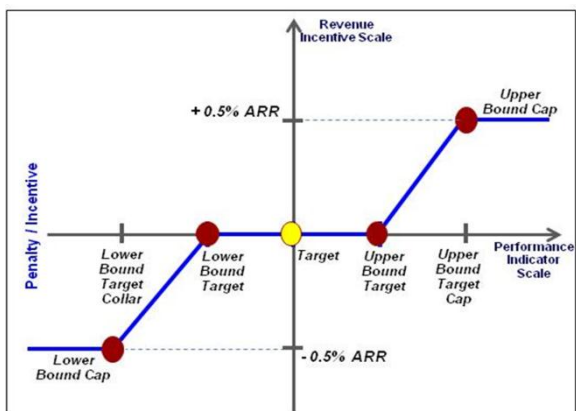
Operational Efficiencies

- 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) - The Move Towards Better Regulation

IBR mechanism to strengthen the following:

 The Economic Regulatory Framework for Regulating TNB

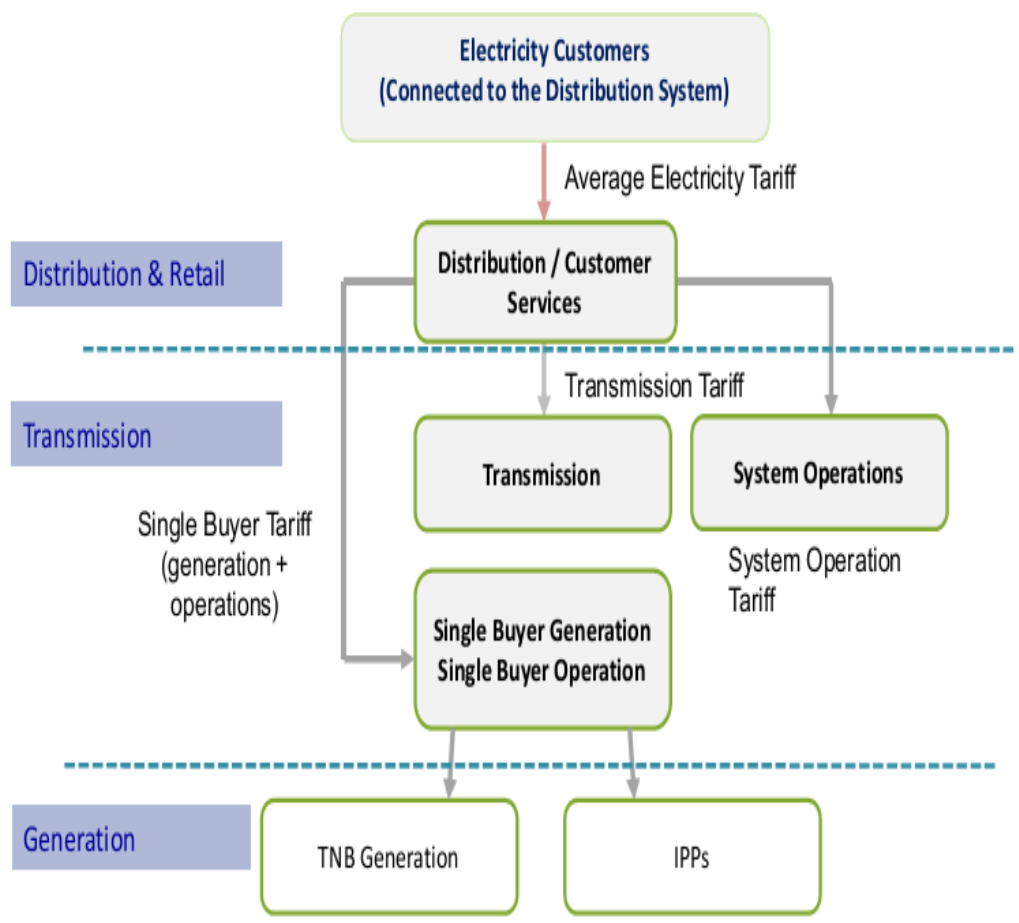
 The Tariff Setting Mechanism and Principles for Tariff Design

 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

*Source: EC

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3. **TARIFF**
4. KEY PERFORMANCE INDICATORS (KPIs)
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TARIFF

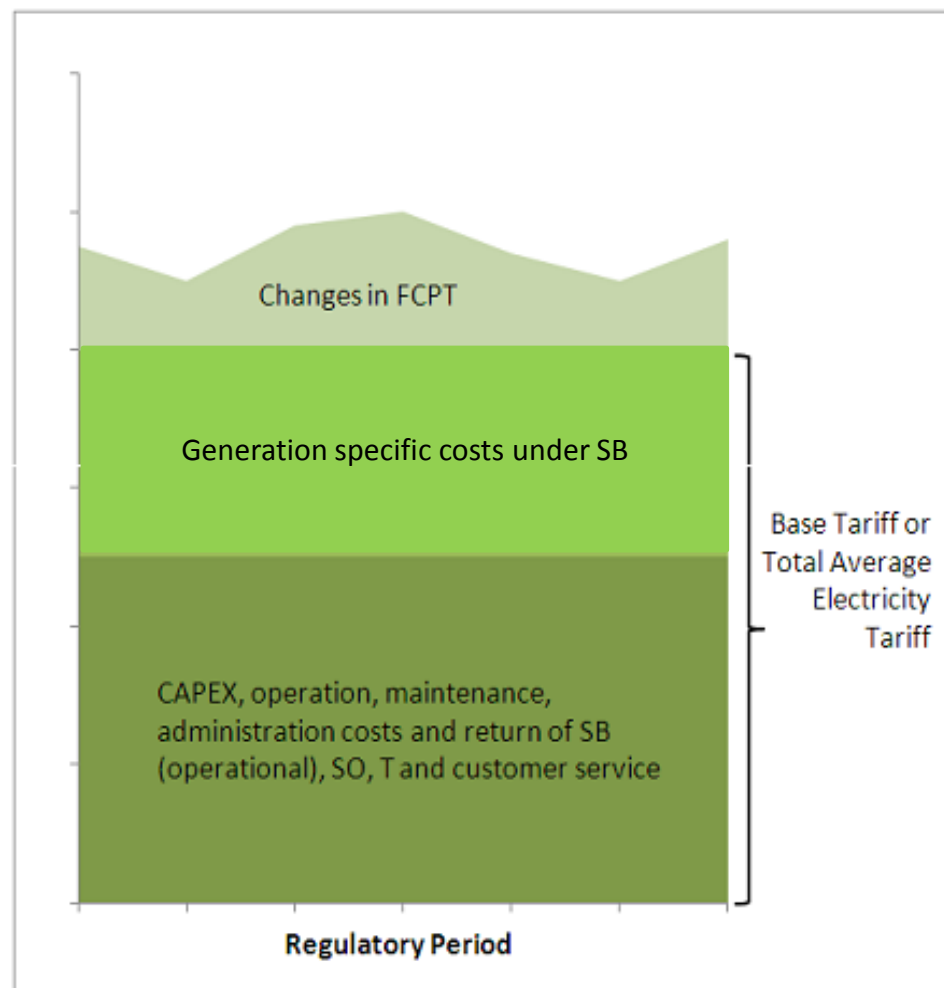
Electricity Tariff Review = Base Tariff + Imbalance Cost Pass-Through (ICPT)

Base Tariff is set to reflect:

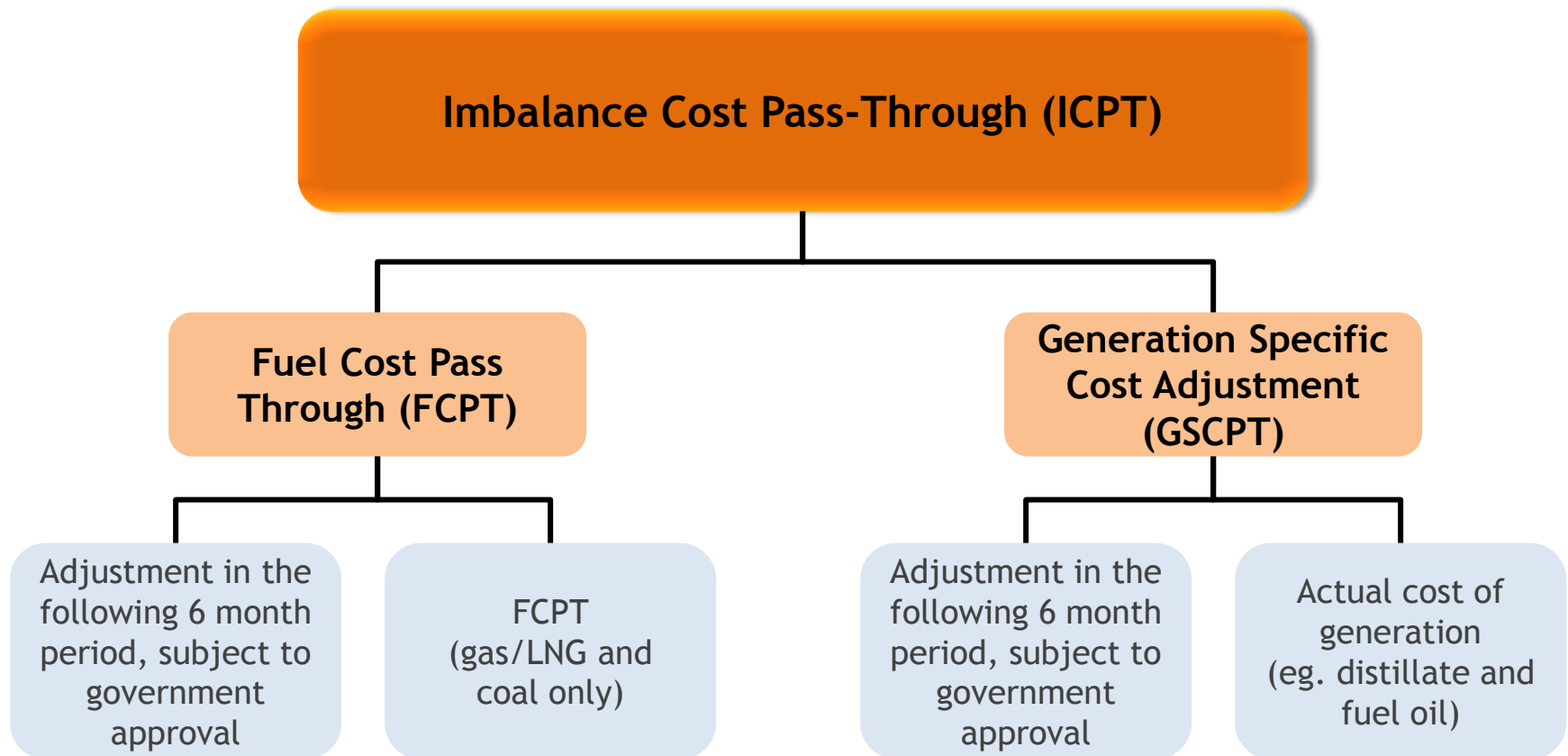
- the construction cost of transmission and distribution system;
- Base fuel and purchasing cost;
- Operation, maintenance and administration costs;
- with certain assumptions related to fuel prices, inflation rates (or CPI), exchange rates.

ICPT:

- adjustment to reflect the change in uncontrollable costs from Base Tariff i.e change in fuel and purchasing cost



Imbalance Cost Pass-Through (ICPT) Comprises Two Components

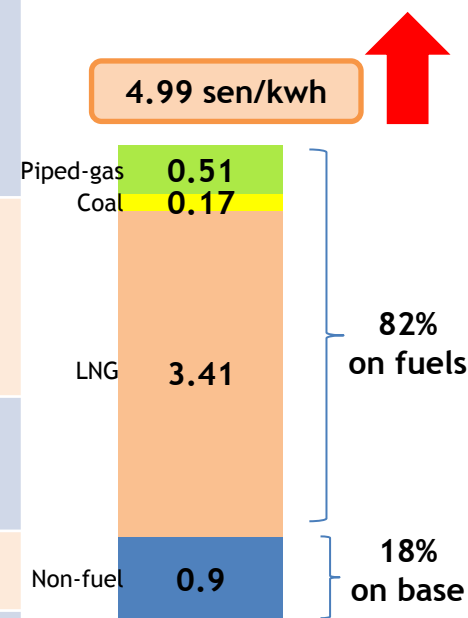


TARIFF

New Tariff of 38.53 sen/kwh is Effective from 1 January 2014

Average electricity tariff rate in Peninsular Malaysia is increased by **4.99 sen/kWh (14.89%)** from 33.54 sen/kWh to 38.53 sen/kWh, from 1st January 2014, to cover:

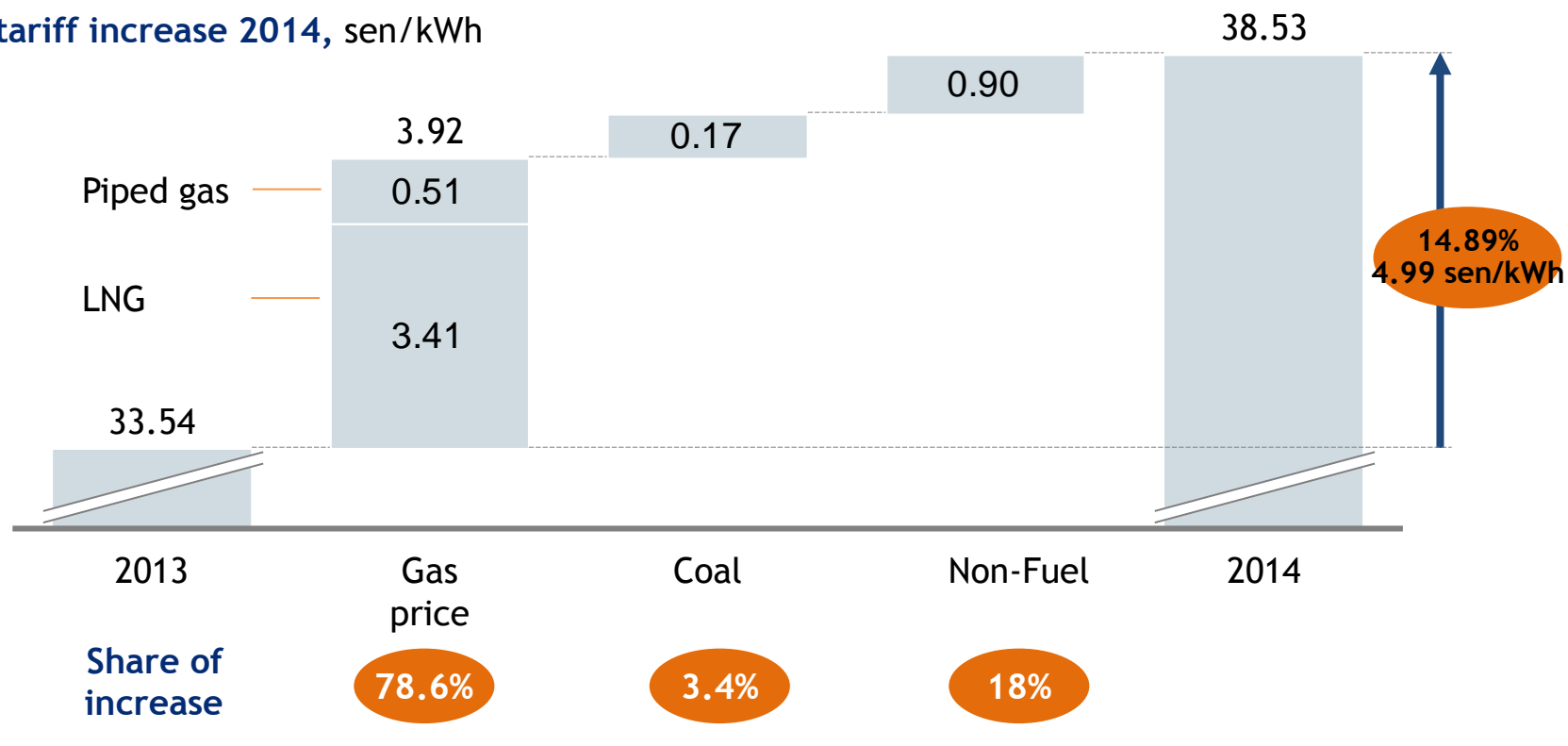
Tariff Components	sen/kWh	% increase
Current Overall Average Tariff	33.54	
Fuel Components:		
<ul style="list-style-type: none"> Piped-gas regulated price (from RM13.70/mmBTU to RM15.20/mmBTU @1,000 mmscfd) 	0.51	1.52
<ul style="list-style-type: none"> Coal (market price) (from USD85/tonne to USD87.5/tonne CIF@CV 5500kcal/kg) 	0.17	0.51
<ul style="list-style-type: none"> LNG RGT market price at RM41.68/mmBTU (for gas volume > 1000 mmscfd) 	3.41	10.17
Non-fuel component (TNB Base Tariff)	0.90	2.69
NEW AVERAGE TARIFF	38.53	14.89



TARIFF

79% of the Tariff Increase in January 2014 is due to Removal of Gas Subsidies and Introduction of LNG at Market Price

Source of tariff increase 2014, sen/kWh

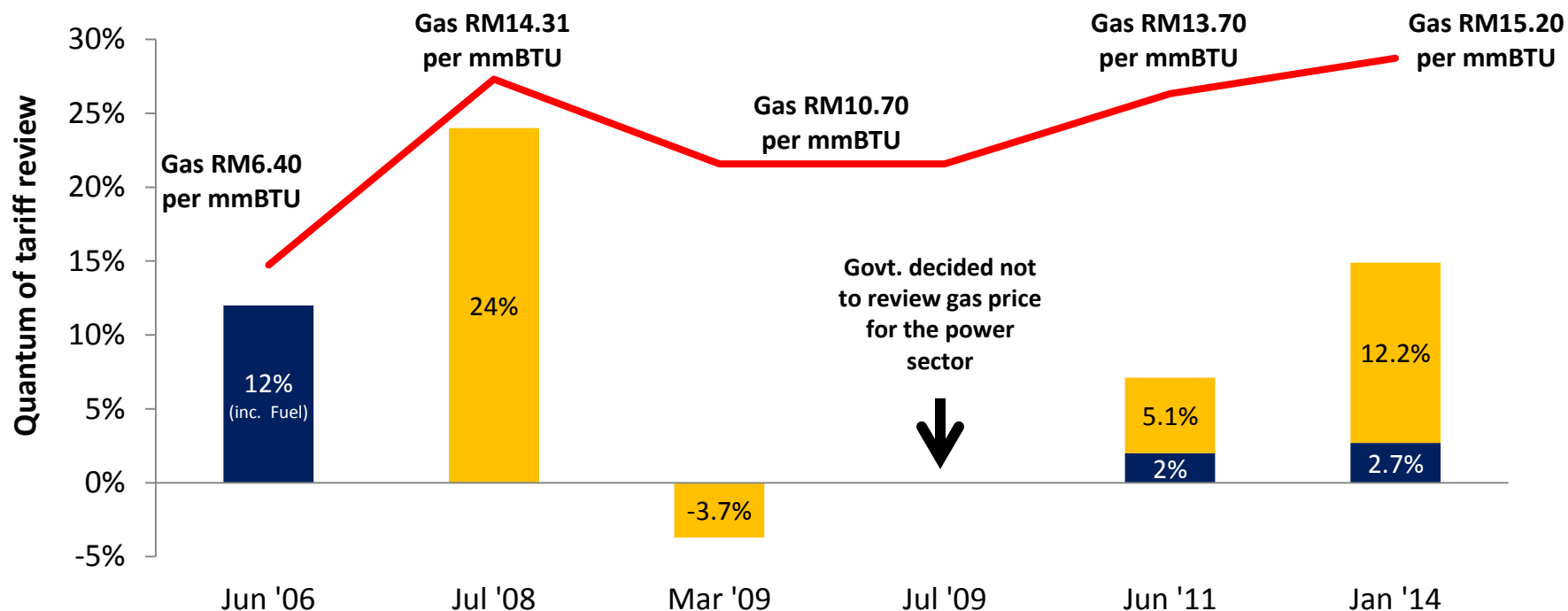


- LNG: 41.68 RM /mmBTU
- Piped gas: increased to RM15.20/mmBTU from RM13.70/mmBTU
- Increased to USD 87.50/tonne from USD 85/tonne
- To account for capex and opex growth

TARIFF

Frequency of Review & Underlying Assumptions

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



* Forex (RM/USD) = RM3.6

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

■ Base tariff adjustment

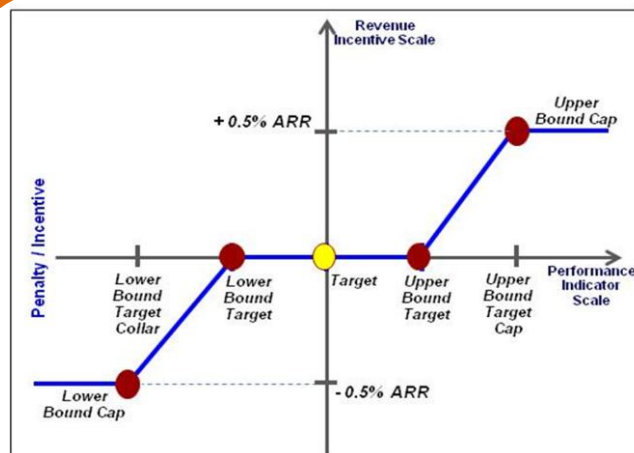
■ Fuel adjustment

— Gas price

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KEY PERFORMANCE INDICATORS (KPIs)

Incentive Based Regulation (IBR) - Incentive and Penalty Mechanism Based on Performance Targets Determined by EC



- Incentive/penalty is capped at +/- 0.3% to 0.5% of annual revenue requirement
- No incentive/penalty if performance between upper and lower bound targets
- Any incentive/penalty to be given in the next regulatory period



PERFORMANCE KPIs

Code	Performance Incentive Scheme	Unit	Weightage (%)	Lower Bound Target	Upper Bound Target
Customer Services					
CSPI1	System Average Interruption Duration Index (SAIDI)	Mins./cust./year	50	70	55
CSPI2	Average of Minimum Service Level Compliance Performance	%	25	84.11	94.11
CSPI3	Weighted Average Guaranteed Service Level (3, 4 and 5)	%	25	86.32	95.50
Transmission					
TXPI1	System Minutes	Minutes	40	5.1	1.5
TXPI2	System Availability	%	30	99.04	99.48
TXPI3	Project Delivery Index	Delayed month	30	5.47	0
System Operator					
SOP11	Wide Area Loss of Supply Event	No. of wide area system blackout incident	25	1	0
SOP12.1	Voltage Limit Compliance	%	25	90	96
SOP12.2	Frequency Limit Compliance	%	25	90	96
SOP13	Dispatch Adjustment	%	25	0.4	0.2
Single Buyer					
SBPI1	Dispatch Deviation	%	25	0.4	0.2
SBPI2	Compliance to Timely Settlement of Generators' Invoices	%	25	99.55	99.85
SBPI3	Compliance to Malaysian Grid Code	%	25	98.10	100
SBPI4	Compliance to Single Buyer Rules	%	25	95.00	100

*Source: EC

KEY PERFORMANCE INDICATORS (KPIs)

TNB Has Been Improving its Performances Over the Years and Now in Line with World Standards

		1 ST PHASE : HEADLINE KPIs						
INITIATIVES		TARGET FY'10	ACTUAL FY'05	ACTUAL FY'06	ACTUAL FY'07	ACTUAL FY'08	ACTUAL FY'09	ACTUAL FY'10
Financial Indicators	Return on Assets (ROA) (%)	6.5	2.2	3.3	6.3	4.6	4.0	4.7
	Gearing (%)	< 60.0	64.9	58.1	49.9	46.9	46.5	42.5
	Company CPU (sen/kwh)							
	Revenue from Non-Regulated Business (RM bn)							
Technical Indicators	Unplanned Outage Rate (UOR)(%)	No target	6.1	4.7	2.2	3.3	2.9	2.7
	T & D Losses (%)	No target	10.5	11.0	10.0	9.5	9.7	9.5
	Transmission System Minutes (mins)	9.0	14.0	7.3	9.3	6.6	1.0	0.9
	Distribution SAIDI (mins)	< 100.0	148.0	101.6	83.0	78.0	68.6	65.0

Note:



Not track as TNB Headline KPI

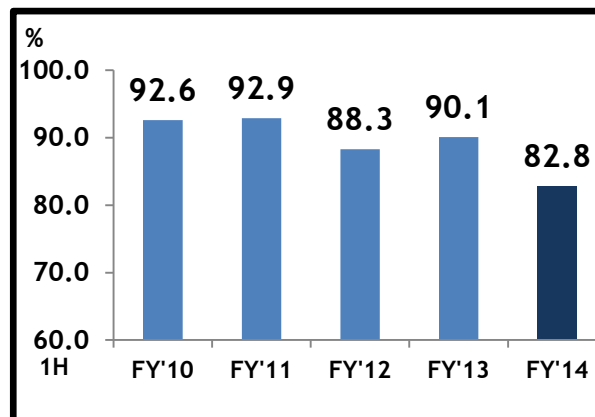
KEY PERFORMANCE INDICATORS (KPIs)

Continuous Monitoring of Performance Targets

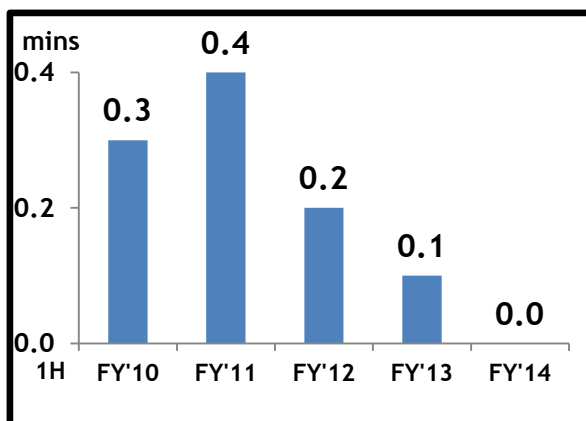
2nd PHASE : HEADLINE KPIs

Technical Indicators

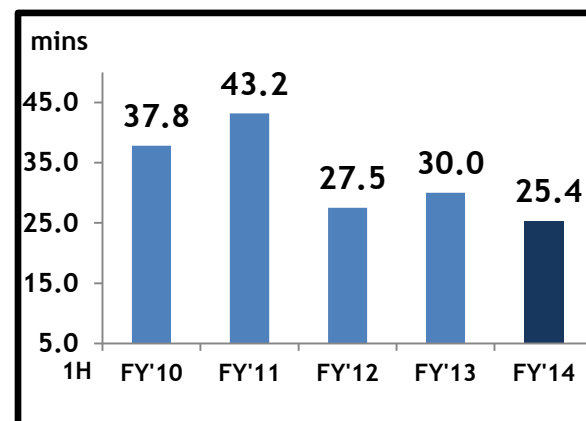
1 Equivalent Plant Availability Factor (EAF) (%)



2 Transmission System Minutes (mins)



3 Distribution SAIDI (mins)



KEY PERFORMANCE INDICATORS (KPIs)

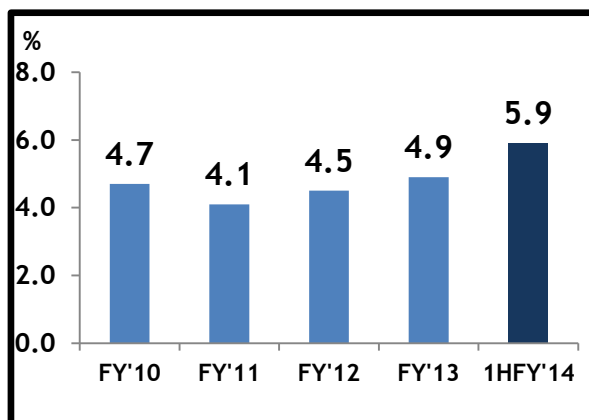
Continuous Monitoring of Performance Targets

2nd PHASE : HEADLINE KPIs

Financial Indicators

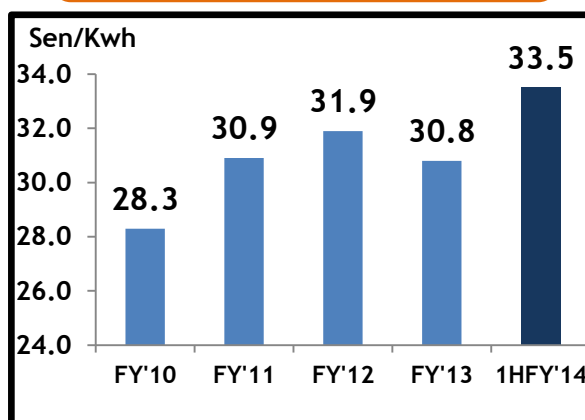
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Return on Assets (ROA)(%)



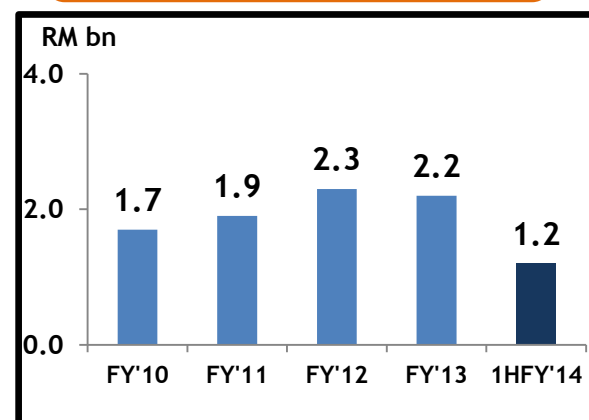
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Company CPU (sen/kwh)



3

Revenue from Non-Regulated Business (RM bn)

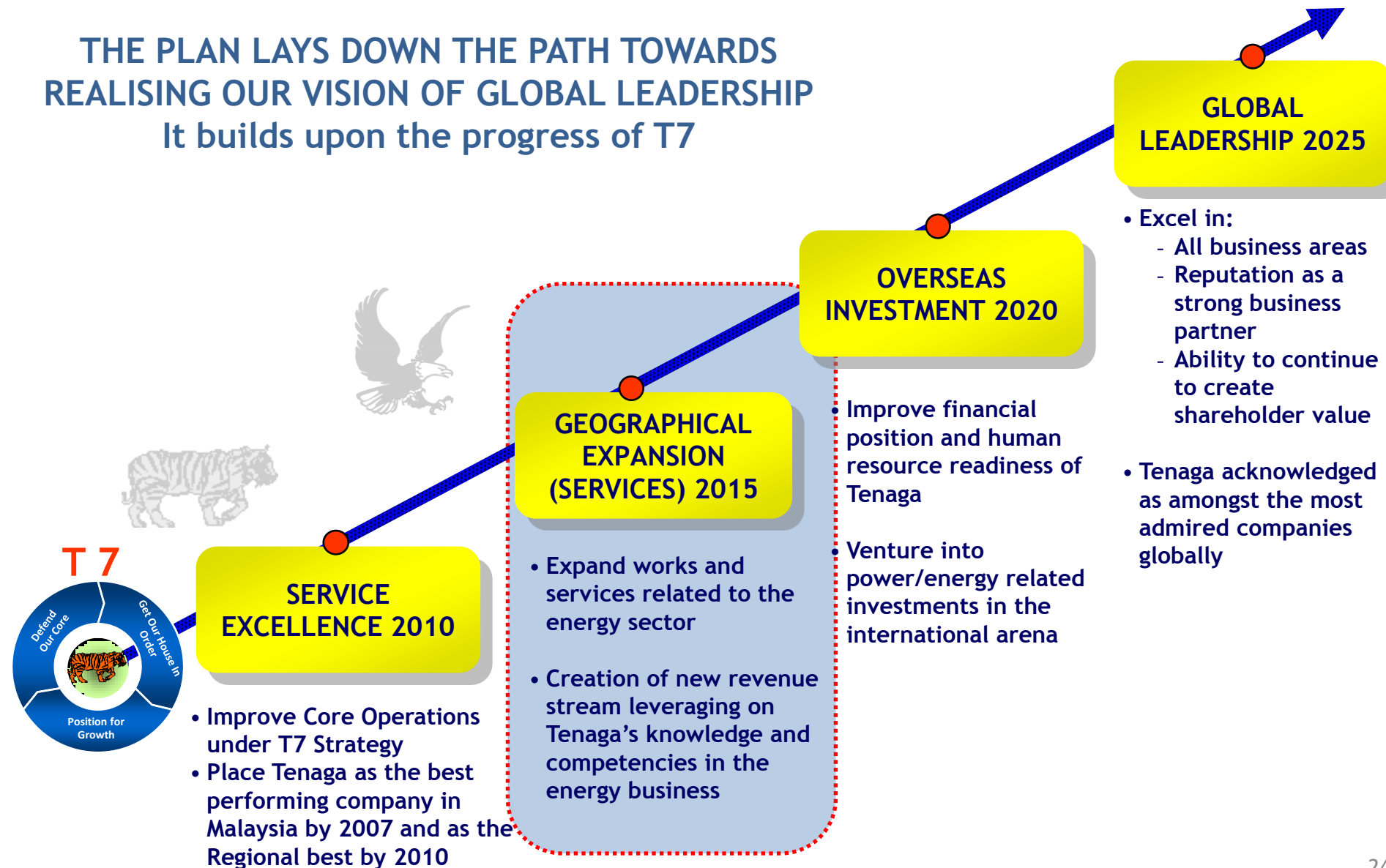


*not restated ('10-'11)

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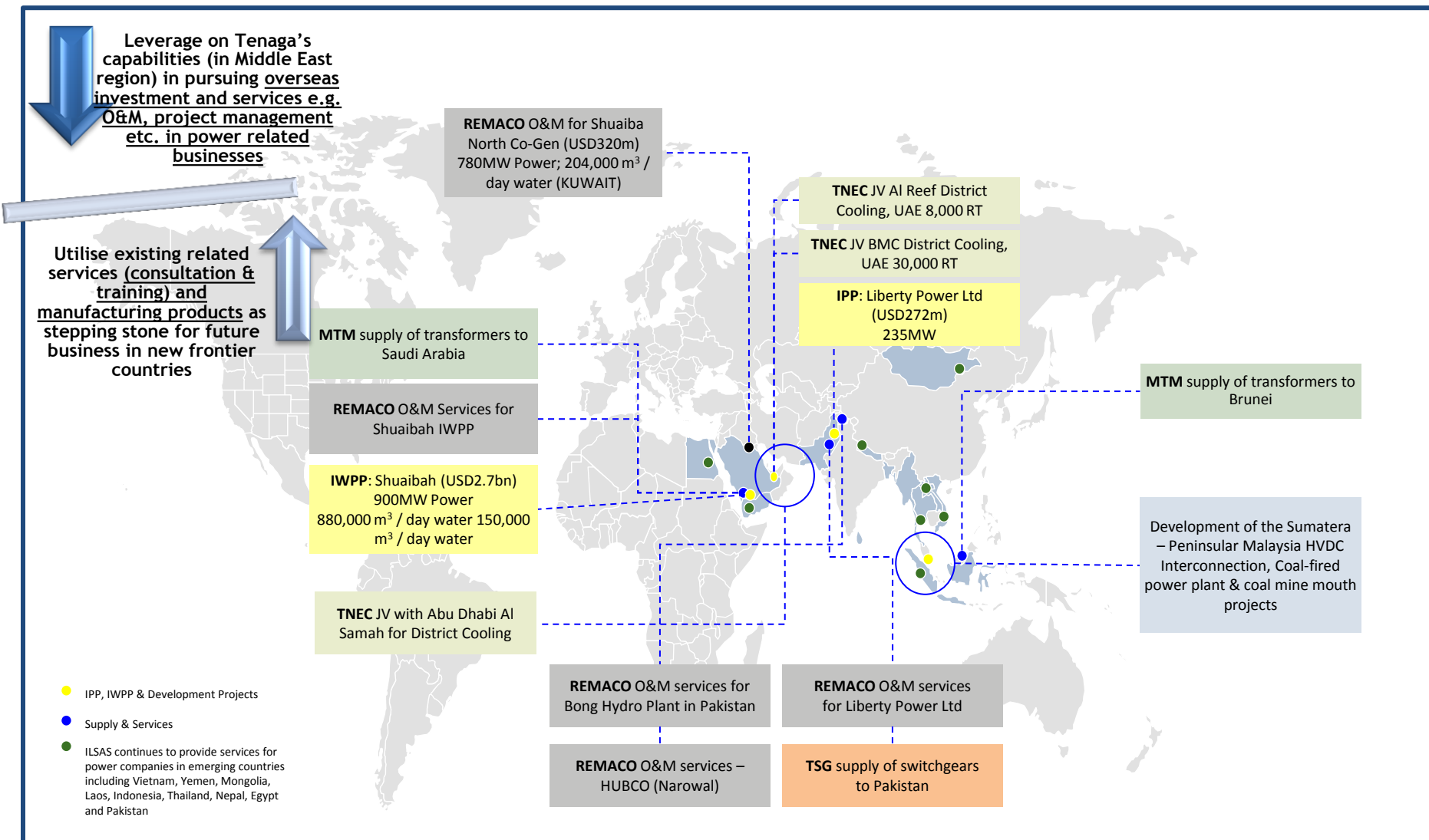
20-YEAR STRATEGIC PLAN

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



INTERNATIONAL FOOTPRINT

Business Expansion in Energy Related Businesses



Source: Company presentation; Note: REMCO 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

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DIVIDEND

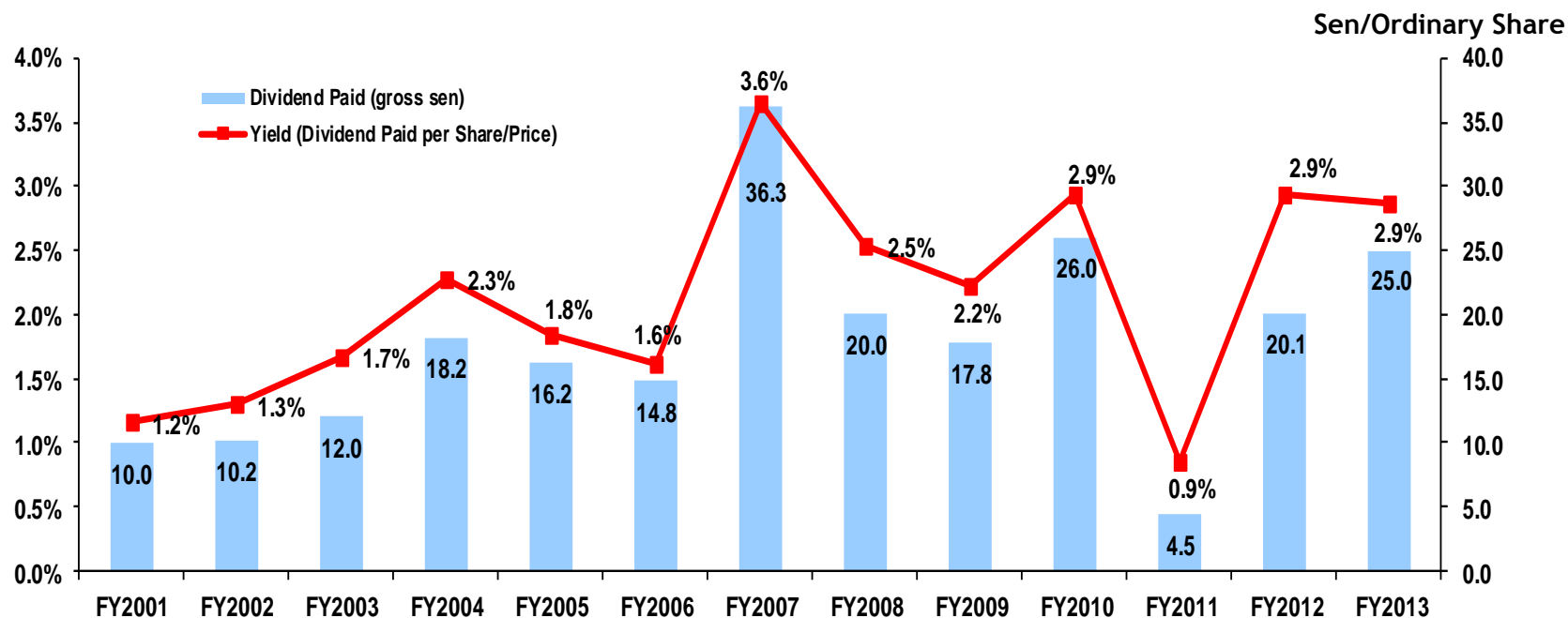
Policy and Yield

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*

1HFY2014

Interim Single-Tier Dividend:
 10.0 sen per ordinary share

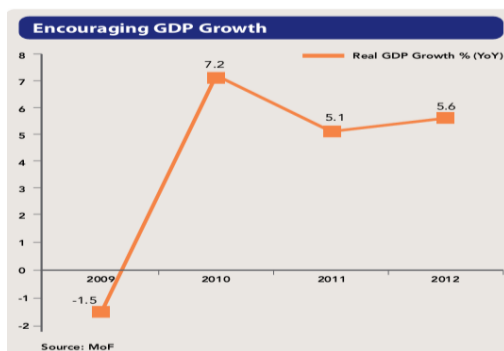
27%
 free cashflow



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1 DEMAND

“The electricity demand growth is expected to remain steady, in line with the expectancy of improving global outlook. This is supported by Bank Negara’s 2013 Annual Report which quoted that the Malaysian economy to remain on a steady growth path in 2014, expanding between 4.5% to 5.5%”.

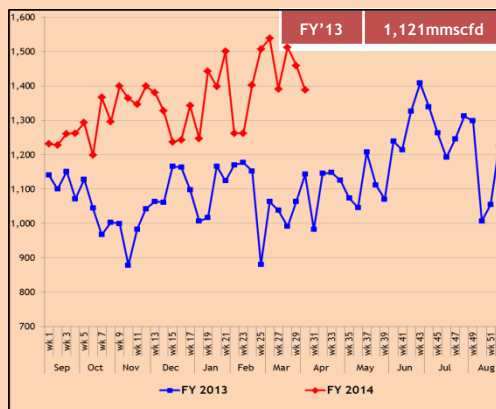


2 GAS VOLUME

Daily average gas volume (mmscfd)

1QFY13	1,043
2QFY13	1,105
3QFY13	1,106
4QFY13	1,230
1QFY14	1,321
2QFY14	1,383

GAS SUPPLY



3 COAL PRICE

Coal price is expected to remain stable for the next 1 year.

Average Coal Price (CIF) (USD/MT)

FY07	45.3
FY08	76.4
FY09	90.2
FY10	88.2
FY11	106.9
FY12	103.6
FY13	83.6
1HFY14	77.5

PART TWO

1HFY2014 RESULTS HIGHLIGHTS

1HFY2014 RESULTS HIGHLIGHTS

2nd Quarter FY2014 3 Months Ended 28th Feb 2014

- Profit Before Tax declined by 23.0% to RM1.23 billion (1QFY2014: RM1.60 billion).
- Group Operating Profit declined by 3.7% to RM1.47 billion (1QFY2014: RM1.52 billion).
- EBITDA margin reduced by 1 percentage point to 27.0% (1QFY2014: 28.0%).

1st Half FY2014 6 Months FY2014

- Profit Before Tax declined by 21.4% to RM2.84 billion (1HFY2013: RM3.61 billion).
- Group Operating Profit declined by 3.2% to RM2.99 billion (1HFY2013: RM3.09 billion).
- EBITDA margin reduced by 1.6 percentage point to 27.5% (1HFY2013: 29.1%).
- Lower Forex Translation Gain of RM133.7 million (1HFY2013: RM786.0 million).

GROUP PROFIT ANALYSIS

Normalised Profit Remained Steady After Tax Adjustments

RM mn	FY2014		6-month	
	1Q	2Q	FY2014	FY2013
Profit Before Tax	1,602.6	1,233.7	2,836.3	3,607.6
Less: Forex Translation Gain / (Loss)	252.7	(119.0)	133.7	786.0
Profit Before Forex & Tax	1,349.9	1,352.7	2,702.6	2,821.6
Taxation & Zakat	115.9	415.2	531.1	(930.7)
Profit Before Forex & After Tax	1,465.8	1,767.9	3,233.7	1,890.9
Add: Tax Adjustments				
Reinvestment Allowance for FY2014	(201.7)	(75.5)	(277.2)	
FY2013 Over Provision - Reinvestment Allowance		(662.0)	(662.0)	
Change in Corporate Tax Rate	(188.7)		(188.7)	
IC4 Prior Year Adjustments & FY2012 Under Provision				232.7
Normalised Profit Before Forex & After Tax	1,075.4	1,030.4	2,105.8	2,123.6

Lower EBITDA Margin due to Higher Generation Costs from Increased LNG Consumption

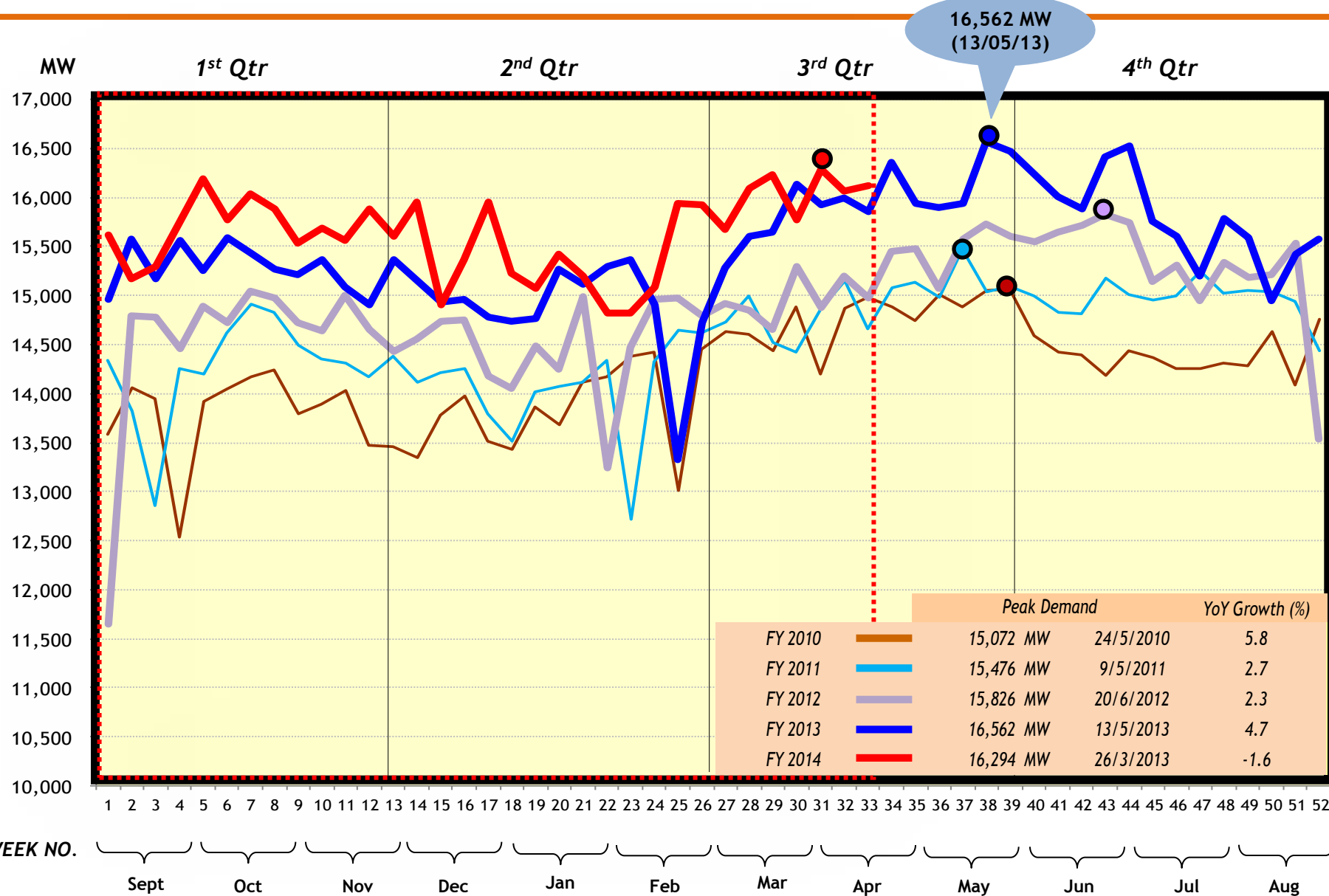
RM mn	1HFY'13	1HFY'14	1QFY'14	2QFY'14
Total Units Sold (GWh)	52,129.1	52,974.8	26,717.4	26,257.4
Revenue	17,981.0	19,594.0	9,585.4	10,008.6
Operating Expenses (before depreciation)	12,957.1	14,392.3	6,966.1	7,426.2
Operating Income	201.0	183.4	67.9	115.5
EBITDA	5,224.9	5,385.1	2,687.2	2,697.9
EBITDA Margin (%)	29.1%	27.5%	28.0%	27.0%
Depreciation and Amortisation	2,135.1	2,395.5	1,164.3	1,231.2
EBIT	3,089.8	2,989.6	1,522.9	1,466.7
EBIT Margin (%)	17.2%	15.3%	15.9%	14.7%
Finance Cost	436.9	443.6	240.5	203.1
Profit Before Tax & Forex Translation	2,821.6	2,702.6	1,349.9	1,352.7
Net Profit Before Forex Translation	1,901.6	3,271.3	1,482.2	1,789.1
Translation Gain/(Loss)	786.0	133.7	252.7	(119.0)
Net Profit attributable to : Equity Holders	2,687.6	3,405.0	1,734.9	1,670.1
Non-controlling Interest	(10.7)	(37.6)	(16.4)	(21.2)

COAL PRICE & CONSUMPTION

	1HFY'13	1HFY'14	Var (%)
Average Coal Price Consumed (USD/MT)			
FOB	74.9	67.8	-9.5%
Freight	9.1	9.1	0.0%
Others	0.6	0.6	0.0%
CIF	84.6	77.5	-8.4%
Average Coal Price Consumed (RM/MT) (CIF)	259.8	252.6	-2.8%
Coal Consumption (mn MT)	10.3	8.8	-14.6%

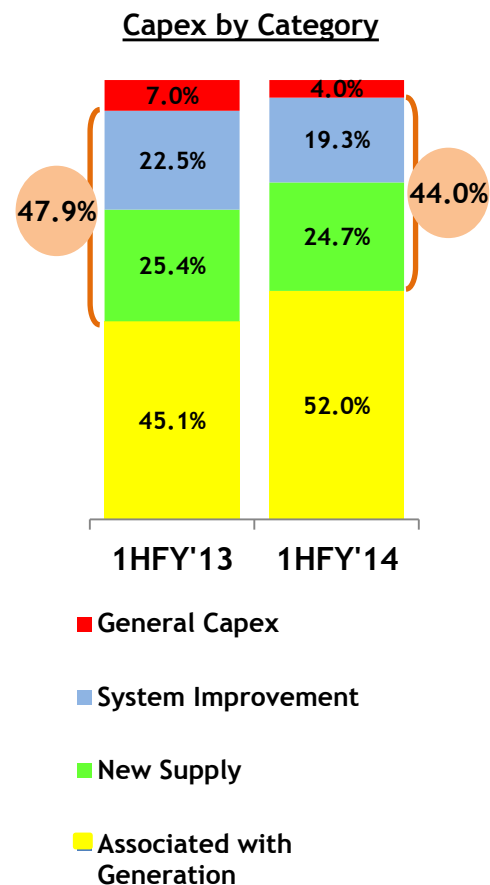
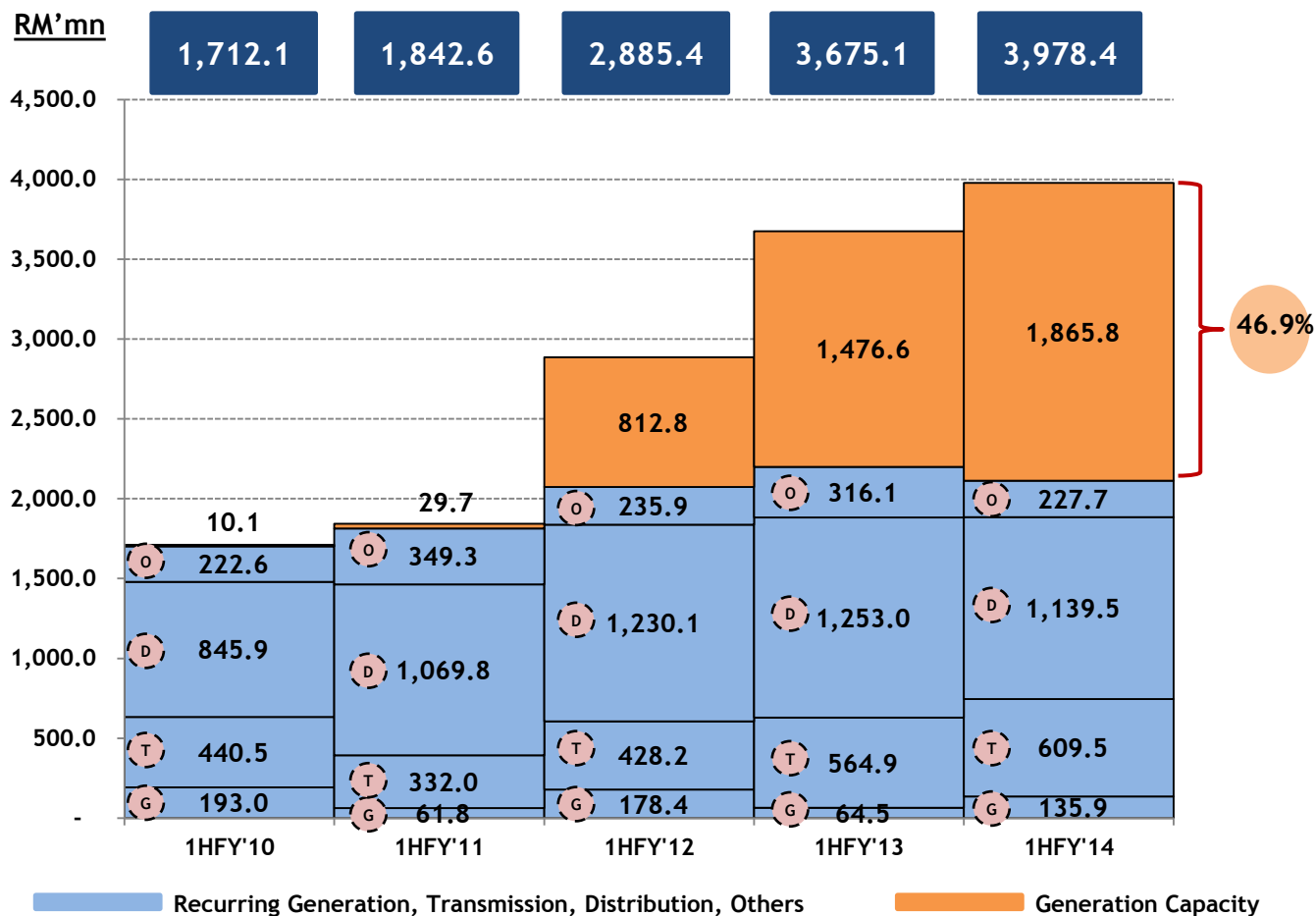
SYSTEM WEEKLY MAXIMUM DEMAND (PENINSULA)

For FY2010 to FY2014



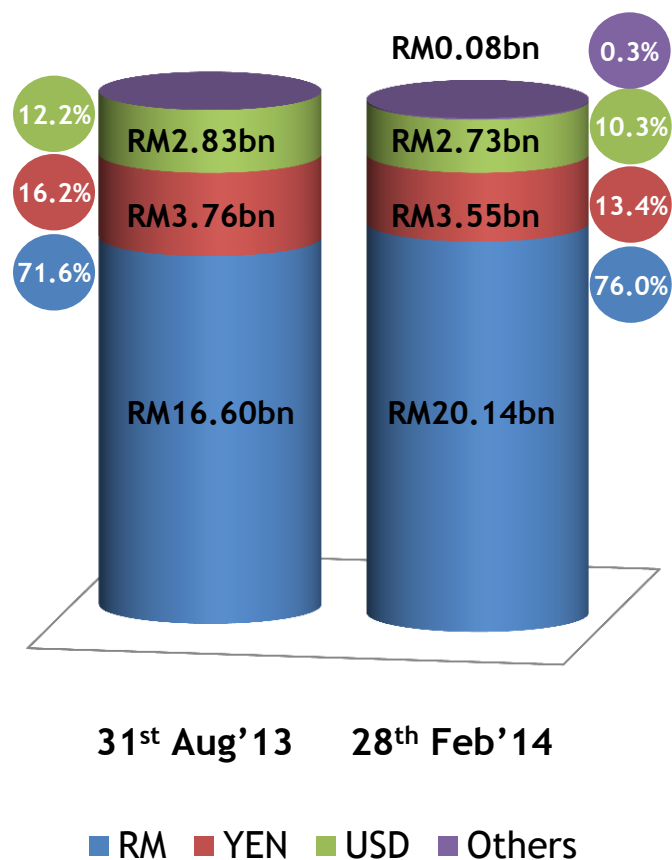
CAPITAL EXPENDITURE

Major Projects Represent 46.9% of Total CAPEX



DEBT EXPOSURE & FOREX

Increase due to Sukuk Financing for Manjung 5 Sukuk of RM3.7bn



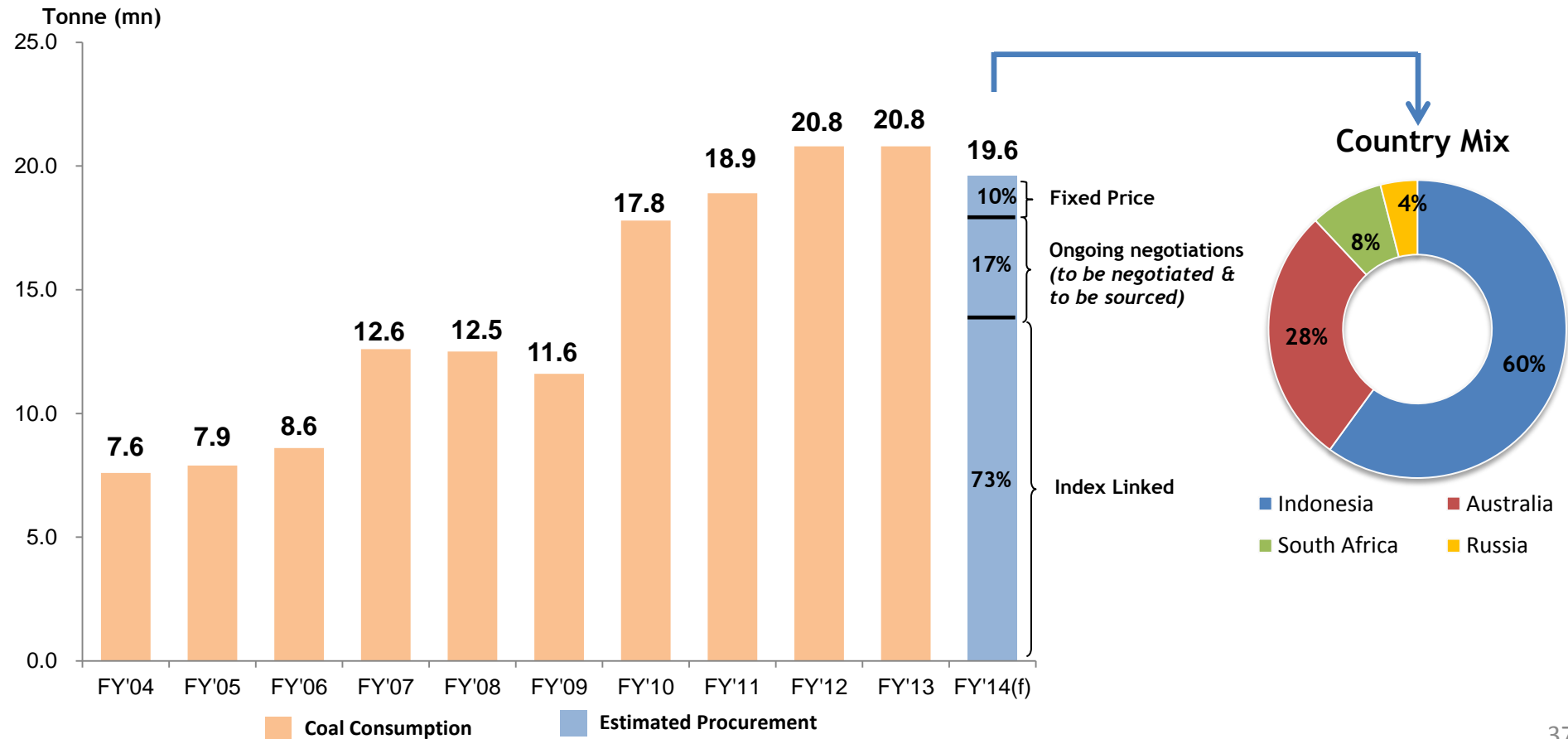
Statistics	31st Aug'13	28th Feb'14
Total Debt (RM bn)	23.2	26.5
Net Debt (RM bn)	13.7	13.0
Gearing (%)	39.6	41.0
Net Gearing (%)	23.3	20.2
Fixed : Floating (%)	98.8 : 1.2	99.3 : 0.7
Final Exposure (%)	100.0 : 0.0	100.0 : 0.0
Weighted Average Cost of Debt (%)	4.68	4.83
Final Exposure (%)	4.77	4.89

	31st Aug'13	28th Feb'14
USD/RM	3.29	3.28
100YEN/RM	3.35	3.23
USD/YEN	98.21	101.55

COAL REQUIREMENT

Average Coal Price for 1HFY'14 was at USD77.5/MT

	FY'04	FY'05	FY'06	FY'07	FY'08	FY'09	FY'10	FY'11	FY'12	FY'13	1HFY'14
Average Coal Price (CIF) (USD/metric tonne)	34.0	49.8	52.8	45.3	76.4	90.2	88.2	106.9	103.6	83.6	77.5



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THANK YOU