

# TNB HANDBOOK

## NON DEAL ROADSHOW



**Frankfurt**  
17<sup>th</sup> August 2015

**Paris**  
18<sup>th</sup>-19<sup>th</sup> August 2015

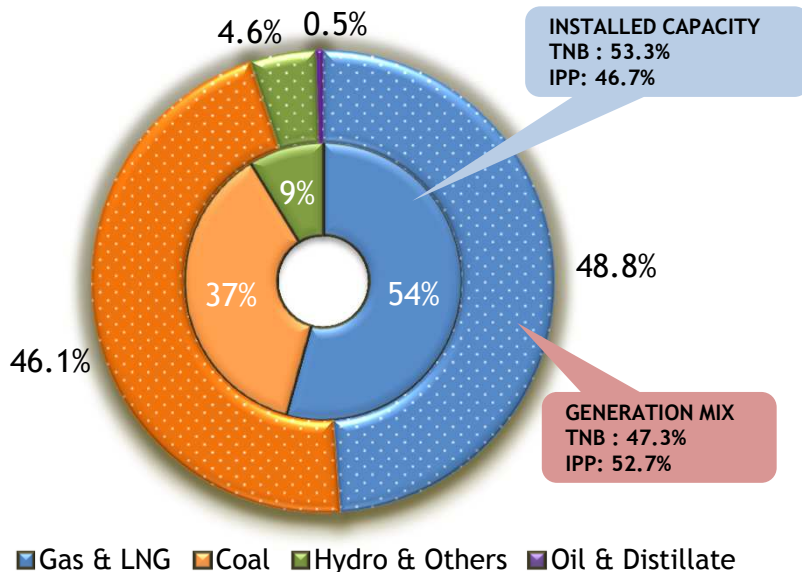
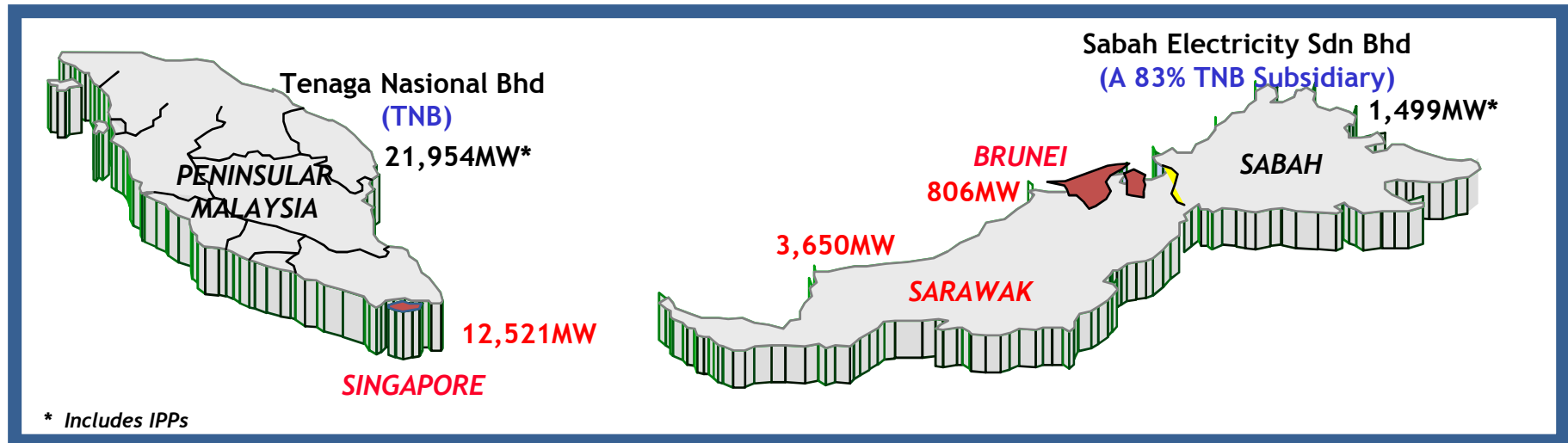
**London**  
20<sup>th</sup>-21<sup>st</sup> August 2015

## PART ONE

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

# INTRODUCTION TO TENAGA

## Three Major Utilities in Malaysia

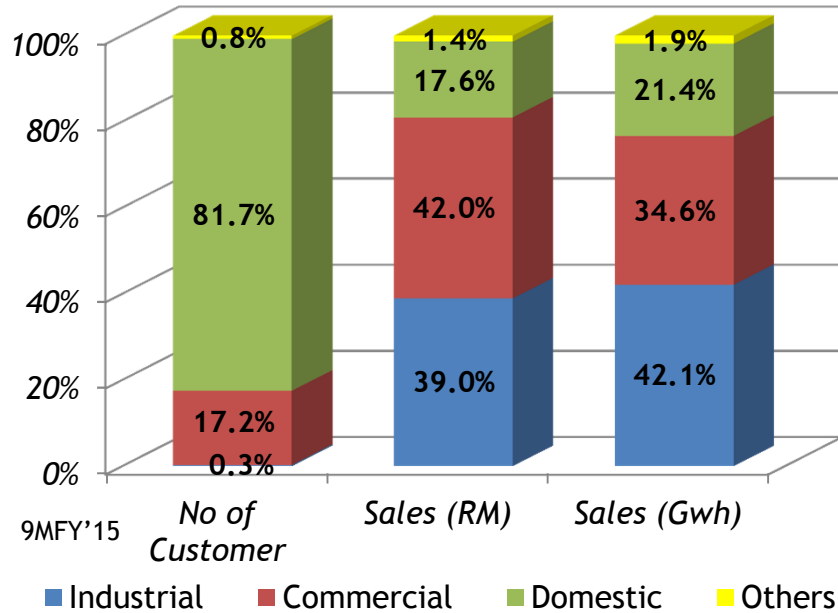


	FY'11	FY'12	FY'13	FY'14	9MFY'15
TNB - Peninsula Installed Capacity (MW)	11,530	11,462	11,462	10,814	11,708
Total units sold (Gwh)	97,888	102,132	105,479	108,102	82,122
Total customers (mn)	8.11	8.36	8.35	8.64	8.86
Total employees ('000)	31.9	33.6	35.0	36.1	36.0
Total assets (RM bn)	79.1	88.5	99.0	110.7	114.7

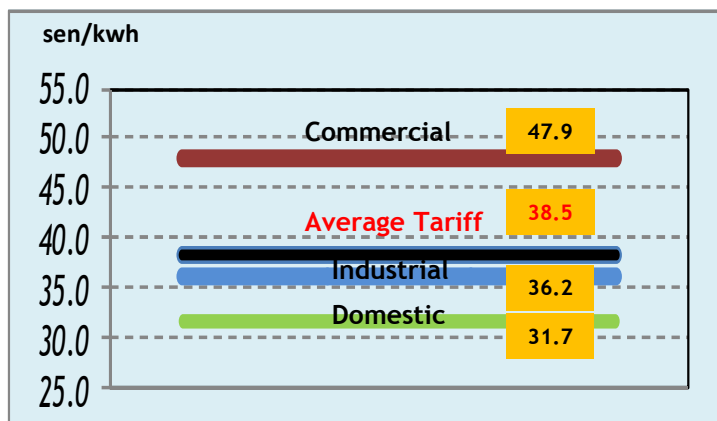
Installed Capacity vs. Generation mix

# INTRODUCTION TO TENAGA

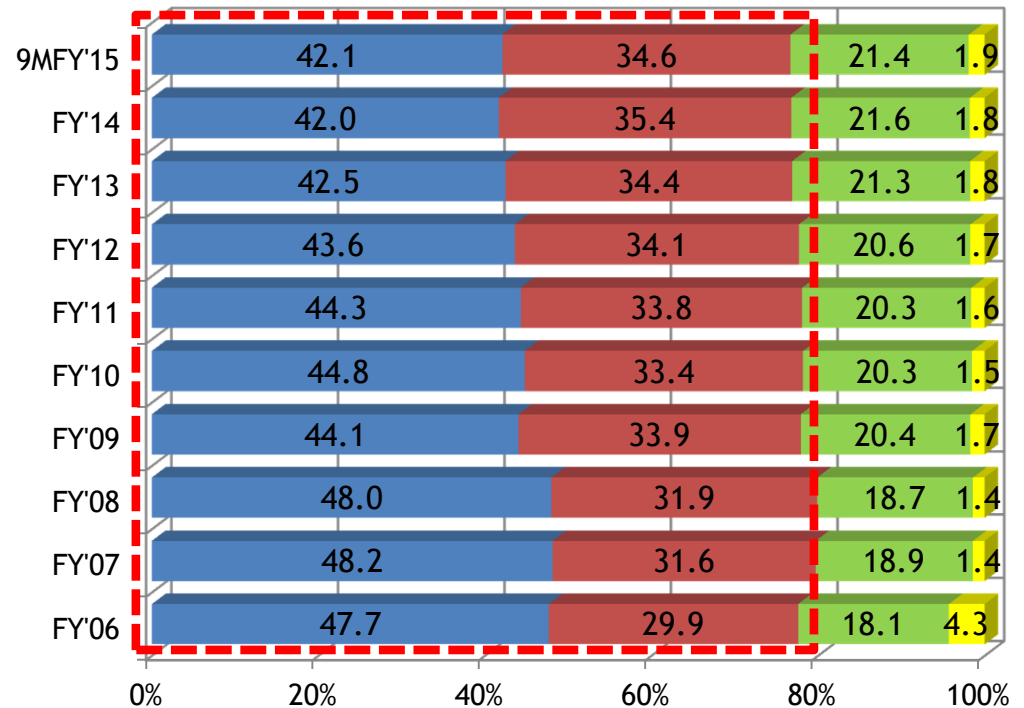
## No of Customer vs. Sales Value vs. Unit Sales



### Average Base Tariff by Sector



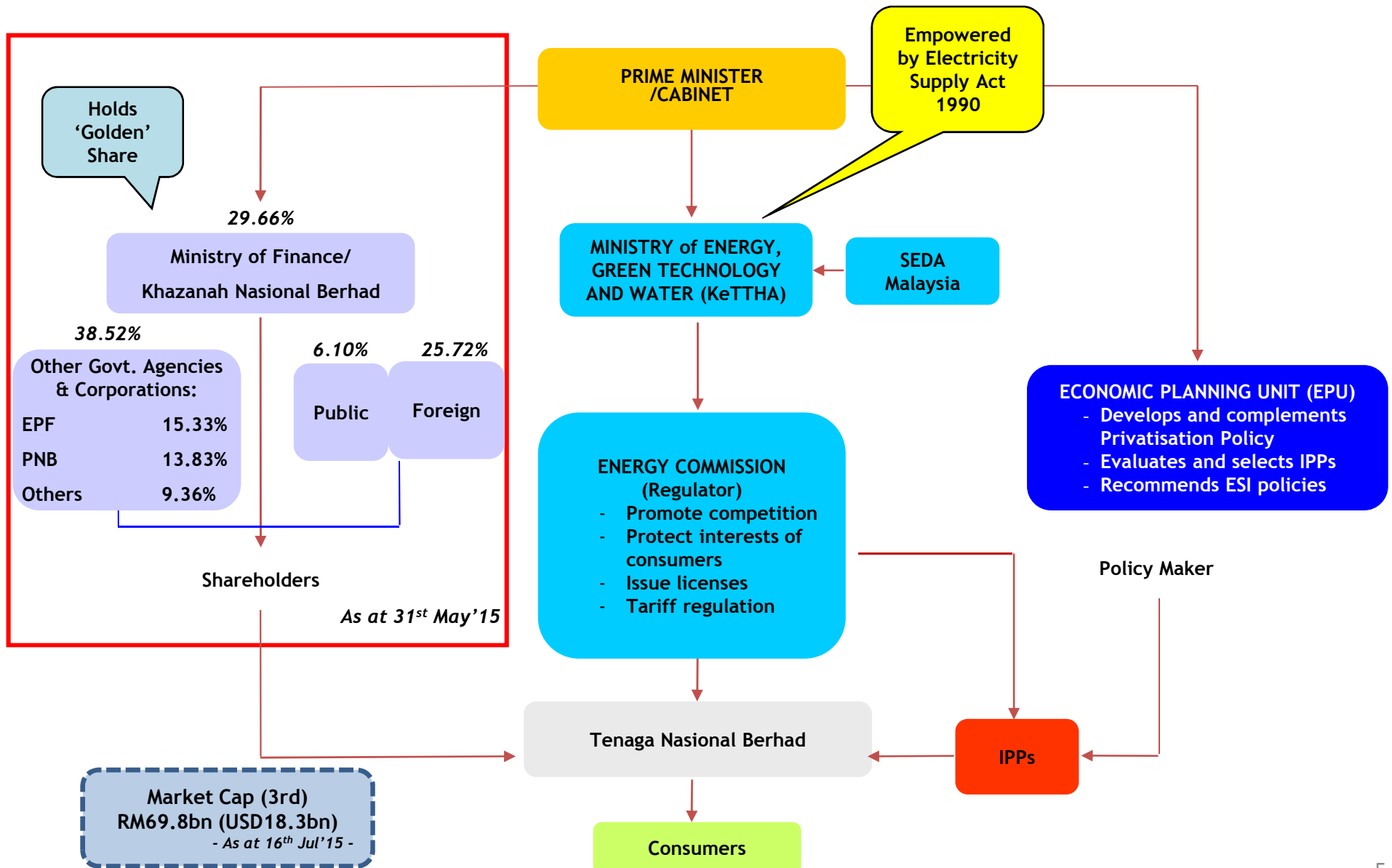
### Sectoral Sales Analysis (Gwh)



- 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

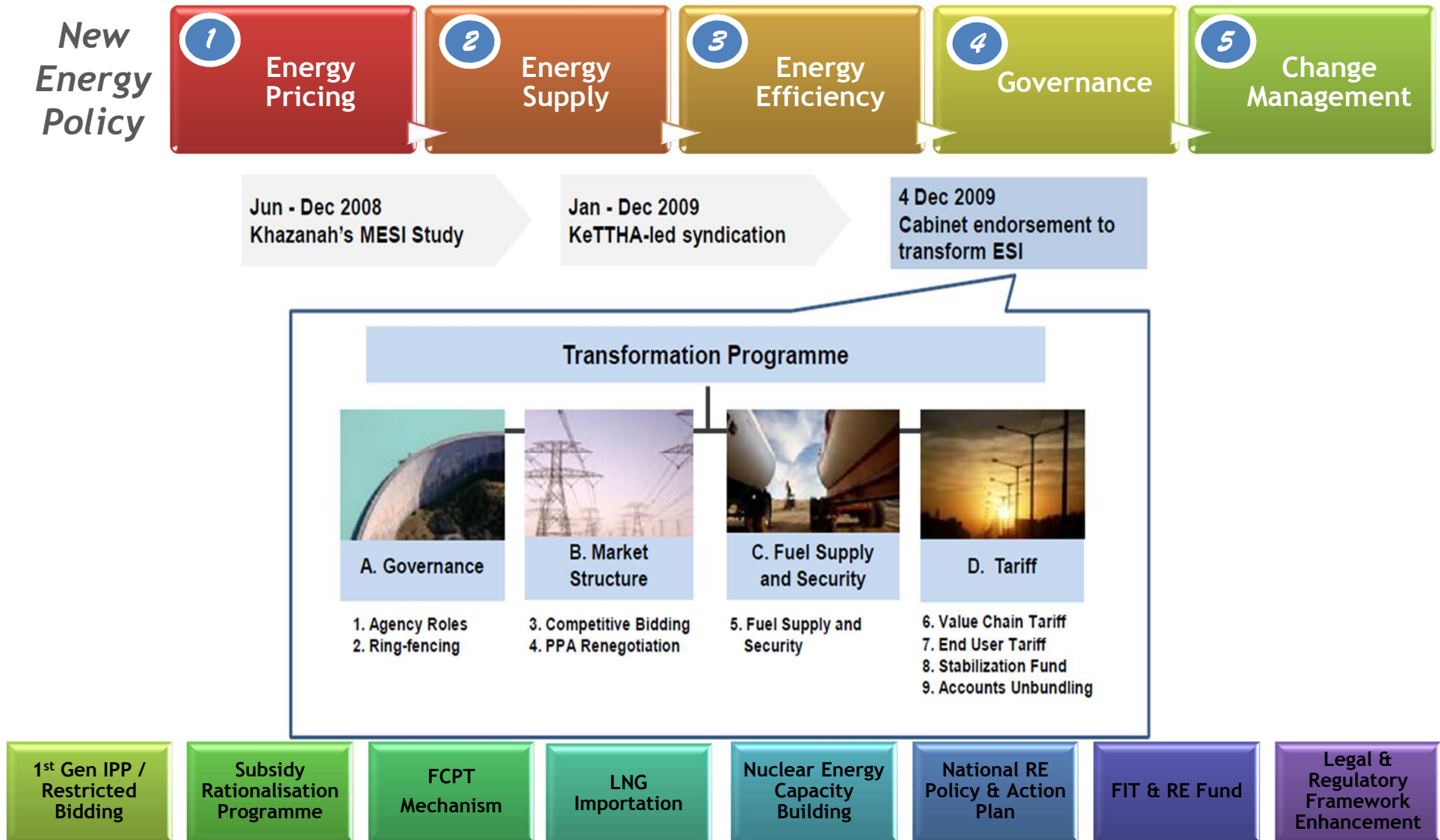
## Industry Regulatory Framework



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# TRANSFORMATION INITIATIVES BY GOVERNMENT

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



\*Source: MyPower

# 1 ENERGY PRICING - COMPETITIVE BIDDING

## Track 1, 2 & 3A

1

TRACK 1	1,071 MW CCGT PRAI (PRAI)
COD	January 2016
LEVELISED TARIFF	34.7 sen/kWh
STATUS	<p>TNB has signed agreements for:</p> <ul style="list-style-type: none"> <li>i. EPC - TNB Northern Energy Bhd &amp; Samsung Engineering &amp; Construction (M) Sdn Bhd</li> <li>ii. Long term Service - TNB Prai &amp; Siemens AG</li> <li>iii. O&amp;M - TNB Prai &amp; REMACO</li> </ul> <p>TNB Northern Energy Sukuk has been issued out on 29 May 2013 for nominal value of RM1.625 billion.</p>
PHYSICAL PROGRESS	97% as at 9MFY'15
TECHNOLOGY	Siemens Super Critical H-Class technology gas turbine combined-cycle efficiency of greater than 60%

2

TRACK 2	RENEWAL OF EXPIRING PLANTS : 2,253 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 1,000 MW COAL-FIRED (MANJUNG 5)
COD	October 2017
LEVELISED TARIFF	22.78 sen/kWh
STATUS	<p>TNB has signed agreements on 16 August 2013 for:</p> <ul style="list-style-type: none"> <li>i. PPA with TNB Manjung Five Sdn Bhd "Manjung 5" to design, construct, own, operate &amp; maintain the coal plant capacity (25 years term)</li> <li>ii. SFA "Shared Facilities Agreement" between TNB, Manjung 5 &amp; TNB Janamanjung</li> <li>iii. CSTA "Coal Supply and Transportation Agreement" between TNB Fuel Services &amp; Manjung 5.</li> </ul> <p>EPC contract signed on 21 August 2013 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 30 January 2014 for nominal value of RM3.655 billion.</p>
PHYSICAL PROGRESS	49% as at 9MFY'15
TECHNOLOGY	Ultra Super Critical Boiler Technology OEM to EPC is Hitachi

Track 2 savings as at May'15: approximately RM1.0 bn



# 1 ENERGY PRICING

## Track 3B & 4A

4

TRACK 3B	2 X 1,000 MW COAL-FIRED (JIMAH EAST)
COD	15 June 2019 & 15 December 2019
LEVELISED TARIFF	26.67 sen/kWh
STATUS	<p>TNB has signed agreements on 22 July 2014 :</p> <ul style="list-style-type: none"> <li>i. PPA with Jimah East Power Sdn. Bhd. (JEP), the incorporated company of the consortium of 1MDB and Mitsui &amp; Co. Ltd, to design, construct, own, operate and maintain the coal plant (25 years term) at Mukim Jimah, Port Dickson, Negeri Sembilan.</li> <li>ii. CSTA "Coal Supply and Transportation Agreement" with TNB Fuel Services Sdn. Bhd.</li> </ul> <p>TNB received a letter of invitation from the EC on 19 June 2015 to submit a proposal pertaining to the participation of TNB through 70% ownership of JEP.</p> <p>TNB received an addendum to the Letter of Award dated 3 June 2014 for the Project from the EC informing TNB and Mitsui that the Government has approved the transfer by 1MDB of its entire shareholding interest in JEP to TNB.</p> <p>TNB has submitted the Letter of Acceptance on 3 July 2015 to the EC's Addendum to the Letter of Award which was issued to TNB.</p> <p>TNB entered into a Share Sale and Purchase Agreement with 1MDB for the acquisition of a 70% shareholding in JEP for a total consideration of circa RM46.98 million.</p>
TECHNOLOGY	2 units of IHI Ultra Super Critical Technology Steam Generator & 2 Units of Toshiba Turbo Generator


5

TRACK 4A	1,000 - 1,400 MW CCGT
COD	June 2018
STATUS	<p>TNB has signed heads of agreement on 24 July 2014 with:</p> <ul style="list-style-type: none"> <li>i. SIPP Energy Sdn. Bhd., signifying the principal terms of the proposed joint venture which will undertake to build, own and operate a power plant of approximately 1,000MW-1,400MW on a land in Pasir Gudang, Johor.</li> </ul>
TECHNOLOGY	-

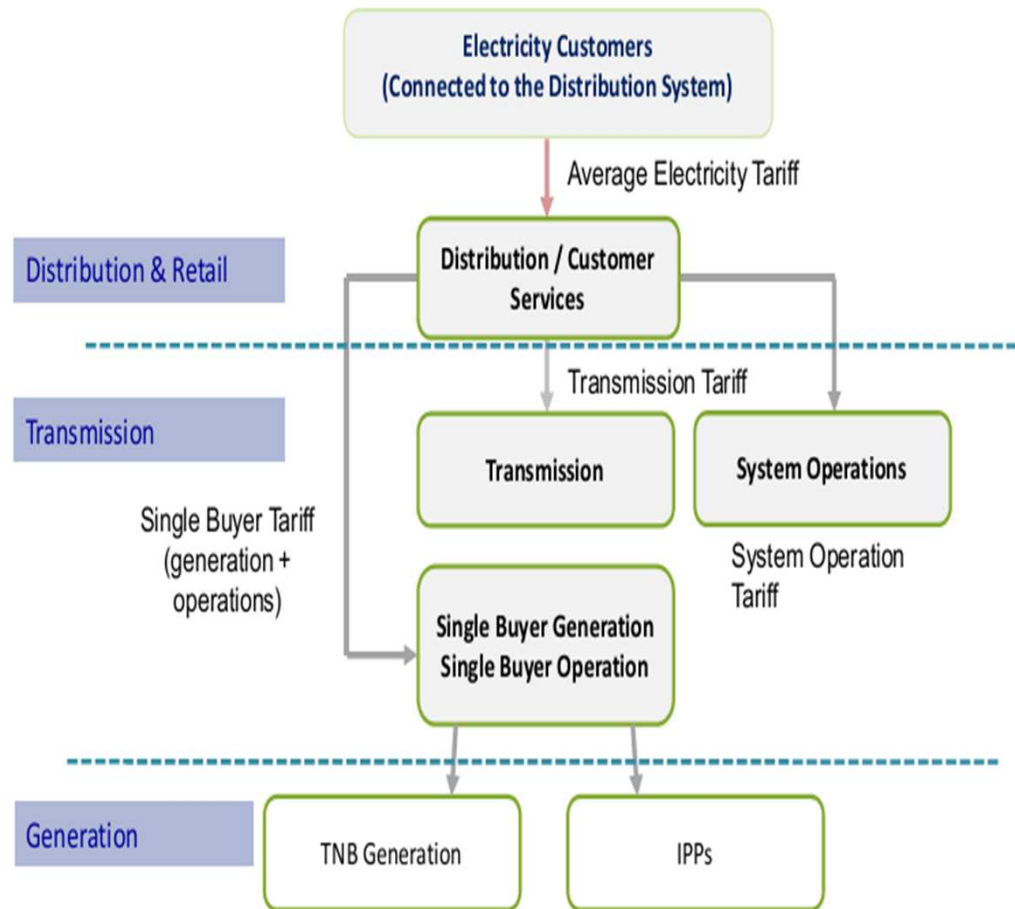
## 3 + 4 EFFICIENCY AND GOVERNANCE

### 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

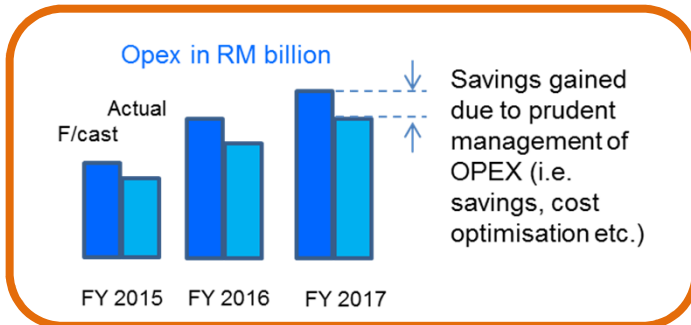
5 Business entities under IBR  
(Accounting Separation)



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

## 3 + 4 EFFICIENCY AND GOVERNANCE

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



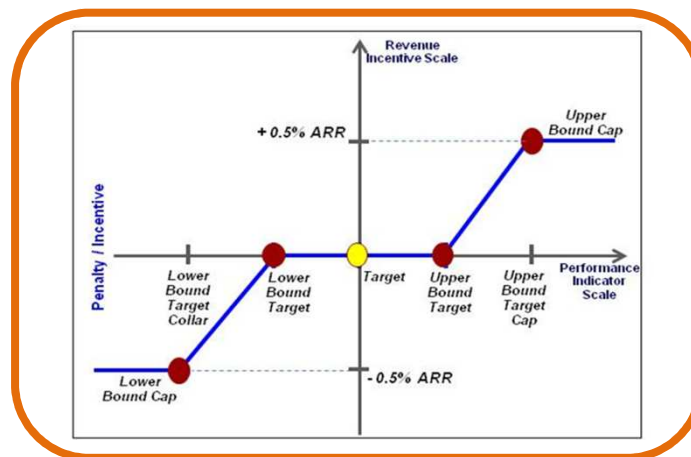
#### Operational Efficiencies

- 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

## 3 + 4 EFFICIENCY AND GOVERNANCE

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%
<b>Weighted Cost of Capital</b>			<b>6.9%</b>			<b>9.7%</b>			<b>7.5%</b>

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

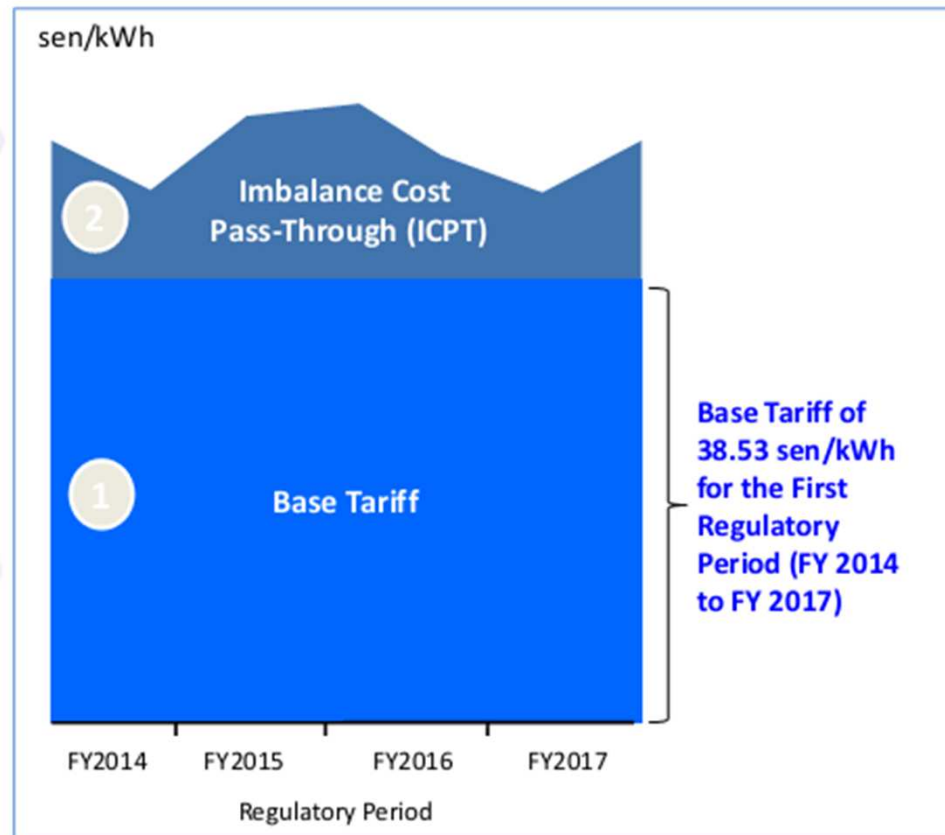
Electricity Tariff Review = Base Tariff + Imbalance Cost Pass-Through (ICPT)

## 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



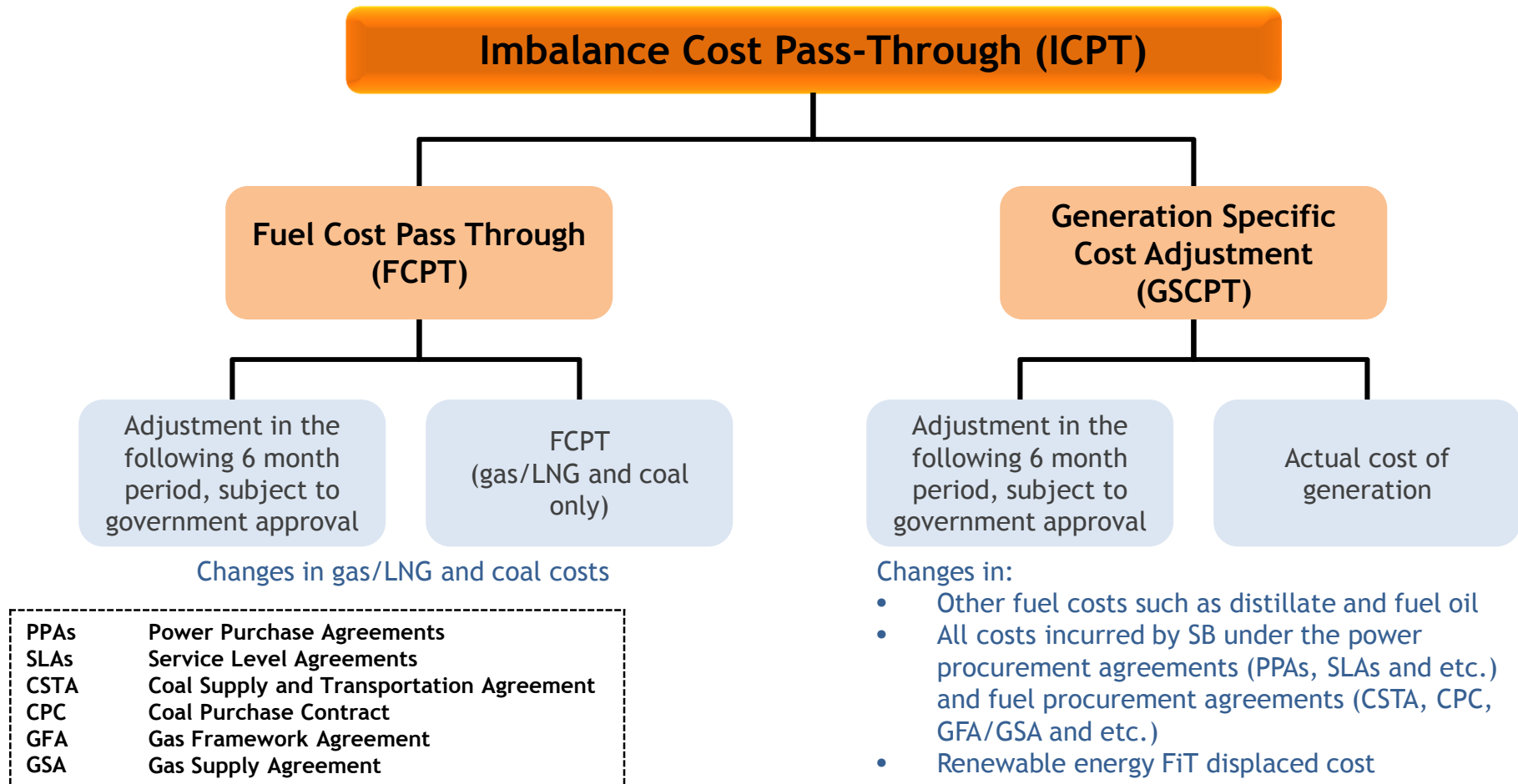
## Principle for ICPT Calculation

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  
2 : OPEX = Operational expenditure

## Imbalance Cost Pass-Through (ICPT) Comprises Two Components

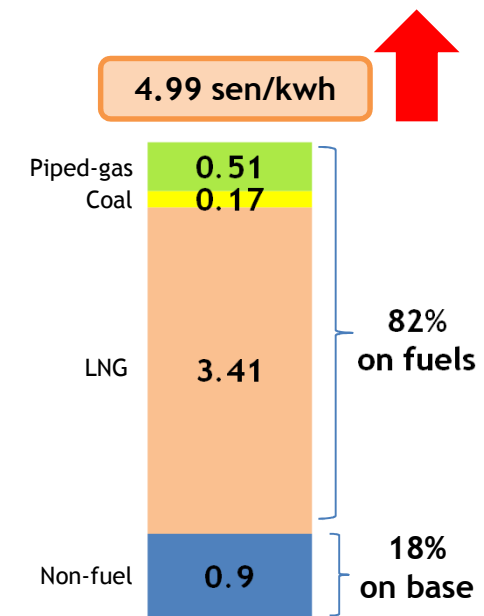


ICPT	Announcement	Rebate	Period
Jan - Dec'14	RM727 mn	2.25sen/kwh	Mar - Jun'15
Jan - Jun'15	RM1,086 mn	2.25sen/kwh	July - Dec'15

# TARIFF

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

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





# TARIFF

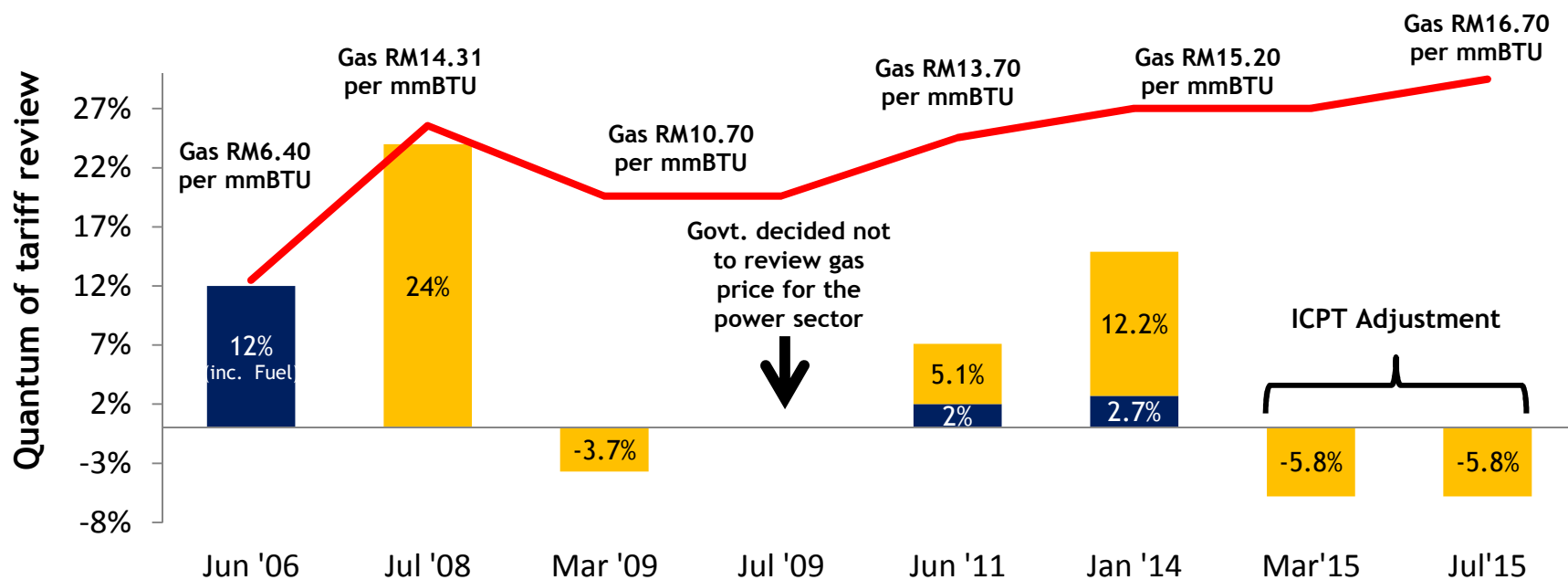
## Frequency of Review & Underlying Assumptions



IBR

ICPT

Approval date	May 2006	Jun 2008	Feb 2009	Jun 2009	May 2011	Dec 2013	Feb 2015	Jun 2015
Effective date	Jun 2006	Jul 2008	Mar 2009	Jul 2009	Jun 2011	Jan 2014	Mar 2015	Jul 2015
Quantum	12%	23 - 24%	(3.7%)	Neutral	7.1%	14.9%	(5.8%)	(5.8%)
Gas (RM/mmbtu)	6.40	14.31	10.70	10.70	13.70	15.20	15.20	16.70
Coal (USD/MT)	45.00	75.00	85.00*	85.00*	85.00*	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



\* Forex (RM/USD) = RM3.6

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

Base tariff adjustment

Fuel adjustment

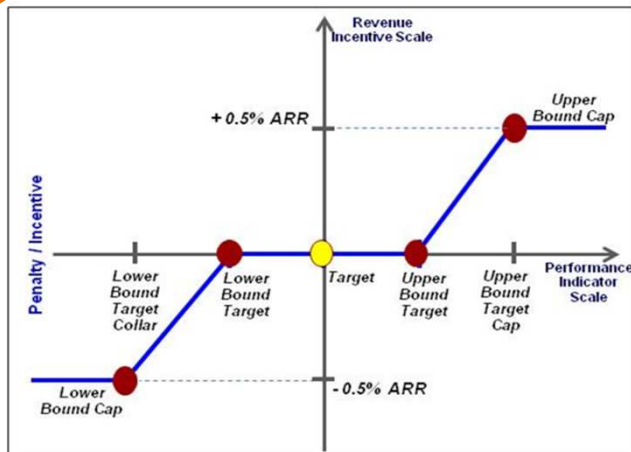
Gas price

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# KEY PERFORMANCE INDICATORS (KPIs)

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

## PERFORMANCE KPIs



- 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

Code	Performance Incentive Scheme	Unit	Weightage (%)	Lower Bound Target	Upper Bound Target
<b>Customer Services</b>					
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
<b>Transmission</b>					
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
<b>System Operator</b>					
SOPI1	Wide Area Loss of Supply Event	No. of wide area system blackout incident	25	1	0
SOPI2.1	Voltage Limit Compliance	%	25	90	96
SOPI2.2	Frequency Limit Compliance	%	25	90	96
SOPI3	Dispatch Adjustment	%	25	0.4	0.2
<b>Single Buyer</b>					
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

Incentive/penalty caps annually: RM47mn

\*Source: EC

# KEY PERFORMANCE INDICATORS (KPIs)

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

			1 <sup>ST</sup> 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 tracked as TNB Headline KPI during 1<sup>st</sup> phase

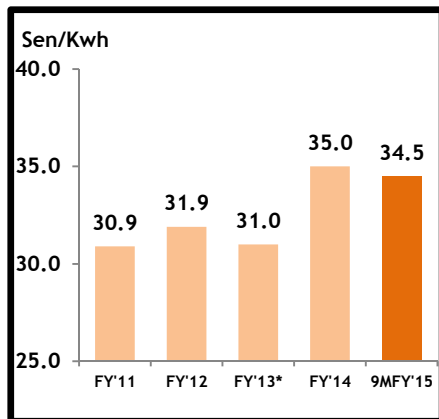
# KEY PERFORMANCE INDICATORS (KPIs)

## Financial & Technical 5-Year Performance

### FINANCIAL PERFORMANCE

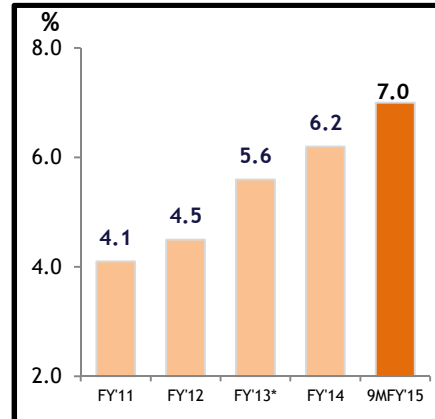
Financial ratios for prior FY'15  
- Full Year

#### 1 COMPANY CPU (sen/kwh)#



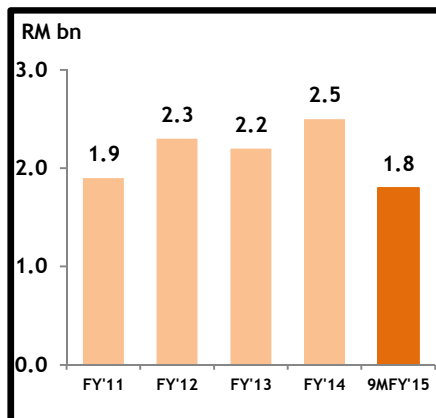
# Exclude Finance Cost

#### 2 ROA



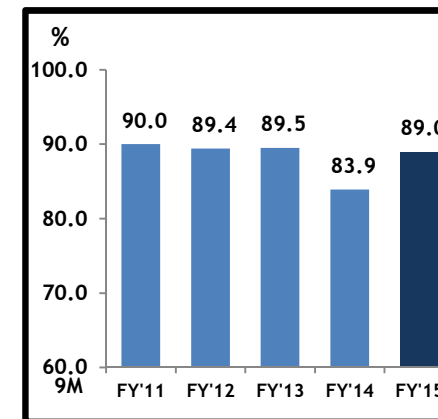
\* FY13 - restated

#### 3 REVENUE FROM NON-REGULATED BUSINESS

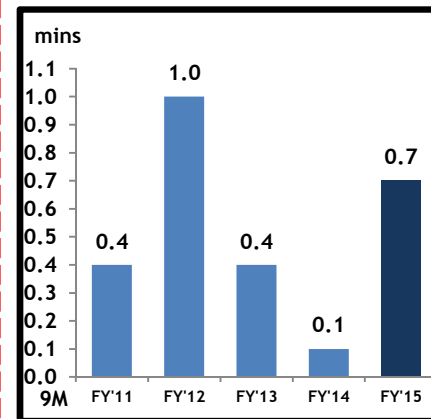


### TECHNICAL PERFORMANCE

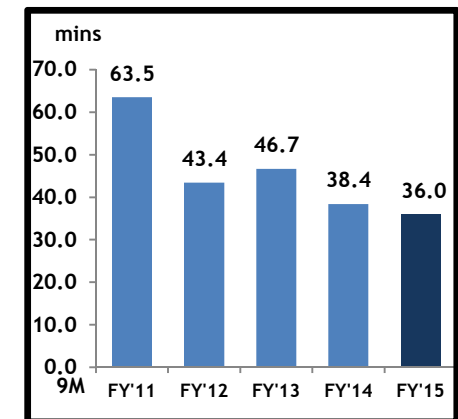
#### 1 EQUIVALENT PLANT AVAILABILITY FACTOR (EAF)



#### 2 SYSTEM MINUTES



#### 3 SAIDI



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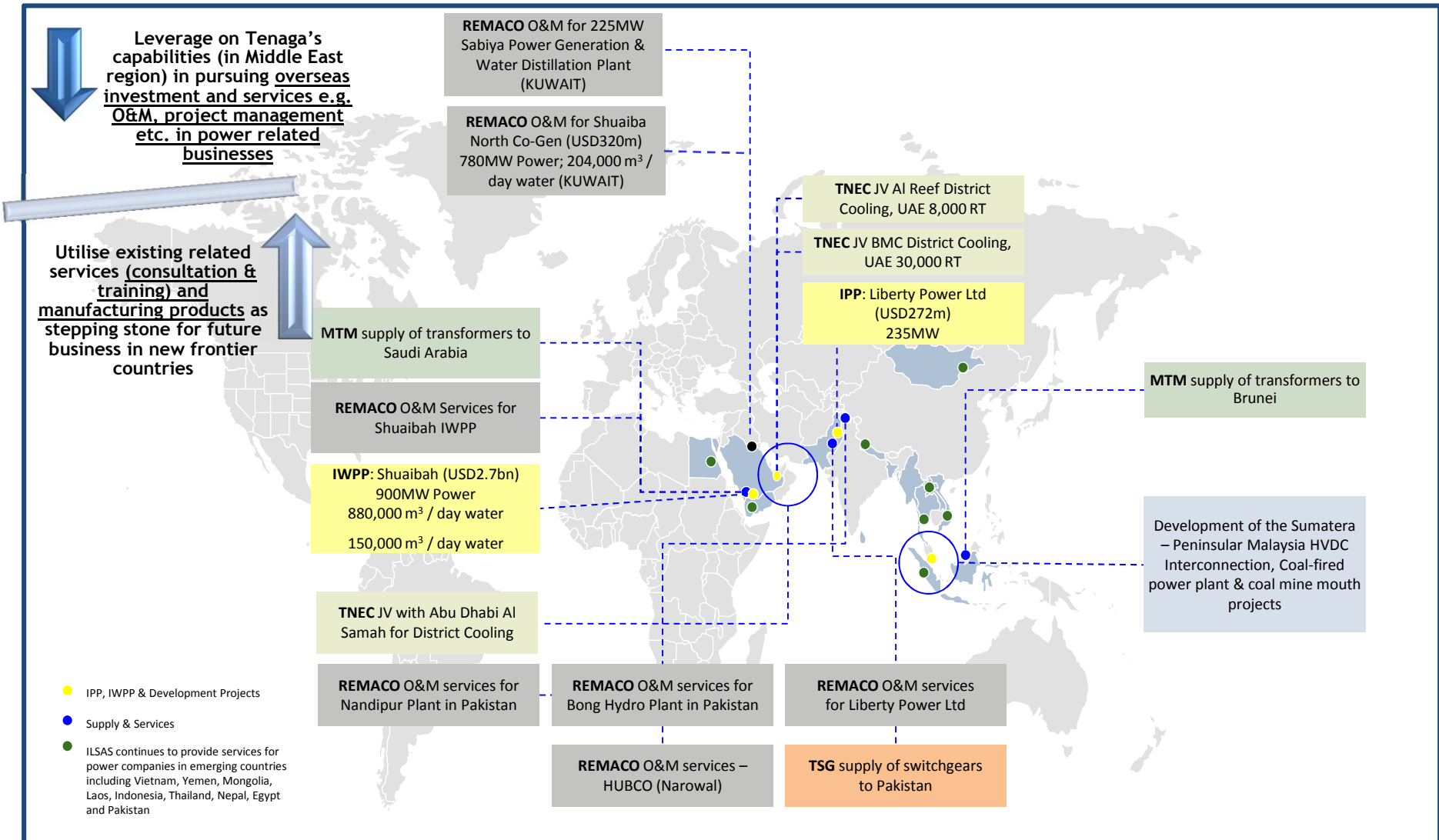
# 20-YEAR STRATEGIC PLAN

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: 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



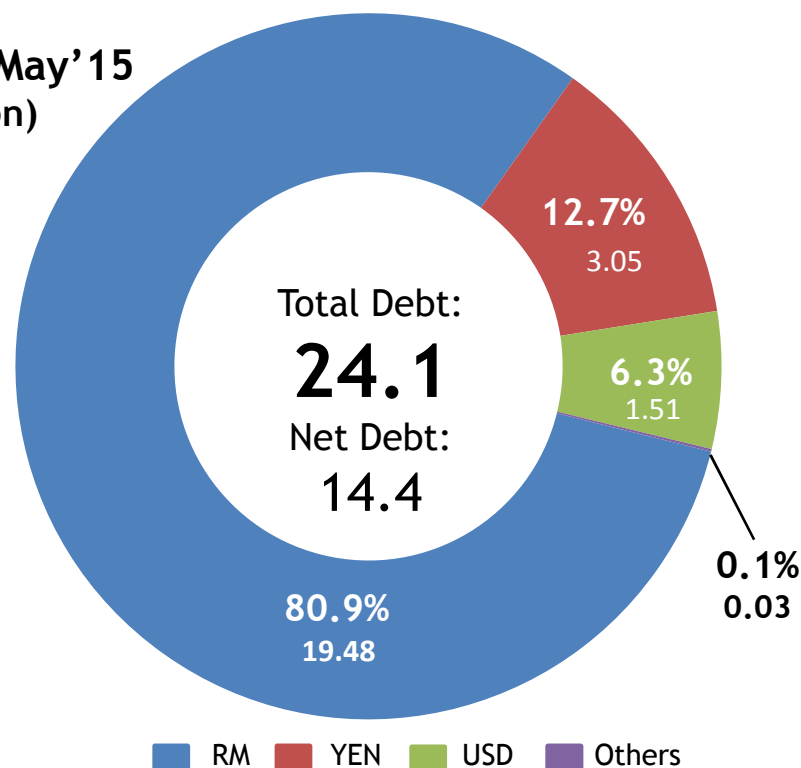
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# DEBT EXPOSURE & FOREX

## Limited Exposure to Financing Cost



31<sup>st</sup> May'15  
(RM bn)



“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'15	31st Aug'14
Gearing (%)	33.9	36.9
Net Gearing (%)	20.2	19.9
Fixed : Floating (%)	100.0 : 0.0	99.3 : 0.7
Final Exposure (%)	100.0 : 0.0	100.0 : 0.0
Weighted Average Cost of Debt (%)	4.93	4.86
Final Exposure (%)	4.93	4.92

	31 <sup>st</sup> May'15	31 <sup>st</sup> Aug'14
USD/RM	3.66	3.15
100YEN/RM	2.96	3.04
USD/YEN	123.65	103.62

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# DIVIDEND

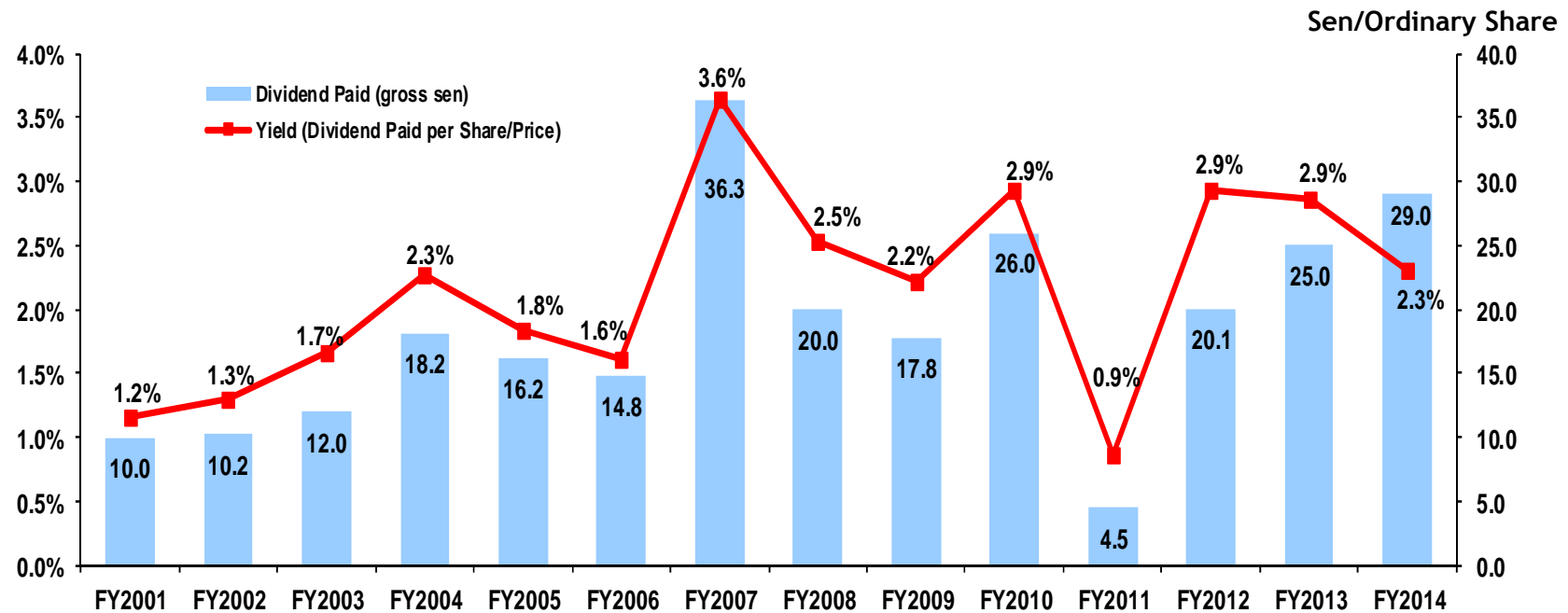
## Policy and Yield



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*

1HFY2015

Interim Single-Tier Dividend  
of 10.0 sen per ordinary share



## PART TWO

### 9MFY2015 RESULTS HIGHLIGHTS



# 3<sup>rd</sup> QUARTER FY2015 & CUMULATIVE FY2015







May 2015

## 3-Month Ended 31<sup>st</sup> May 2015

- Imbalance Cost Pass Through (ICPT) over-recovery recognition of RM1.82 bn

	3QFY2015	2QFY2015	QoQ
Profit After Tax	RM0.77 bn	RM2.13 bn	 (64.1%)
EBITDA Margin	21.9%	37.8%	 15.9ppt

## 9 Months FY2015

	9MFY2015	9MFY2014 (Restated)	YoY
Profit After Tax	RM5.25 bn	RM5.10 bn	 2.9%
EBITDA Margin	32.3%	27.4%	 4.9ppt
Average Coal Price	USD67.3/mt	USD76.5/mt	 12.0%
Forex Translation Gain/(Loss)	(RM85.8 mn)	RM292.2 mn	 >(100.0%)

# GROUP PROFIT ANALYSIS

## Higher Adjusted Profit After Tax with Effective Implementation of ICPT Mechanism

(RM mn)	9 MFY'15	9 MFY'14
Profit After Tax	5,251.3	5,104.8
Less: Forex Translation (Gain) / Loss	85.8	(292.2)
Change in Corporate Tax Rate		(188.7)
Reinvestment Allowance	(951.6)	(1,076.7)
Adjusted Profit After Tax	4,385.5	3,547.2

23.6%

# QUARTERLY & YEARLY ANALYSIS

## Year-on-Year EBITDA Margin Improved Resulted from Lower Costs & ICPT Implementation

RM mn	1QFY'15	2QFY'15	3QFY'15	9MFY'15	9MFY'14 (Restated)
Total Units Sold (GWh)	27,431.2	27,197.6	27,493.1	82,121.9	79,843.7
Revenue	11,027.1	10,610.0	9,905.7	31,542.8	31,069.0
Operating Expenses (before depreciation)	7,161.8	6,798.2	7,986.2	21,946.2	22,910.4
Operating Income	136.9	203.3	252.8	593.0	349.5
EBITDA	4,002.2	4,015.1	2,172.3	10,189.6	8,508.1
<b>EBITDA Margin (%)</b>	<b>36.3%</b>	<b>37.8%</b>	<b>21.9%</b>	<b>32.3%</b>	<b>27.4%</b>
Depreciation and Amortisation	1,257.4	1,239.7	1,283.8	3,780.9	3,605.1
EBIT	2,744.8	2,775.4	888.5	6,408.7	4,903.0
EBIT Margin (%)	24.9%	26.2%	9.0%	20.3%	15.8%
Finance Cost	253.9	210.3	255.1	719.3	639.0
Profit Before Tax & Forex Translation	2,574.9	2,668.8	563.3	5,807.0	4,512.7
Net Profit Before Forex Translation	2,306.0	2,459.5	617.8	5,383.3	4,818.9
Translation Gain/(Loss)	45.9	(303.3)	171.6	(85.8)	292.2
Net Profit attributable to : Equity Holders	2,351.9	2,156.2	789.4	5,297.5	5,111.1
Non-controlling Interest	(0.9)	(22.5)	(22.8)	(46.2)	(6.3)



# GENERATION MIX (PENINSULA) con't

## Year-on-Year Analysis

12.1% Reduction in Fuel Costs Mainly due to Lower Consumption of Gas & LNG, and Lower Coal Price

Table 1:

Fuel Cost (RM mn)					Units Generated (Gwh)				
Fuel Type	9MFY'14	9MFY'15	Variance		Fuel Type	9MFY'14	9MFY'15	Variance	
			RM mn	%				Gwh	%
Gas	6,273.0	5,574.9	(698.1)	(11.1)	Gas & LNG	47,236.2	41,198.2	(6,038.0)	(12.8)
LNG	2,629.9	1,862.9	(767.0)	(29.2)	Coal	31,793.4	38,921.2	7,127.8	22.4
Coal	3,447.0	4,039.4	592.4	17.2	Dist.	729.1	161.2	(567.9)	(77.9)
Dist.	525.0	128.6	(396.4)	(75.5)	Oil	896.9	231.9	(665.0)	(74.1)
Oil	462.7	114.9	(347.8)	(75.2)	Hydro	3,533.1	3,850.4	317.3	9.0
Hydro	-	-	-	-	Total	84,188.7	84,362.9	174.2	0.2
Fuel Costs	13,337.6	11,720.7	(1,616.9)	(12.1)					

Table 2:

Average Gas Volume (mmscfd)	
9MFY'14	9MFY'15
1,370	1,186

Table 3:

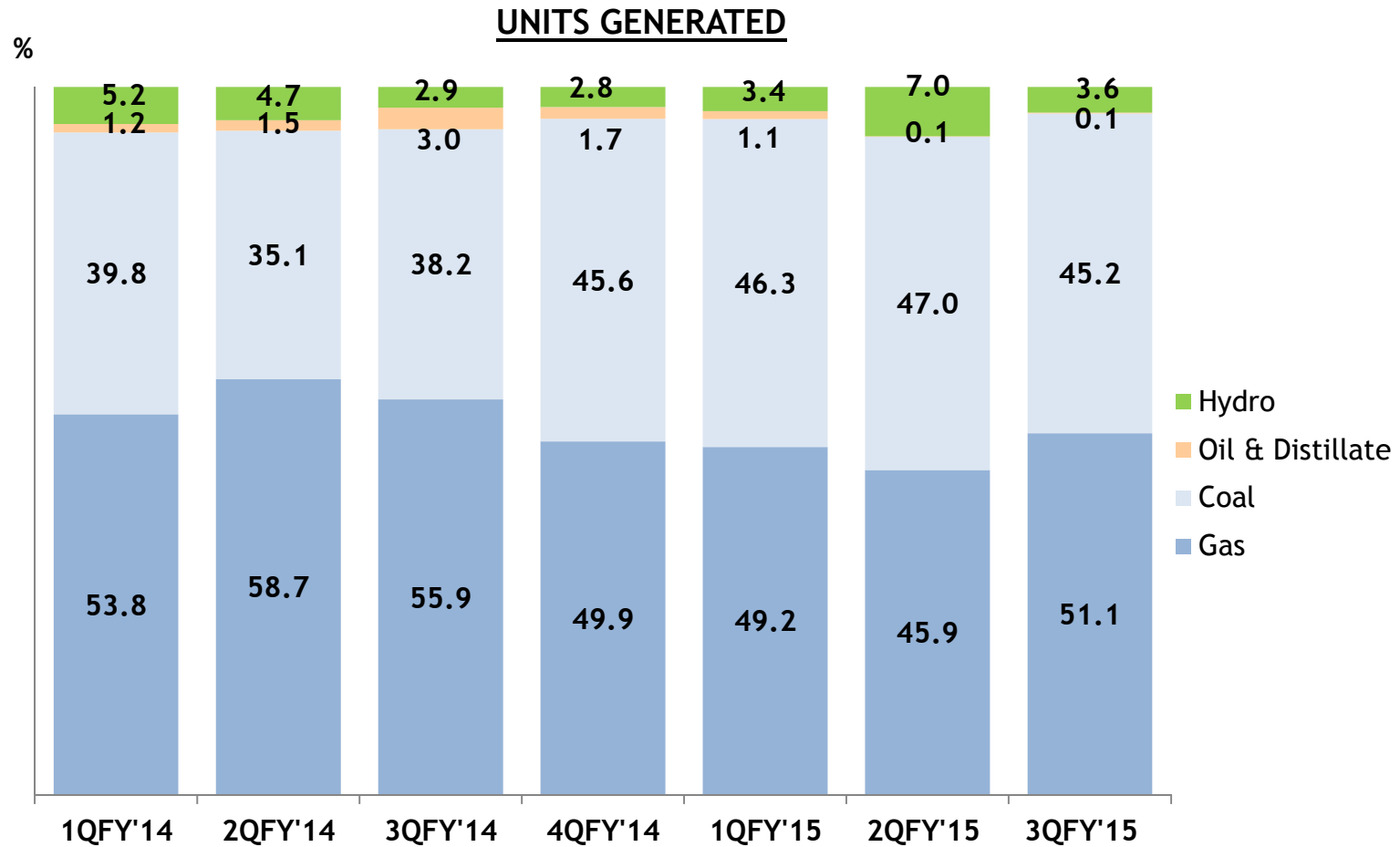
	9MFY'14	9MFY'15	Var (%)
Average Coal Price Consumed (USD/MT)			
FOB	66.9	58.5	-12.6%
Freight	9.0	8.2	-8.9%
Others	0.6	0.6	0.0%
CIF	76.5	67.3	-12.0%
Average Coal Price Consumed (RM/MT) (CIF)	249.3	234.3	-6.0%
Coal Consumption (mn MT)	13.6	16.6	22.1%

# GENERATION MIX (PENINSULA)

## Quarterly Analysis



May 2015



# ELECTRICITY GROWTH IN PENINSULA

UNITS SALES		FY2014				FY2015									
		1Q	2Q	3Q	4Q	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Industrial	Gwh	10,644	10,802	10,584	10,998	3,704	3,582	3,687	3,587	3,660	3,729	3,256	3,799	3,706	3,736
	Growth (%)	1.0	2.5	1.8	0.1	9.0	0.9	(0.2)	0.7	0.7	3.5	0.2	2.7	1.9	(0.2)
Commercial	Gwh	8,718	8,596	8,865	9,175	2,867	3,006	3,145	3,007	2,936	2,917	2,741	3,143	3,106	3,198
	Growth (%)	3.6	1.4	4.0	2.4	0.5	4.0	5.7	5.1	1.3	2.8	(1.1)	3.4	1.7	4.2
Domestic	Gwh	5,379	5,229	5,545	5,971	1,842	1,886	1,810	1,789	1,730	1,819	1,886	1,958	1,931	2,062
	Growth (%)	3.9	1.9	3.1	6.0	2.6	4.1	2.1	3.9	1.2	1.2	2.8	7.9	1.8	8.6
Others	Gwh	464	467	466	480	168	164	164	165	166	162	151	157	154	161
	Growth (%)	7.2	1.7	4.0	15.4	7.0	5.8	7.9	5.8	6.4	4.5	1.3	(0.6)	(3.1)	1.3
TOTAL	Gwh	25,205	25,094	25,460	26,624	8,581	8,638	8,806	8,548	8,492	8,627	8,034	9,057	8,897	9,157
	Growth (%)	2.6	2.0	2.9	2.4	4.6	2.8	2.5	3.0	1.1	2.8	0.4	4.0	1.7	3.2

FY'14  
2.5%

1QFY'15  
3.3%

2QFY'15  
2.3%

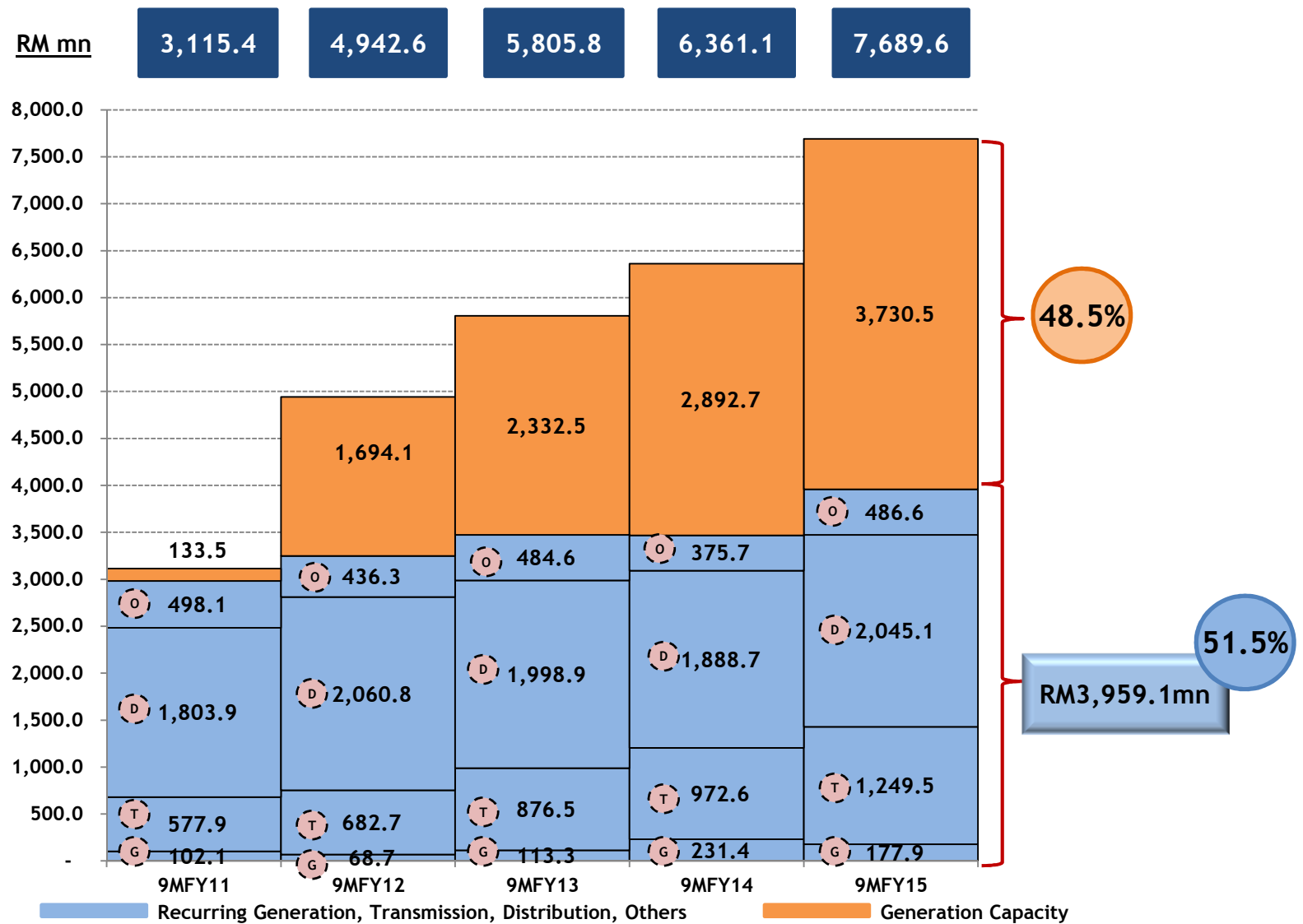
3QFY'15  
2.1%

10MFY'15  
2.6%

	9MFY'14	9MFY'15
Growth (%)	2.5	2.5

# CAPITAL EXPENDITURE

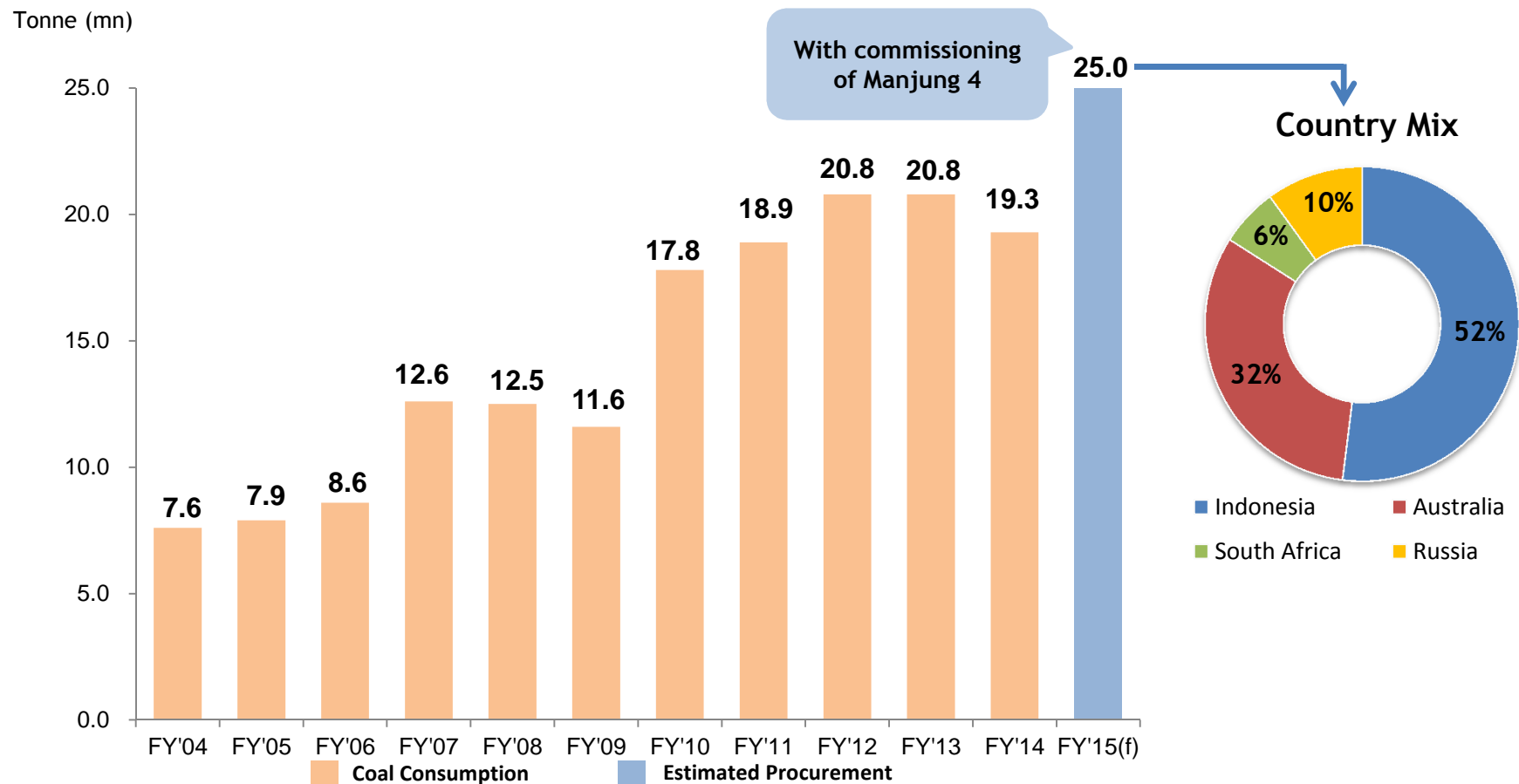
Major Projects Represent 48.5% of Total CAPEX



# COAL REQUIREMENT

Average Coal Price for 9MFY'15 was at USD67.3/MT

Average Coal Price (CIF)	FY'10	FY'11	FY'12	FY'13	FY'14	9MFY'15
(USD/metric tonne)	88.2	106.9	103.6	83.6	75.4	67.3
(RM/metric tonne)	293.8	325.9	321.9	259.5	244.6	234.3



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**THANK YOU**