

UPDATES ON ELECTRICITY TARIFF REGULATION

9 OCTOBER 2014

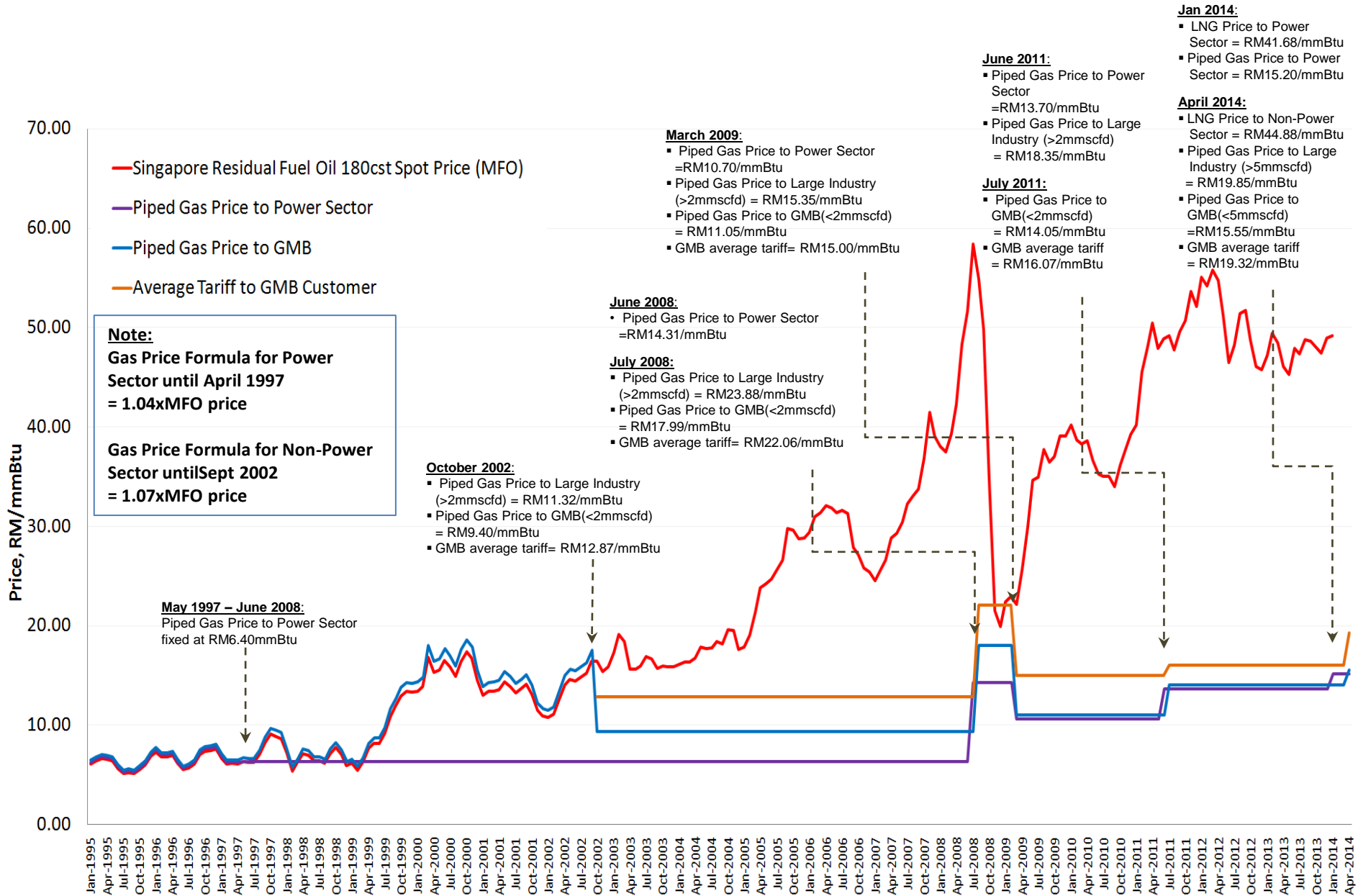
OBJECTIVE

To update the stakeholders on recent developments in relation to:

- Policy on natural gas pricing for the power sector
- TNB electricity tariff revision
- Incentive-based regulation of electricity tariff
- Special Industrial Tariff Removal Plan

POLICY FOR NATURAL GAS PRICING FOR THE POWER SECTOR

Regulated price of natural gas vs. market price of fuel oil since 1995



Effective January 2014, price of natural gas supplied by Petronas is based on two-tier pricing formula

1 Tier 1 – Regulated Piped Gas Price

Applicable gas supply volume :

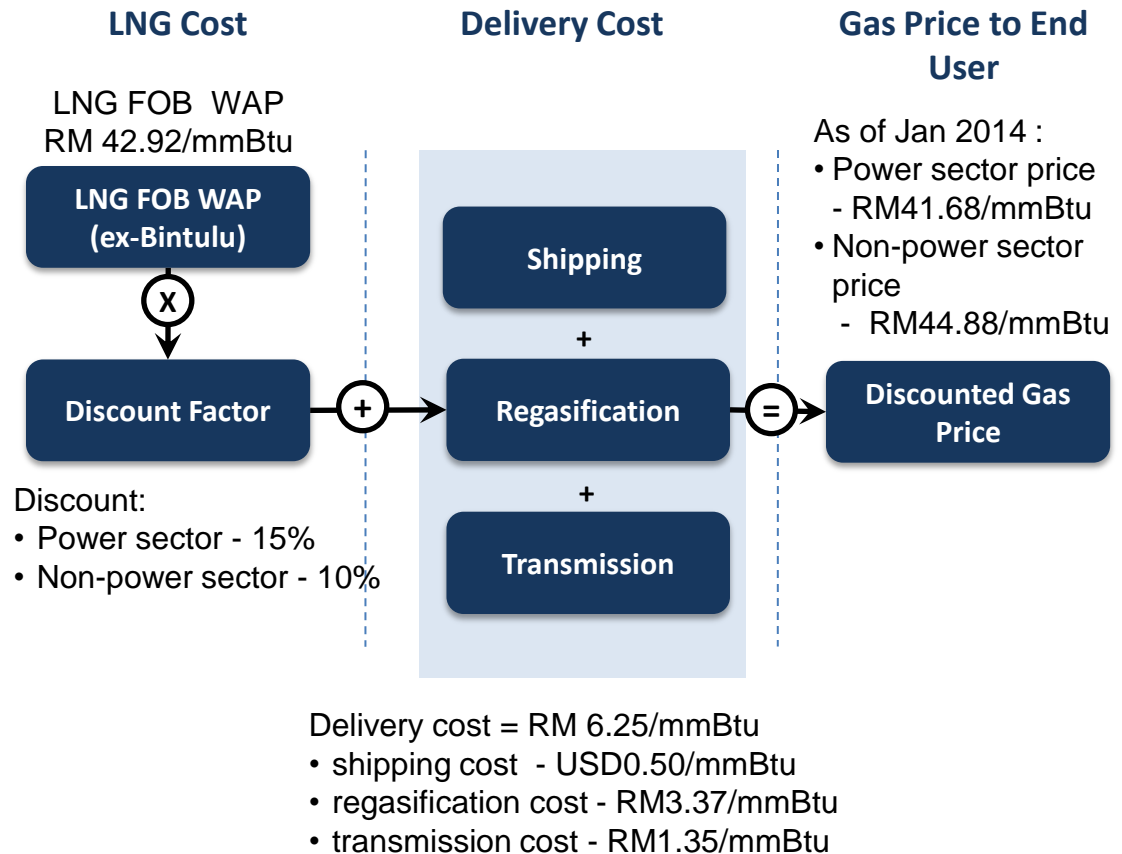
- first 1000mmscfd for power sector
- existing contract for large industries
- first 382mmscfd for Gas Malaysia Bhd (GMB)

Regulated piped gas price as at January 2014 will be increased by RM1.50/mmBtu every 6 months until Tier 2 price level is reached.

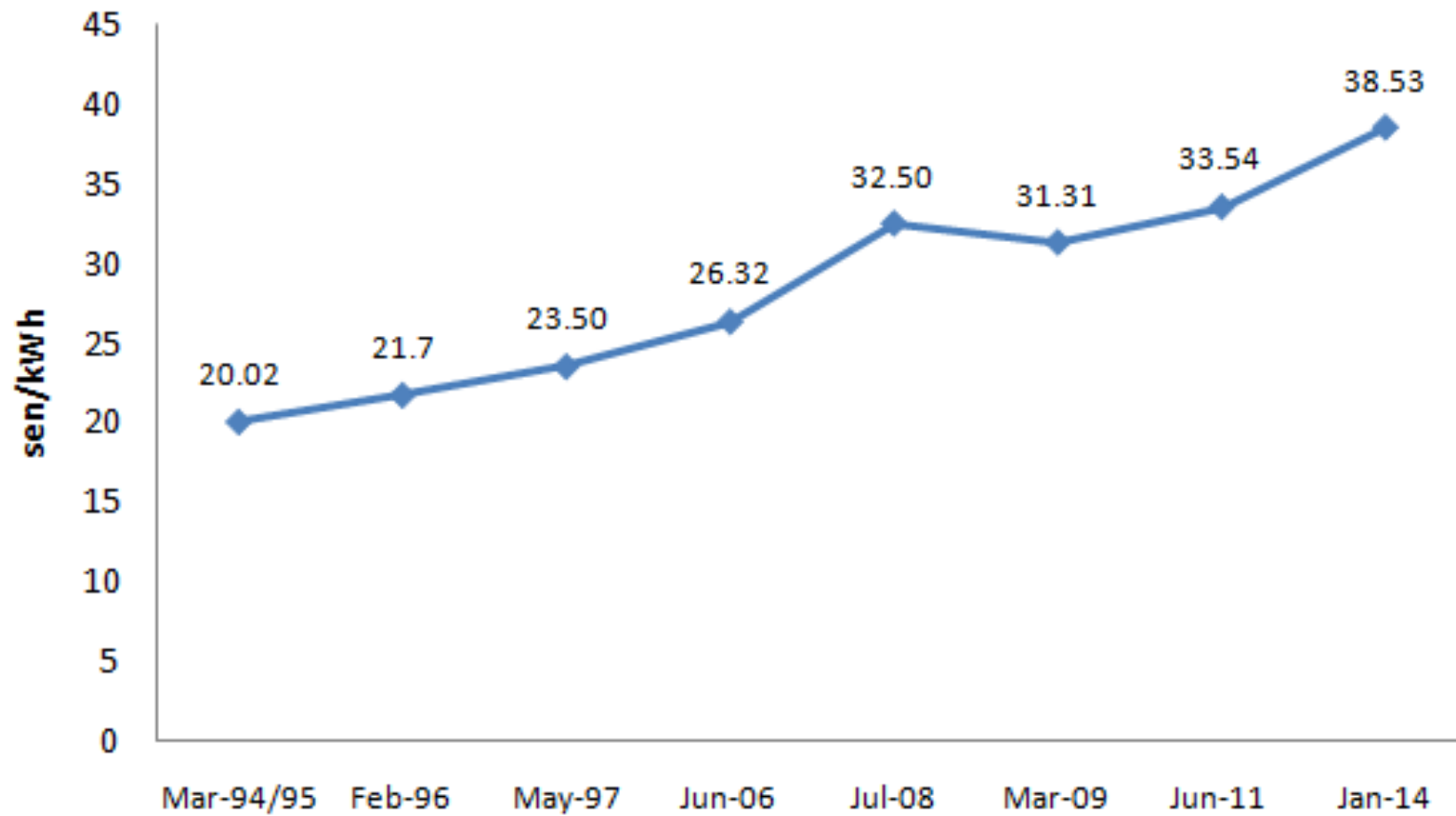
2 Tier 2 –Discounted LNG Market Price

Applicable gas supply volume:

- above 1000mmscfd for power sector
- additional/new contract for large industries
- above 382mmscfd for GMB

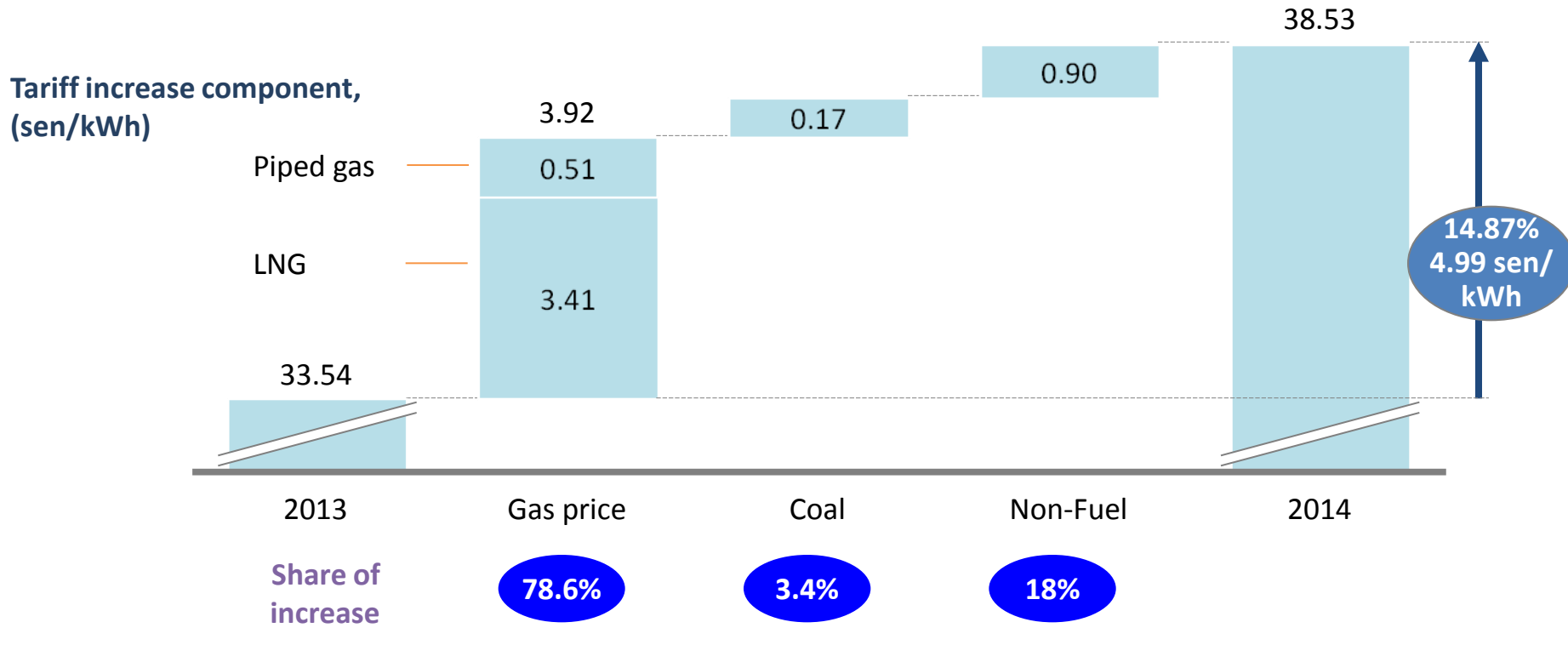


Revisions of TNB Average Electricity Tariff



Components Of Jan 2014 TNB Electricity Tariff Increase

- 82% of tariff increase in January 2014 is due to reduction of gas subsidy, introduction of LNG at market price and increase in coal benchmark market price



- LNG: RM 41.68 per 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

INCENTIVE-BASED REGULATION OF ELECTRICITY TARIFF

Electricity Tariff Components under Incentive-based Regulation (IBR) framework

Electricity Base Tariff Components

Component	sen/kWh
Single Buyer Generation : <ul style="list-style-type: none"> Fuel Costs - 41% Other Generation Specific Costs - 28% 	26.39
Distribution 21%	8.24
Transmission 9%	3.66
<ul style="list-style-type: none"> Single Buyer Operation Grid System Operation 1%	0.24



Imbalance Cost Pass-Through (ICPT)
 every 6 months for changes in fuel costs and other generation specific costs that are beyond the control of Single Buyer
(Difference between cost assumptions in the base tariff and the actual cost of procuring electricity for the regulatory period)

Assumptions in the Base Tariff:

- Fuel Prices:
 - ❖ LNG @ RM41.68/mmBtu
 - ❖ Domestic gas @RM15.20/mmBtu
 - ❖ Coal @USD87.50/tonne
- Other generation specific costs
- Average ratebase is RM50.1billion (over 4-year regulatory period)

38.53 sen/kWh
 Electricity Base
 Tariff Effective
 1st January 2014

Electricity tariff under IBR framework is made up of two components

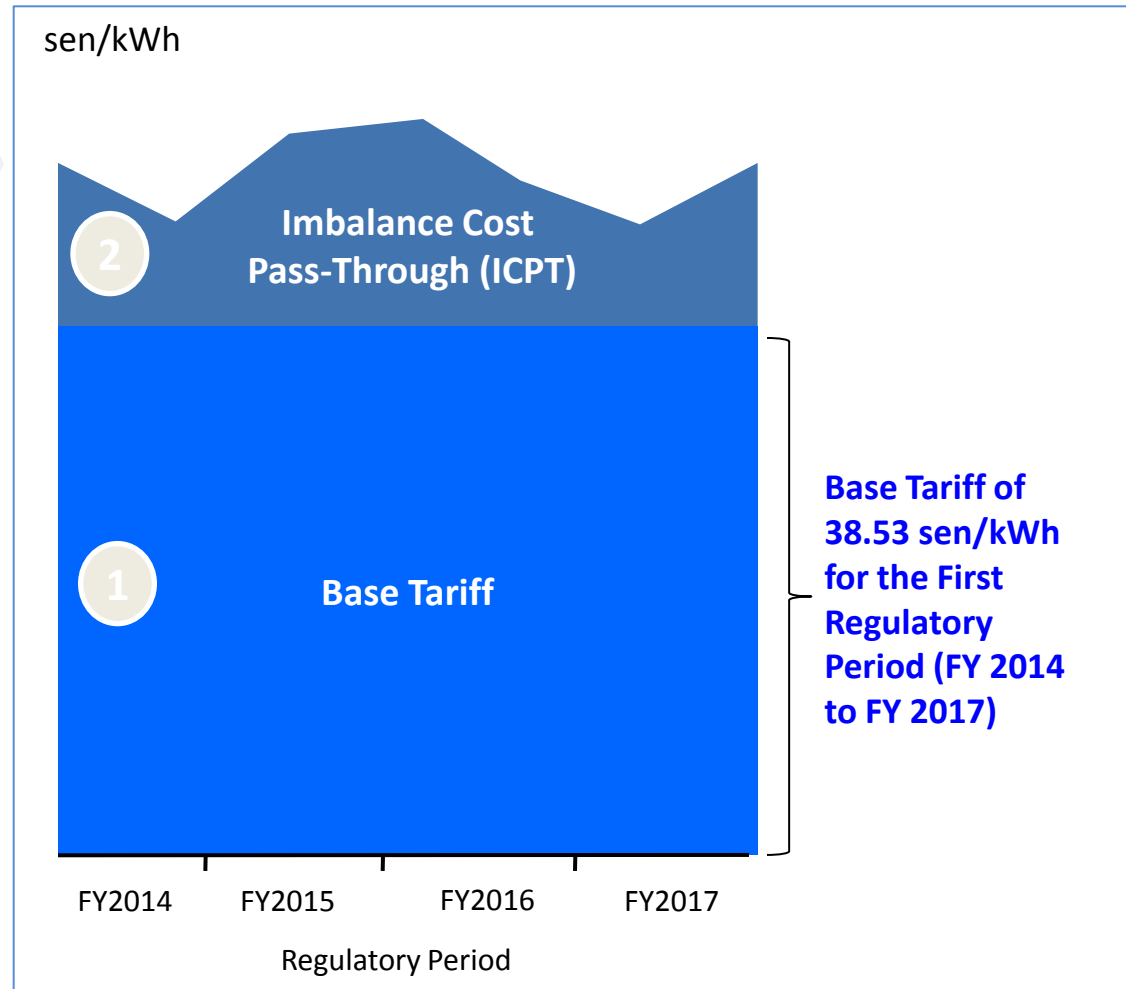
- Base Tariff and Imbalance Cost Pass-Through (ICPT)

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

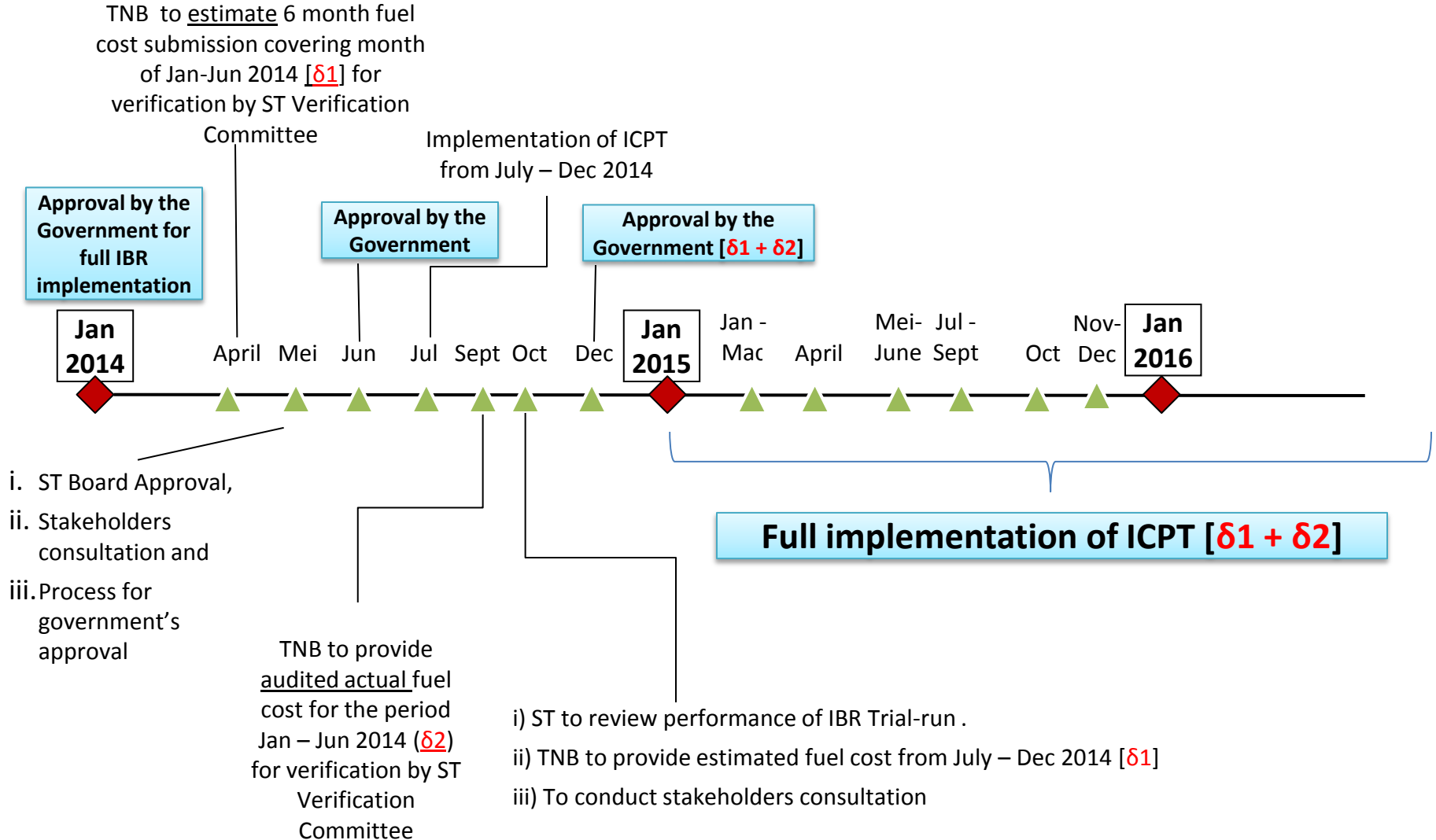
Cost components comprise of:

- 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

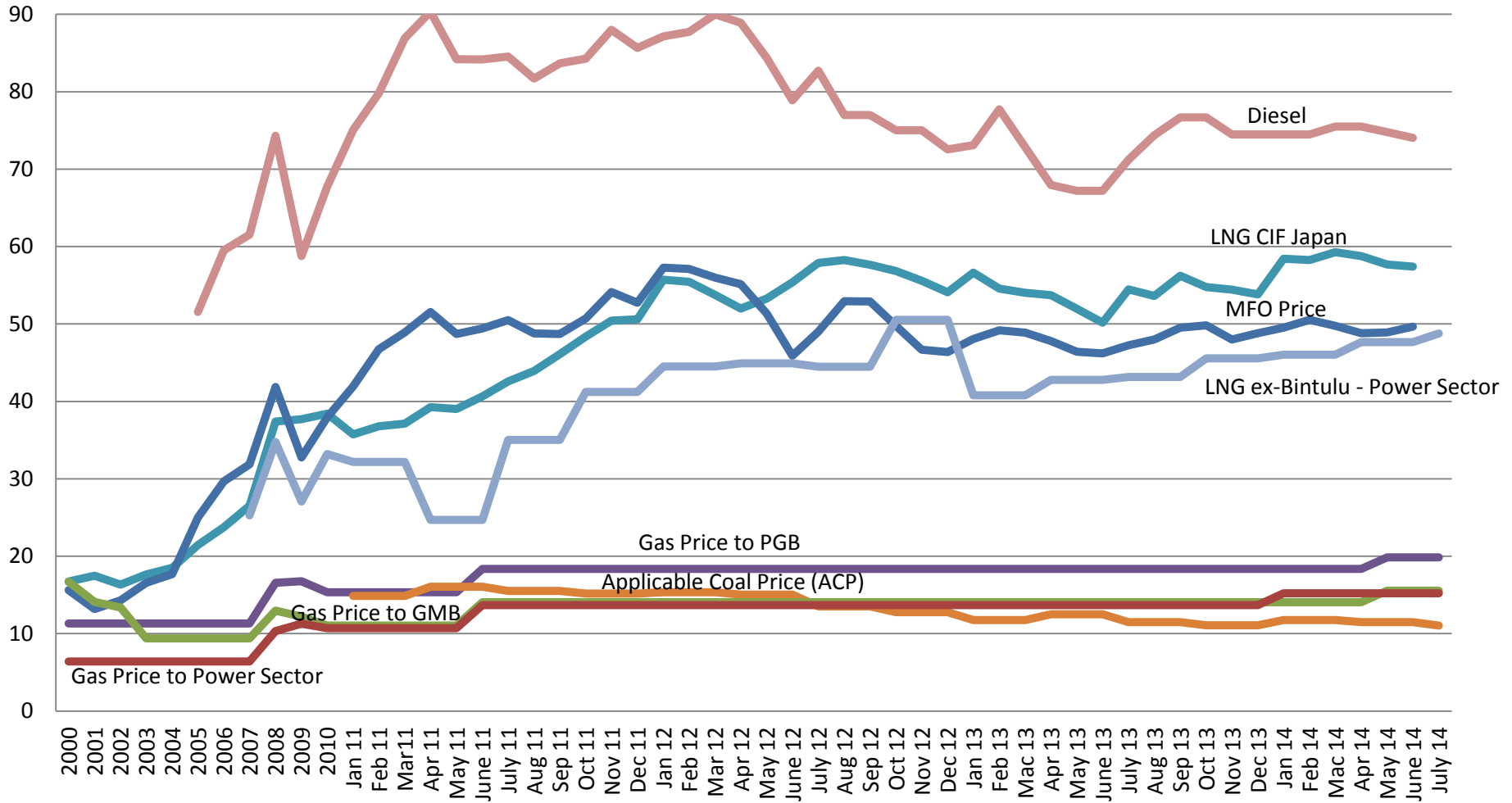
2 : OPEX = Operational expenditure

IBR Timeline for ICPT: Fuel and Other Generation Specific Costs



Average Fuel Price Trend in RM/MMBtu

RM/mmBtu



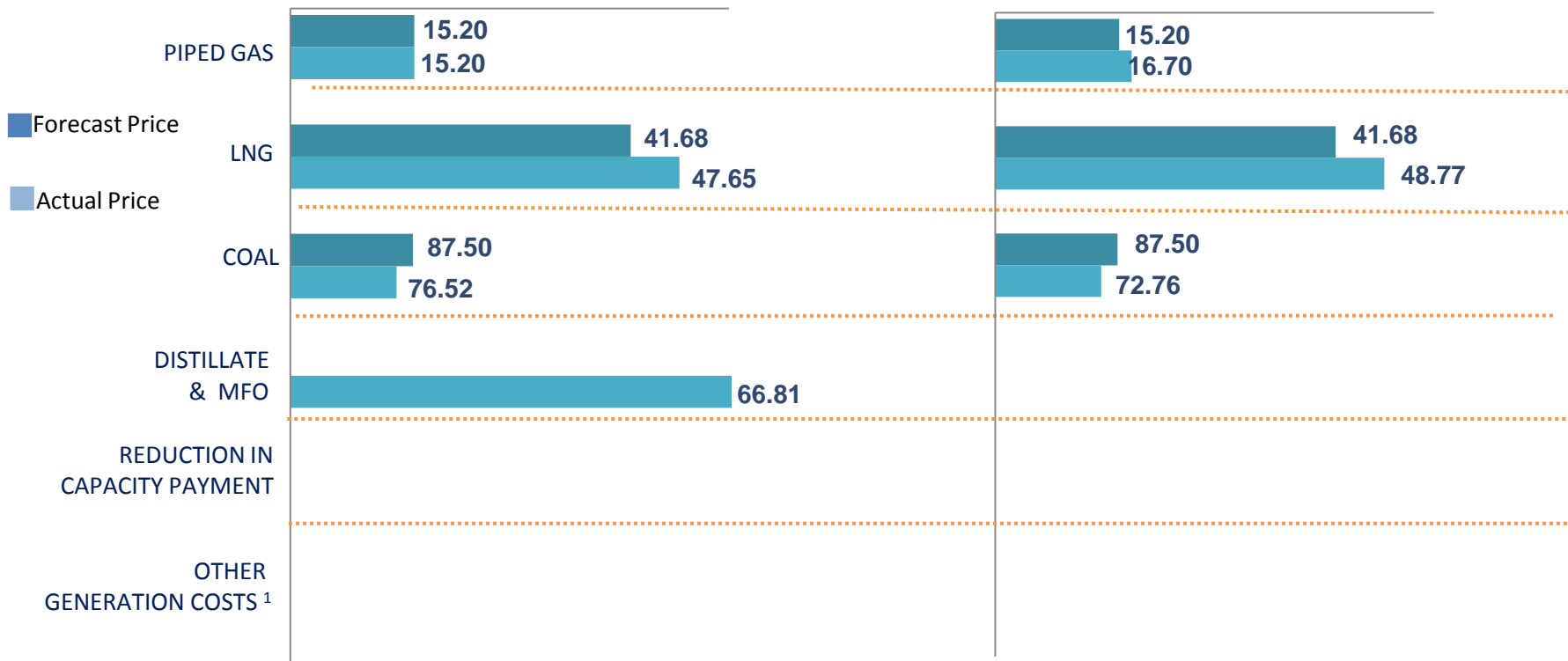
Imbalance Cost Pass-Through (ICPT)

**ICPT
(Period 1: Jan – June 2014)**

**ICPT
(Period 2: Jul – Dec 2014)**

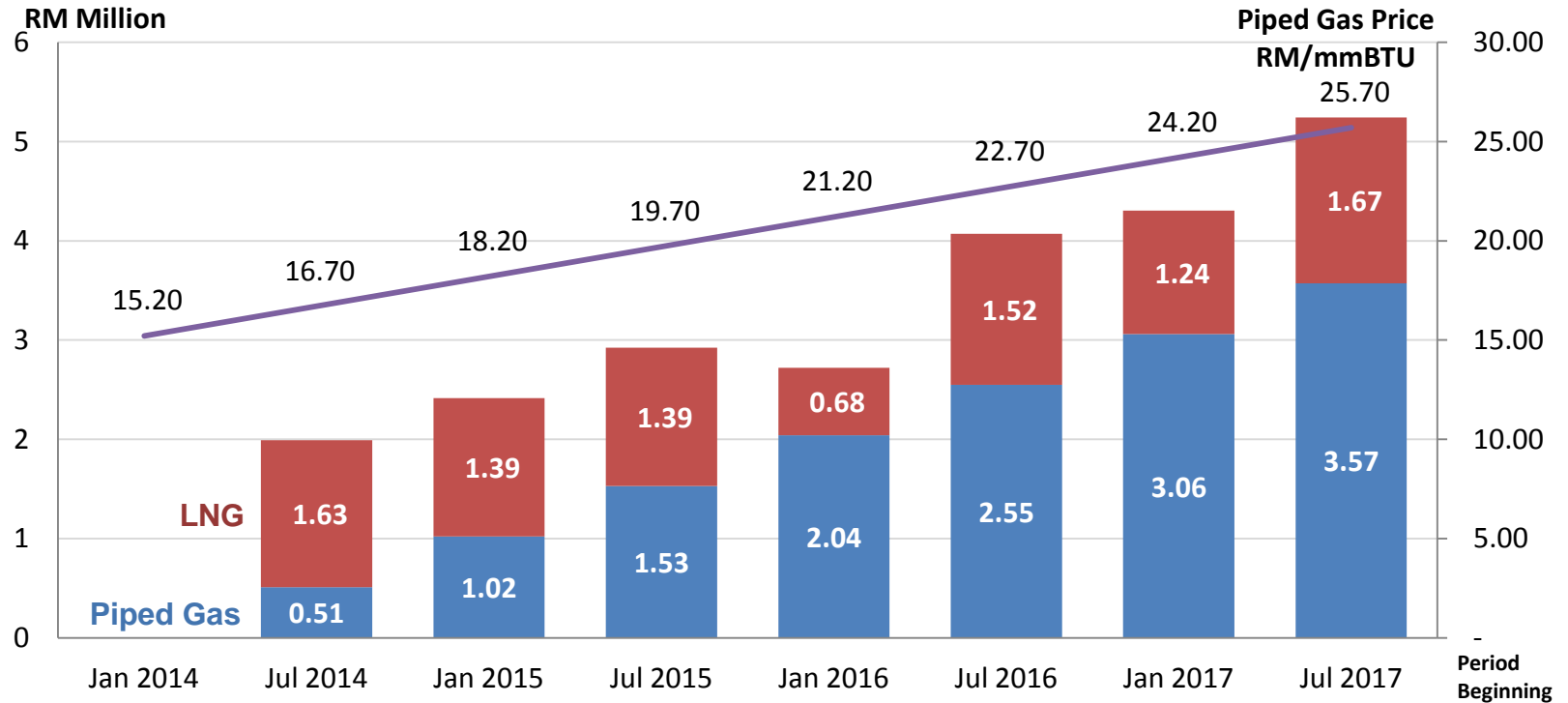
Fuel Price (RM/mmBTU, USD/mt)
and generation costs

Fuel Price (RM/mmBTU, USD/mt)
and generation costs



Note ¹: Other generation costs refers to RE Displaced Cost, variations in VOR, energy payment hydro, variation in capacity payment, IPP Track 2 savings, interconnection cost

Projected Tariff Increase based on projected LNG and Piped Gas Prices in the IBR 1st Regulatory Period, sen/kWh



ICPT in sen/kWh	0	+1.43	+2.41	+2.92	+2.72	+4.07	+4.30	+5.24
Base Tariff + ICPT	38.53	40.52	40.94	41.45	41.25	42.60	42.83	43.77

Assumptions:

- Coal price assumed at 87.50 USD/mt i.e. no variation in coal costs
- Sales volume are extracted from the Revenue Requirement Model (JPPPET April 2012)
- LNG price is assumed at RM 47.65/mmBTU as per Period 1 (Jan – Jun 2014) for 1st regulatory period
- Assumes no pass through for the Other Generation Specific Components in the ICPT
- Period Jan – Jun 2014 is based on increase in LNG price only

Special Industrial Tariff Removal Plan

Government Decision

Subsidy Rationalisation Programme

- The government's subsidy rationalisation programme introduced in July 2010 is a bold move to put the country's economy on a strong footing.

4 May 2011

- In principle Jemaah Menteri agreed for the **Special Industrial Tariff (SIT) discount reduces gradually**

15 July 2013

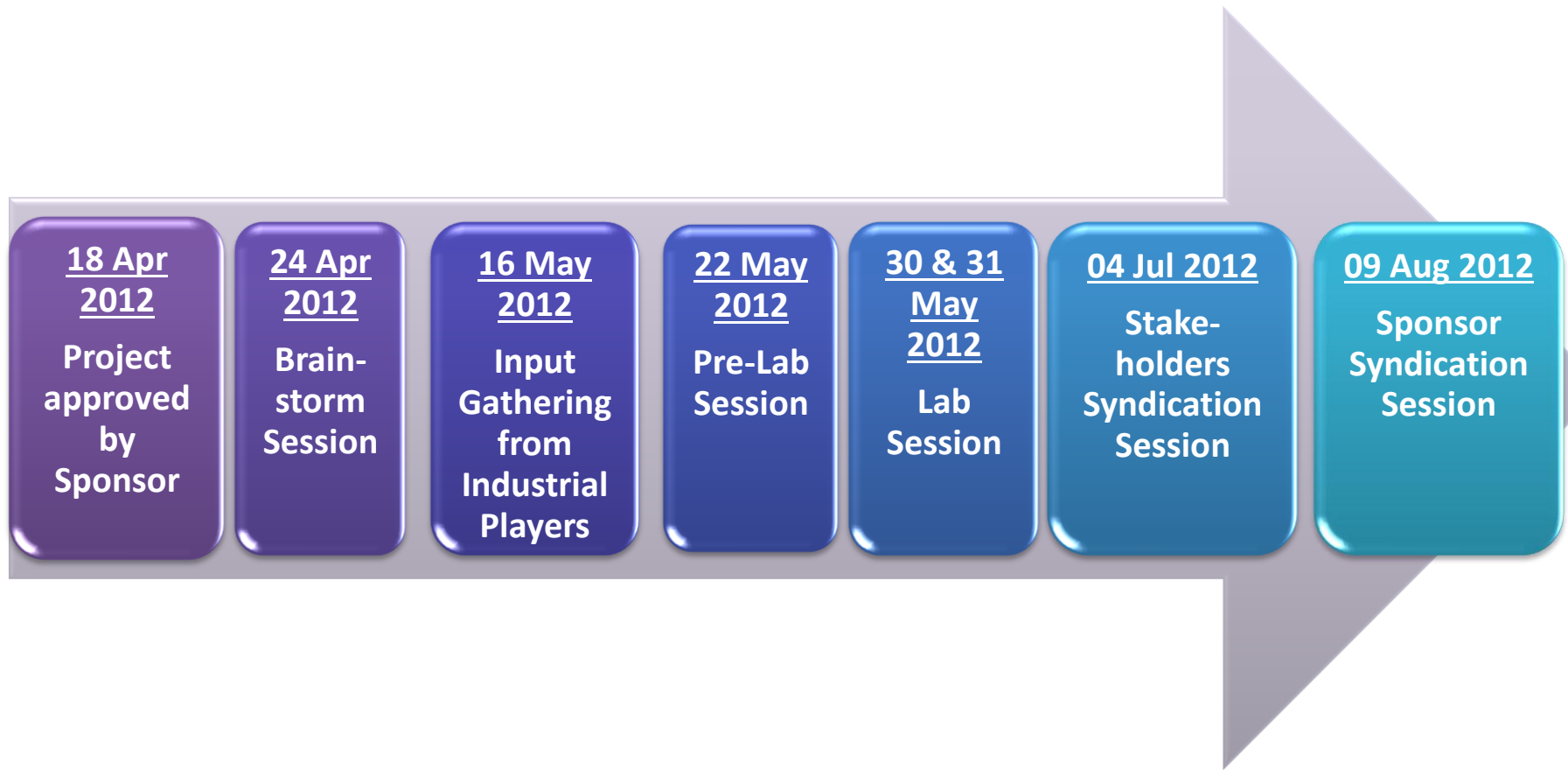
- Majlis Ekonomi agreed for the **Special Industrial Tariff (SIT) discount to be reduced gradually by 2%**

Rationale behind Government's Strategy To Remove SIT Gradually

TIK perlu disemak semula agar selaras dengan strategi kerajaan:-

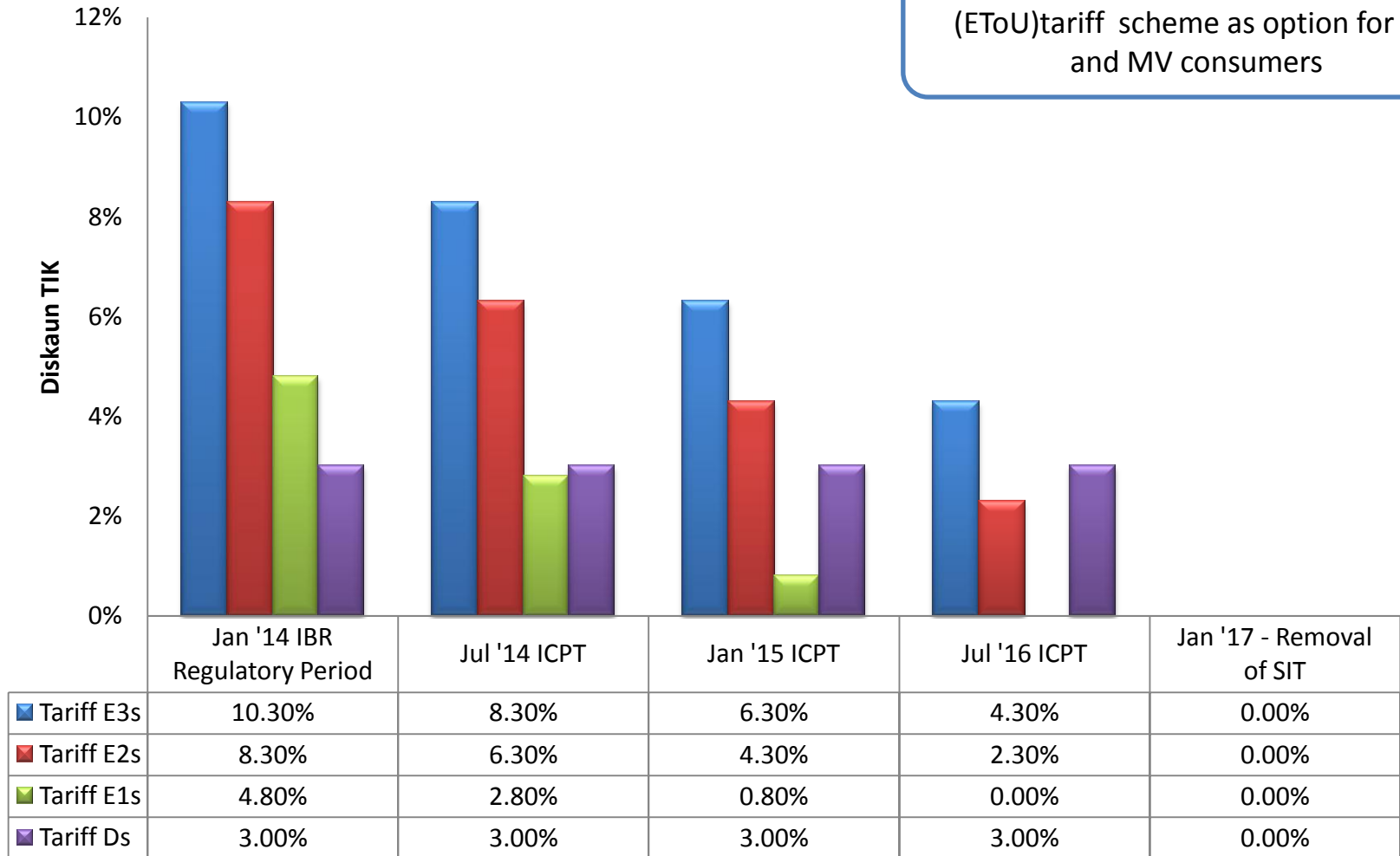
- merasionalisasi subsidi dan mengasingkan subsidi daripada penggunaan tenaga
- menggalakkan industri dan pengguna untuk mengguna tenaga secara cekap dan meminimum pembaziran
- mewujudkan industri yang lebih berdaya saing di pasaran global
- menstrukturkan semula TIK untuk menggalakkan Kecekapan Tenaga kepada pengguna melalui:
 - i. Menyemak semula kriteria kelayakan TIK
 - ii. Mengenalpasti industri yang layak menerima TIK

Consultation process



Gradual removal of SIT, from now till Jan 2017

Introduction of Enhanced Time of Use (EToU) tariff scheme as option for HV and MV consumers



Note: SIT discount rate for tariff Ds is remained until EToU is available for the category on 1 Jan 2017.

THANK YOU
