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# **Presentation on Gas Supply Situation in Peninsular Malaysia**

**Panel Perundingan Tenaga**

**10 June 2014**

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## Objective

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- To share with Panel Perunding Tenaga the Gas Supply Situation in Peninsular Malaysia



## Key messages

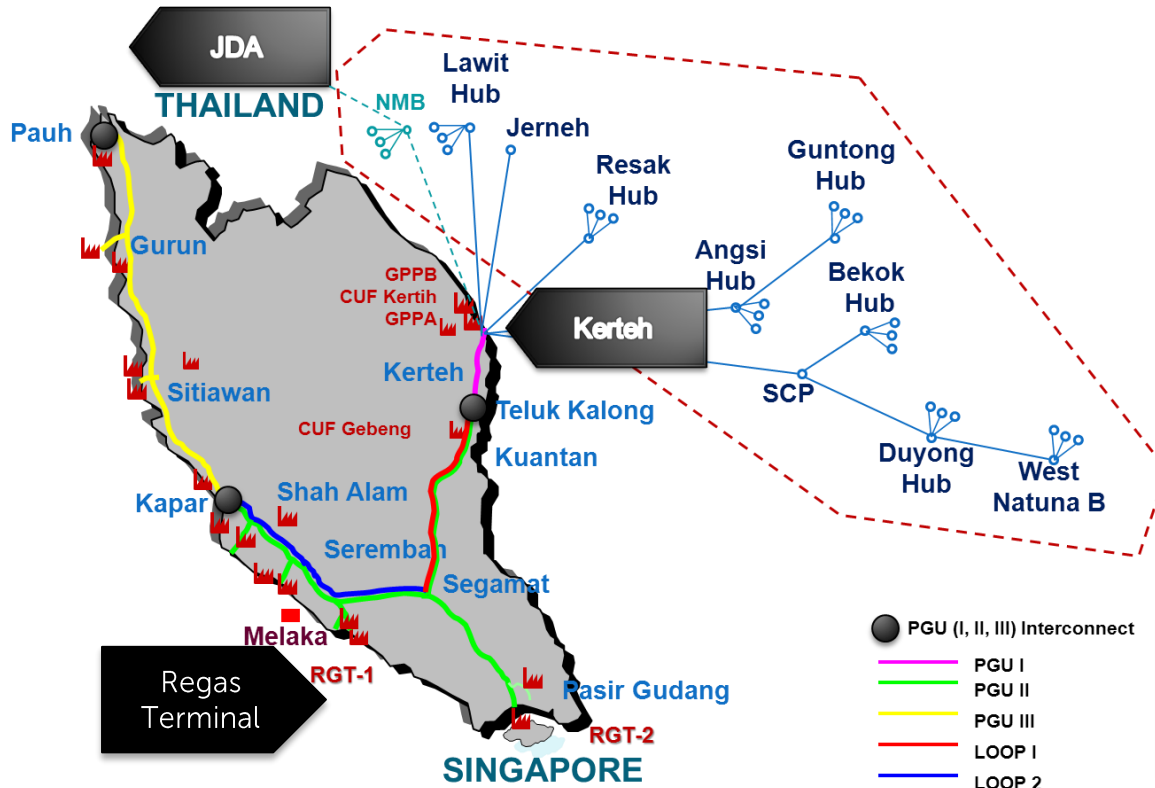
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- Gas supply has improved significantly after RGT started operation (May 2013)
- LNG supply commitment is to fulfil the Annual Delivery Plan (ADP)
  - ✓ 2014 Gas Supply-Demand planning started as early as April 2013; LNG ADP was approved in November
  - ✓ A total of 33 LNG cargoes have been planned for 2014
- Imbalances of supply demand due to sudden & excessive gas off-take by power sector have to be mitigated through various means



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# Extensive infrastructures are in place to support Peninsular Malaysia gas market development



### Major Offshore Facilities

Offshore Platform	106
Active gas wells	203
Major pipelines	923 km
Capacity	2,520 mmscfd feed gas

### Major Onshore Facilities

Pipelines	2,505 km
City Gates	27
Slugcatchers	3
Kertih GPPs	6 (2,060 mmscfd)
TTM GSP	1 (400 mmscfd)
Compressor stations	3
RGT-1 Melaka	3.8 MTPA

### Total Investment

- ~RM26 billion to develop PGU system
- ~RM 2 billion to develop TTM facilities
- ~RM 3 billion to develop RGT-1

### Main Supply Sources

1. Kerteh Offshore (including PM3 & WNB)
2. JDA Songhkla
3. LNG via RGT

### Gas System Network

1. Kerteh Upstream (inclusive of Onshore Terminal i.e. OGT/OSC/future TGAST)
2. LNG Regasification Terminal (RGT)
3. Peninsular Gas Utilisation (PGU) System
4. Trans-Thailand Malaysia (TTM) Plant & Gas Pipeline System



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## LNG import is crucial to mitigating any domestic supply shortfall in efforts to meet Peninsular gas demand

The RGT has been designed to receive, store and regasify LNG with a maximum capacity of 3.8 MTPA or up to 530 mmscf/d

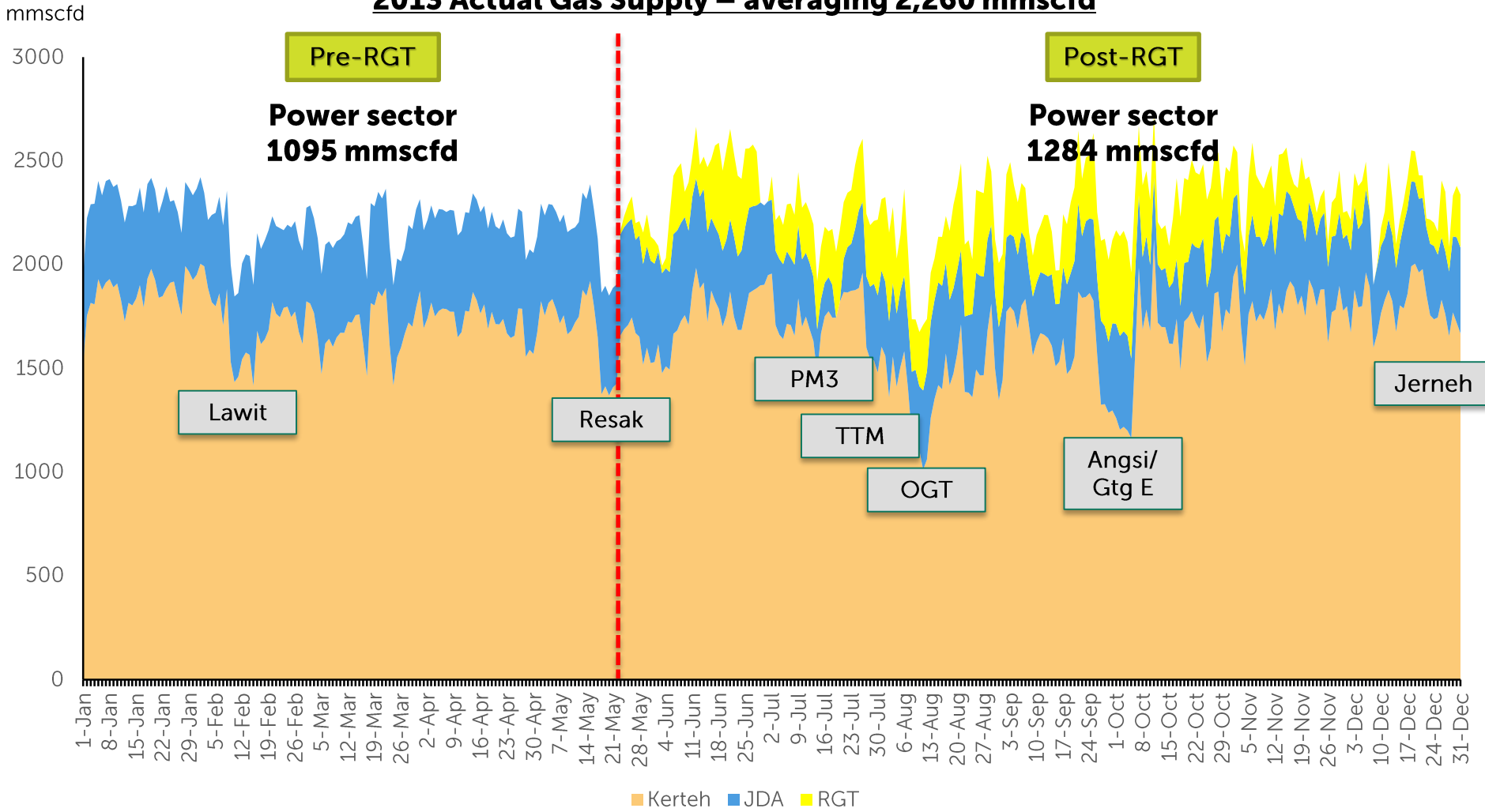


*While RGT generally alleviates the problem of shortfall, it works best when demand/supply planning is effective*



# RGT has improved overall gas supply situation enabling upstream to undertake its maintenance and has increased offtake by Malaysian Power

**2013 Actual Gas Supply – averaging 2,260 mmscfd**



Upstream planned shutdown



## Substantial amount have been spent to bring in a total of 23 LNG cargoes in 2013

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No	Date	Vessel	Origin
1	8-May-13	Seri Bijaksana	Nigeria
2	26-May-13	Seri Angkasa	Nigeria
3	12-Jun-13	Artic Princess	Norway
4	24-Jun-13	Lalla Fatma	Algeria
5	5-Jul-13	Seri Begawan	Nigeria
6	16-Jul-13	Provalys	Yemen
7	30-Jul-13	Seri Begawan	Qatar
8	6-Aug-13	Abadi	Brunei
9	16-Aug-13	Abadi	Brunei
10	22-Aug-13	Cape Ann	Algeria
11	2-Sep-13	Amali	Brunei
12	12-Sep-13	Point Fortin	Yemen
13	21-Sep-13	Amali	Brunei
14	25-Sep-13	Seri Begawan	Nigeria
15	30-Sep-13	Seri Bijaksana	Nigeria
16	8-Oct-13	Abadi	Brunei
17	17-Oct-13	Arkat	Brunei
18	20-Oct-13	Lusail	Qatar
19	27-Oct-13	Grace Acacia	Algeria
20	6-Nov-13	Arkat	Brunei
21	19-Nov-13	Gaselys	Egypt
22	12-Dec-13	Amali	Brunei
23	26-Dec-13	Grace Acacia	Algeria

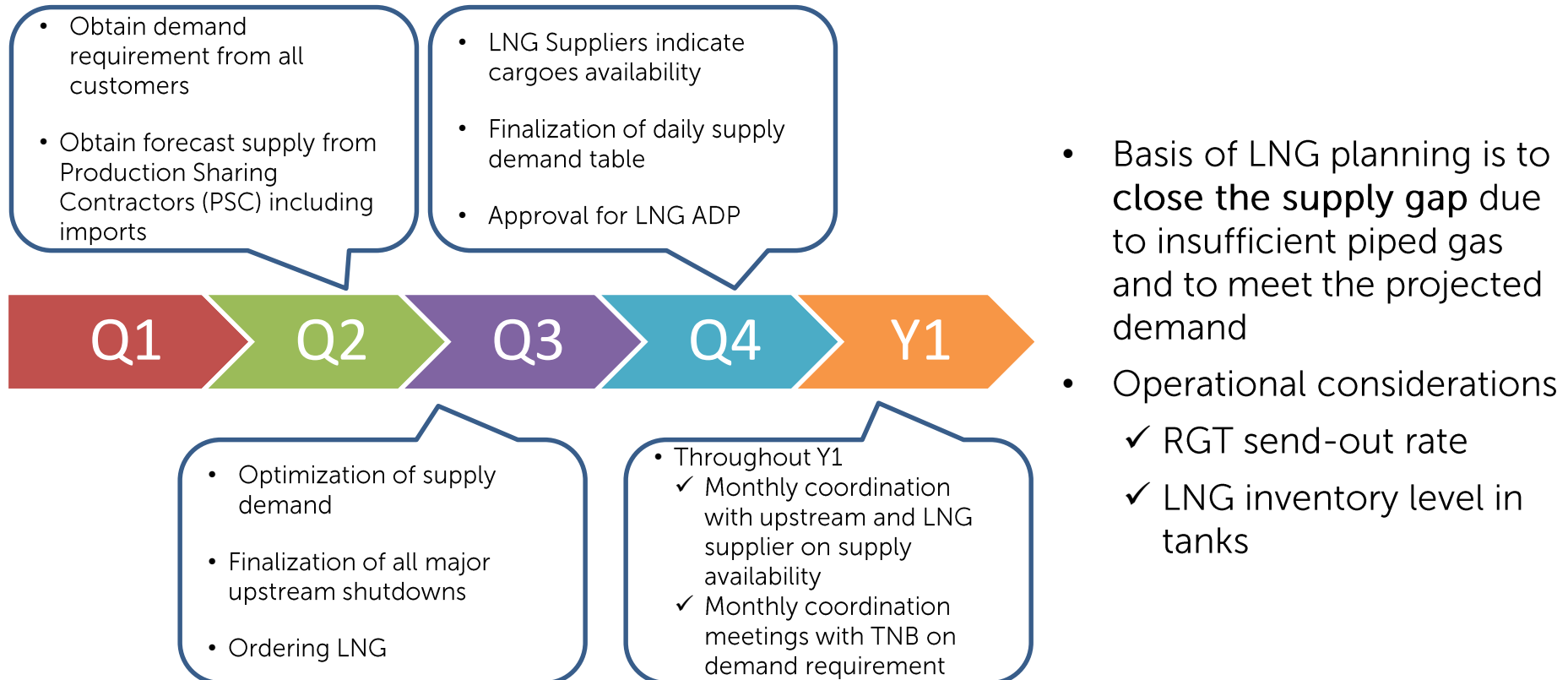
Total cargoes value  
= US\$ 1.09 billion

Weightage average  
purchase price  
= US\$ 16.25/ mmbtu



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## 2014 Gas Supply-Demand planning started as early as April 2013; LNG ADP was approved in November





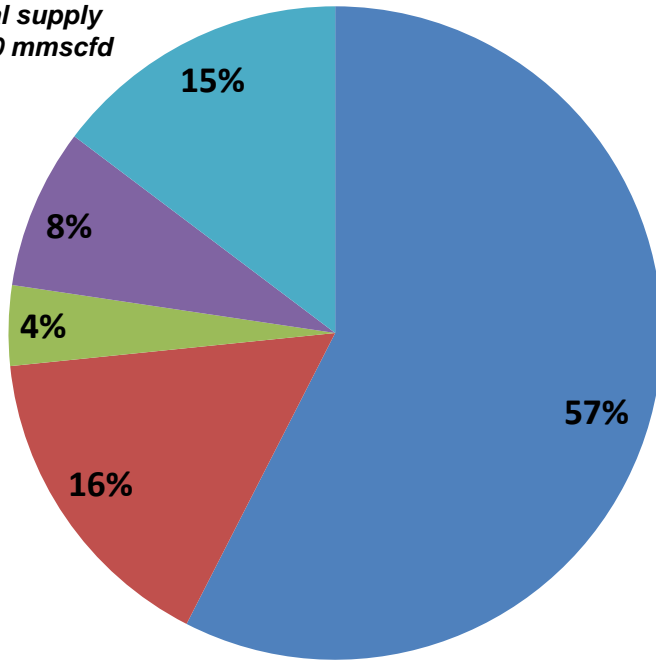


## Peninsular Malaysia gas supply demand balance

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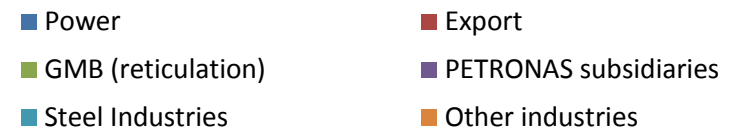
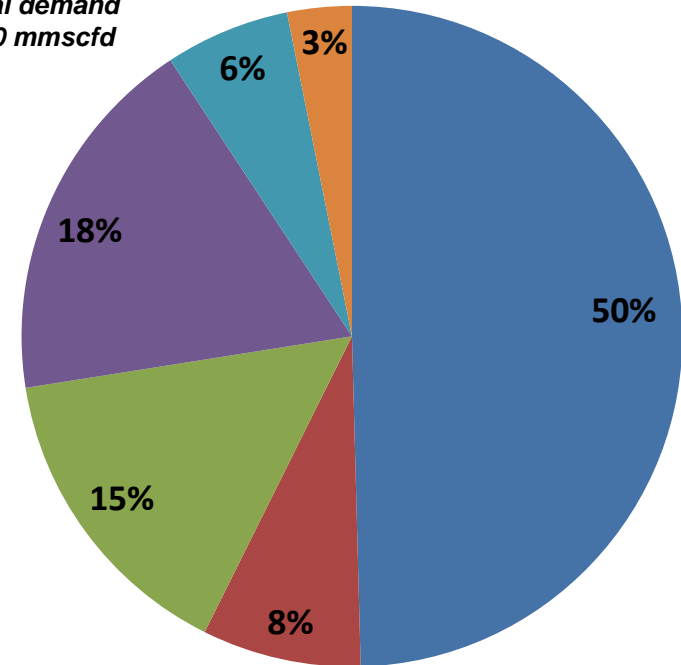
### Gas Supply

Total supply  
2520 mmscfd



### Gas Demand

Total demand  
2520 mmscfd

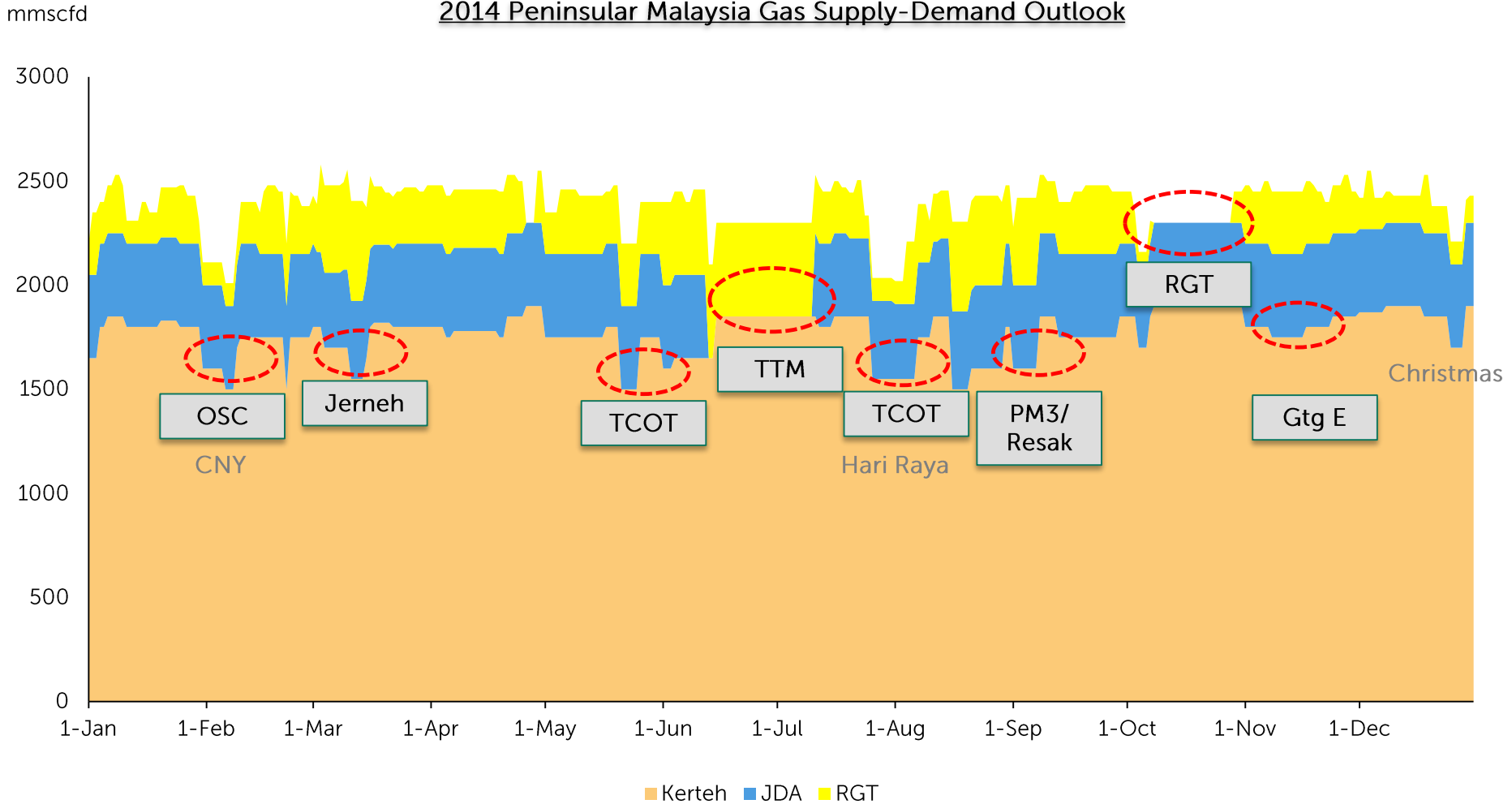




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# 2014 Gas Supply forecast incorporating planned shutdown

2014 Peninsular Malaysia Gas Supply-Demand Outlook





# A total of 33 LNG cargoes have been planned for 2014

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## Quarter 1

JAN					FEB					MAR			
W1	W2	W3	W4	W5	W1	W2	W3	W4	W5	W1	W2	W3	W4
	Cargo 1		Cargo 2				Cargo 3	Cargo 4		Cargo 5	Cargo 6		Cargo 7

## Quarter 2

APR				MAY					JUNE				
W1	W2	W3	W4	W1	W2	W3	W4	W5	W1	W2	W3	W4	W5
Cargo 8	Cargo 9		Cargo 10	Cargo 11		Cargo 12	Cargo 13		Cargo 14	Cargo 15	Cargo 16	Cargo 17	

## Quarter 3

JUL					AUG					SEP			
W1	W2	W3	W4	W5	W1	W2	W3	W4	W5	W1	W2	W3	W4
Cargo 18	Cargo 19	Cargo 20		Cargo 21	Cargo 22		Cargo 23	Cargo 24	Cargo 25		Cargo 26	Cargo 27	Cargo 28

## Quarter 4

OCT					NOV					DEC			
W1	W2	W3	W4	W5	W1	W2	W3	W4	W5	W1	W2	W3	W4
RGT DOSH SD					Cargo 29	Cargo 30		Cargo 31		Cargo 32		Cargo 33	

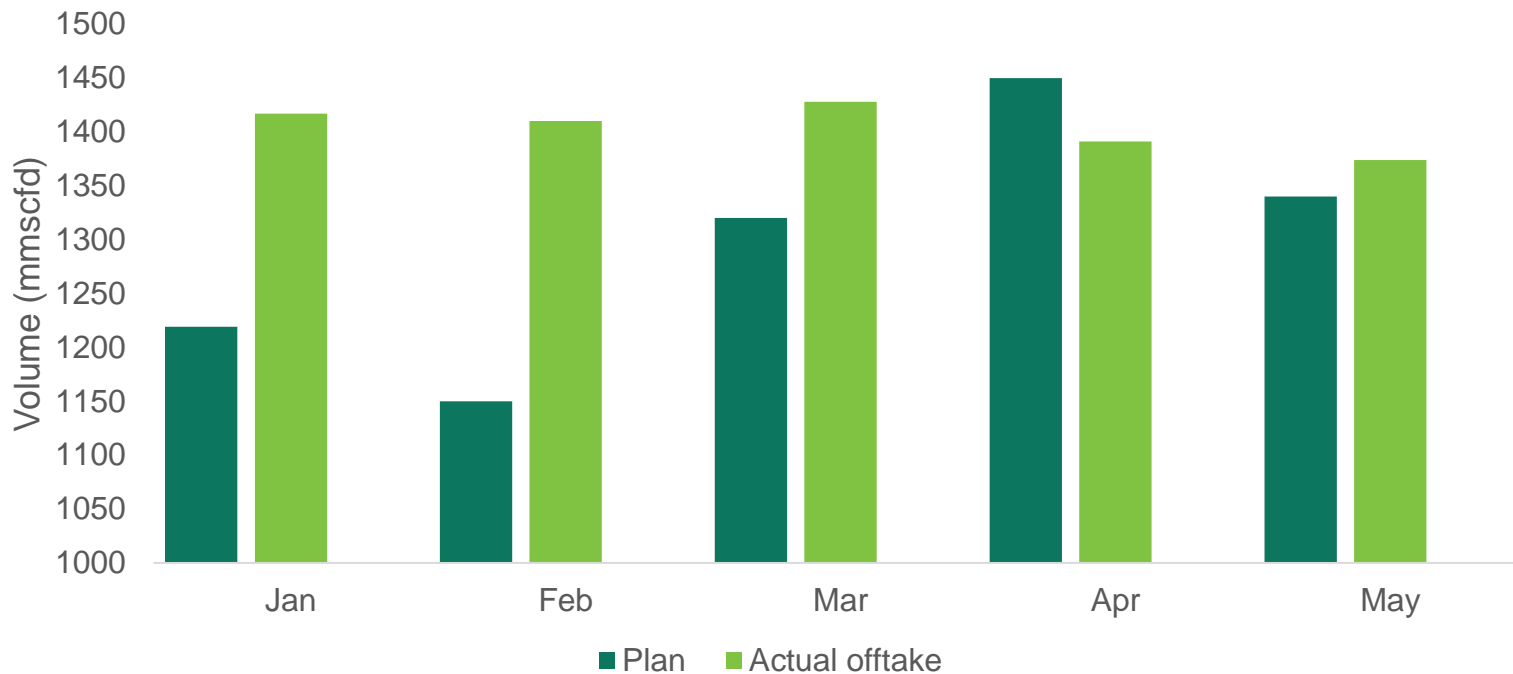
Firm LNG cargoes



## Actual offtake from Power Sector was 8% higher than planned (Jan-May 2014)

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Unit: mmscfd	Jan	Feb	March	April	May	Average
Plan	1219	1150	1320	1450	1340	1296
Actual off take	1417	1410	1428	1391	1374	1404





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## Challenges in managing supply demand situation post RGT

### Excessive offtake:

- Causes supply demand imbalances affecting other customers' offtake
- Prolonged increase in RGT send out affecting:
  - LNG inventories and cargoes scheduling
  - breached the minimum national strategic reserve level of 20% in Feb 2014
- Had to increase TTM send out rate and borrow from PTT's JDA volume in order to meet higher off take from power sector

### Lower offtake:

- Low off take from customers require Upstream to impose production cutback due to sudden high pressure in PGU system



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**Thank you**