COP 17

UN Climate Change Conference
Durban, South Africa
28 November - 9 December 2011

KUALA LUMPUR 2012 WORLD GAS CONFERENCE

International Gas Union (IGU) presents

Natural Gas - Powering the Low-Carbon Economy & Facilitating Access to Energy



A Symposium at the United Nations' Climate Change Conference in Durban

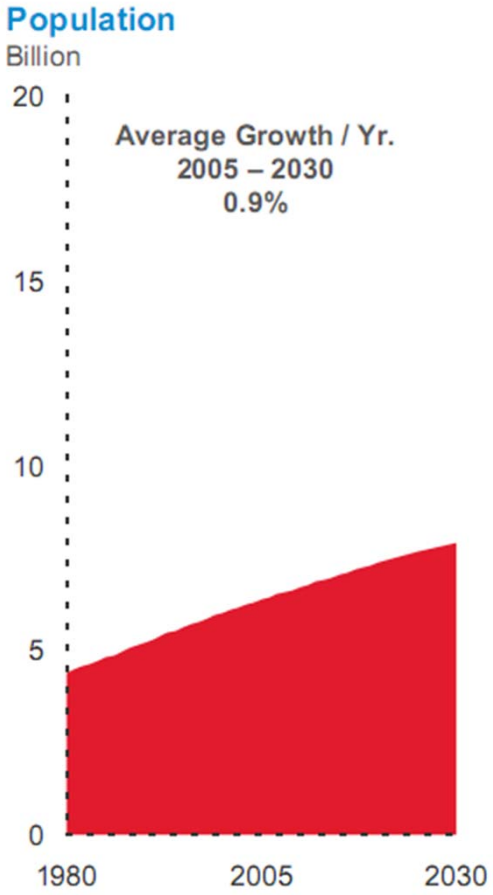
IGU - Gas Event

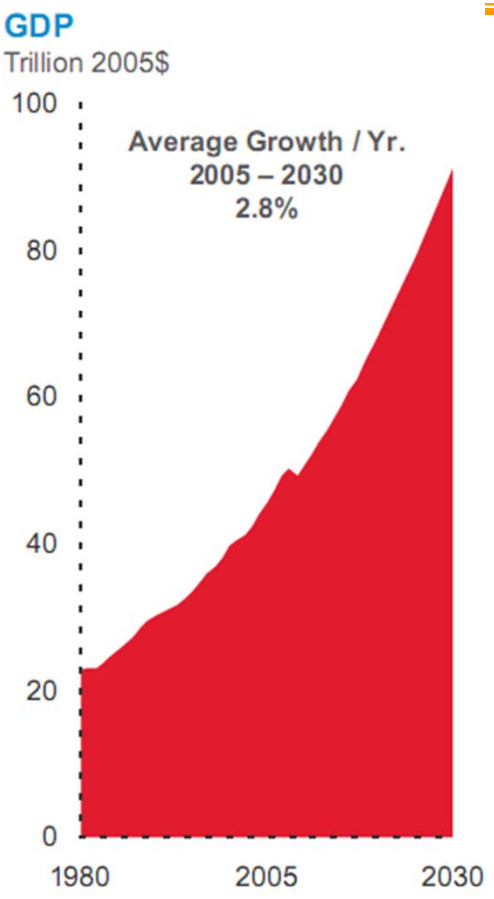
Sunday 4 December
2011

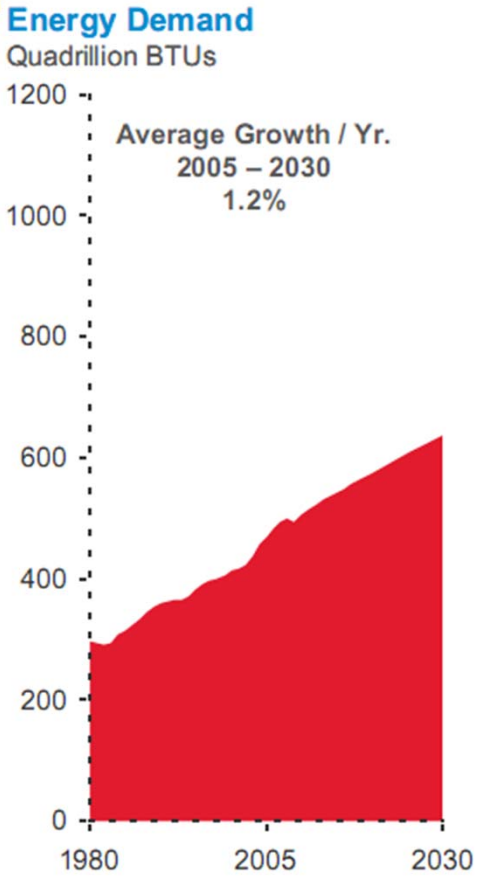
By:
Ho Sook Wah
Chairman, Coordination Committee
International Gas Union (IGU)

4th December 2011
Durban | South Africa

WORLD DEMAND FOR ENERGY IS INCREASING







- Key drivers: population growth, economic expansion, urbanisation and individual's prosperity.
- The world faces a dual challenge of energy security and environmental concerns.
- The world's energy equation becomes more complicated as sustainability takes place accordingly.

Source(s): ExxonMobil 2010, OECD/IEA 2010, IGU 2011

NATURAL GAS MEETS GLOBAL NEEDS

Global needs:

- More energy
- Affordable energy
- Cleaner energy
- Safe energy

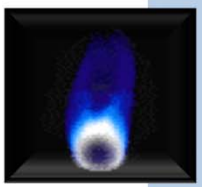
Natural gas is:

- Abundant
- Affordable
- Acceptable

Natural Gas CARES for the world

Gas: Part of the long term energy solution

GAS USE EVOLVES OVER TIME



1800-1850
Gas for lighting

street lights
gas from coal
lamps in the home
first gas company
heating
first gas well
cooking
metering
more gas lights than oil lamps
compressors
vehicles
pipeline transport
industrial use
national pipeline network

1850-1900
Gas for heating & cooking

thermostats for heating
World's Fair features gas
underground storage
1st LNG cargo to Europe
turbine for electricity
NYMEX futures
Russia exports to Europe
LNG to Asia
meets 20% of energy needs globally
UK-Europe Interconnector
renewed US interest in LNG
first gas fuel cell in the home
advances in shale gas enhance supply outlook
Expanded use to meet growing power needs & reduce emissions

1900-1950
Gas for industry & power

1950-2000
Gas as a global, flexible fuel

2000-2030
Gas to reduce emissions

- It is adaptable in response to the world's changing needs.

Source(s): ExxonMobil 2011

NATURAL GAS HAS A VARIETY OF USES

Fuel for
Gas District Cooling

Fuel for
Residential

Fuel for
Commercial

Fuel for
Automotive

Fuel for
Industry

Fuel for
Power Generation

Fuel for
Petrochemical Feedstock

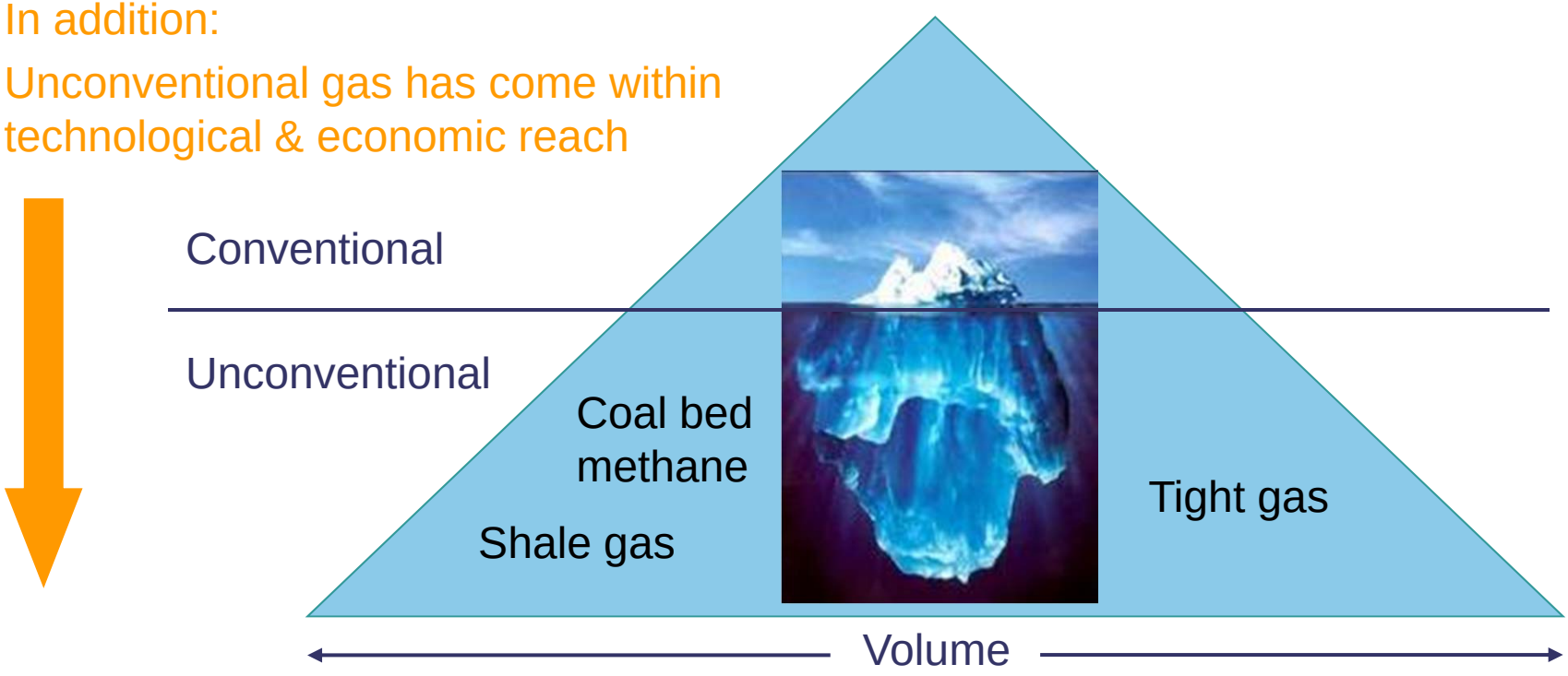
- Gas is the preferred fuel due to its efficiency, flexibility, economic and environmental credentials as well as a better public acceptance compared to nuclear power and coal-fired plants.

NATURAL GAS RESERVES – PLENTIFUL WITH MORE TO COME

Proven conventional reserves are growing

In addition:

Unconventional gas has come within technological & economic reach



Altogether recoverable resources for over 250 years at current production rates.

- IEA-Golden Age of Gas 2011-

SOME KEY ISSUES STILL EXIST

Issues impacting the global gas industry

Energy Policy and Regulation

Shale Gas

Gas Pricing

Image of Gas

Impact of Fukushima

Natural Gas offers a Realistic Path To a Low Carbon Economy

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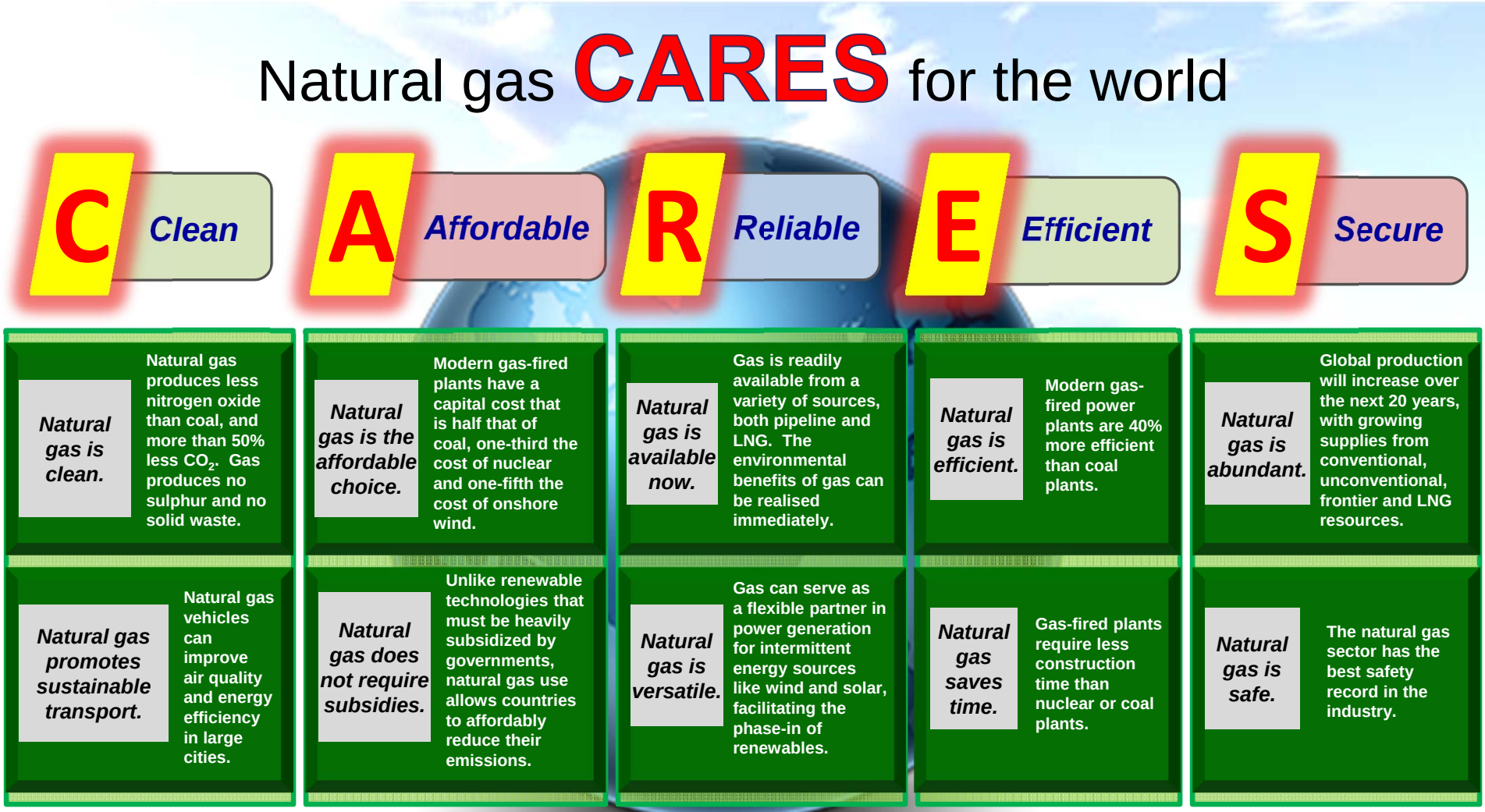
Natural gas CARES for the world



- It is a clean, affordable, reliable, efficient, and secure energy source.

YOU CAN'T TURN ON THE SUN OR THE WIND WITH A SWITCH

- Variability creates complex grid balancing & supply security issues
- Gas-fired generation can play a key role in maintaining grid stability and supply security

NATURAL GAS ENABLES RENEWABLE ENERGY

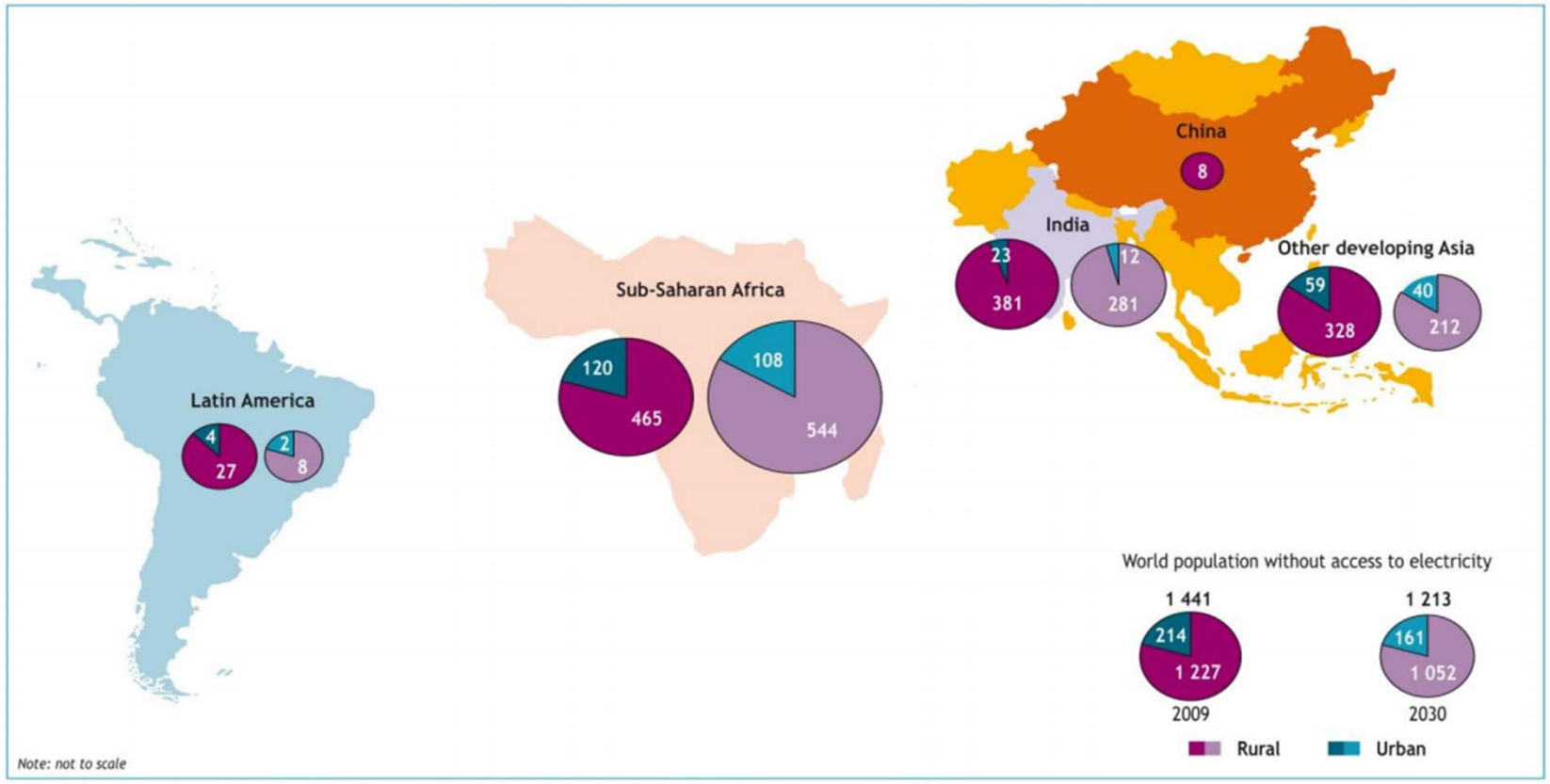
Natural Gas - Wind - Solar

Natural gas can produce clean base load support for intermittent renewables

An ideal combination

OVERCOMING ENERGY POVERTY WITH NATURAL GAS

Number of people without access to electricity (in million)

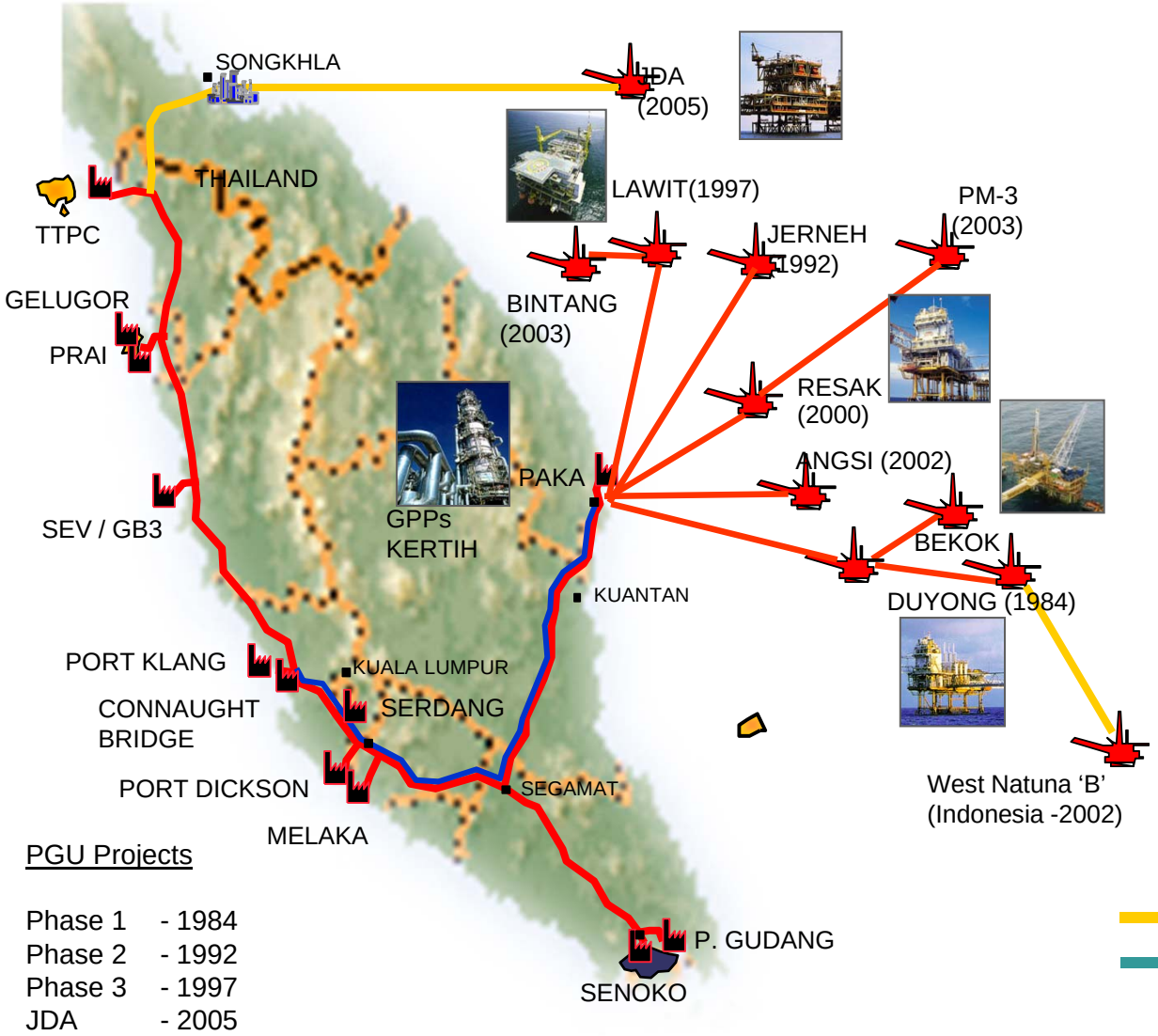


The boundaries and names shown and the designations used on maps included in this publication do not imply official endorsement or acceptance by the IEA.

- In 2010, 1.4 billion people or 20% of the world's population do not have the access to electricity.
- By 2030, 1.2 billion people or 15% of the world's population will still lack the access to electricity despite more widespread prosperity and more advanced technology.

Source(s): OECD/IEA 2010

ENERGY ACCESS
- CASE STUDY ON MALAYSIA



Upstream Capacities

Major Facilities	
Fields developed	11
Major pipelines	923 km
Production capacity	2500 mmscfd

Downstream Capacities

Major Facilities	
Pipelines (trunklines)	2,600 km
Pipelines (distribution)	1,365 km
City Gates	27
Slugcatcher	3
Kertih GPPs	6 (2,060 mmscfd)
TTM GSP	1 (316 mmscfd)
Compressor stations	3
Supply capacity	
- From Kertih	2,060 mmscfd
- From JDA	316 mmscfd

PGU Projects

Phase 1 - 1984
Phase 2 - 1992
Phase 3 - 1997
JDA - 2005

New connections (West Natuna 'B' and JDA)

PGU Loop

Source of Data: CIRU, PETRONAS

TOTAL INVESTMENT = USD 8 BILLION

WELCOME TO THE 25TH WORLD GAS CONFERENCE

"GAS : SUSTAINING FUTURE GLOBAL GROWTH"

Kuala Lumpur Convention Centre

4 to 8 June, 2012

www.wgc2012.com/,www.igu.org/

THANK YOU FOR YOUR KIND ATTENTION !