



**MINISTRY OF ENERGY AND MINERAL RESOURCES
DIRECTORATE GENERAL OF OIL & GAS**

Policy Goals for Unconventional Gas and Investment Needs

by:

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2nd United States-Indonesia Energy Investment Roundtable: "Unconventional Gas"

Under the auspices of the

United States-Indonesia Energy Policy Dialogue

Jakarta, 6 February, 2012



AGENDA

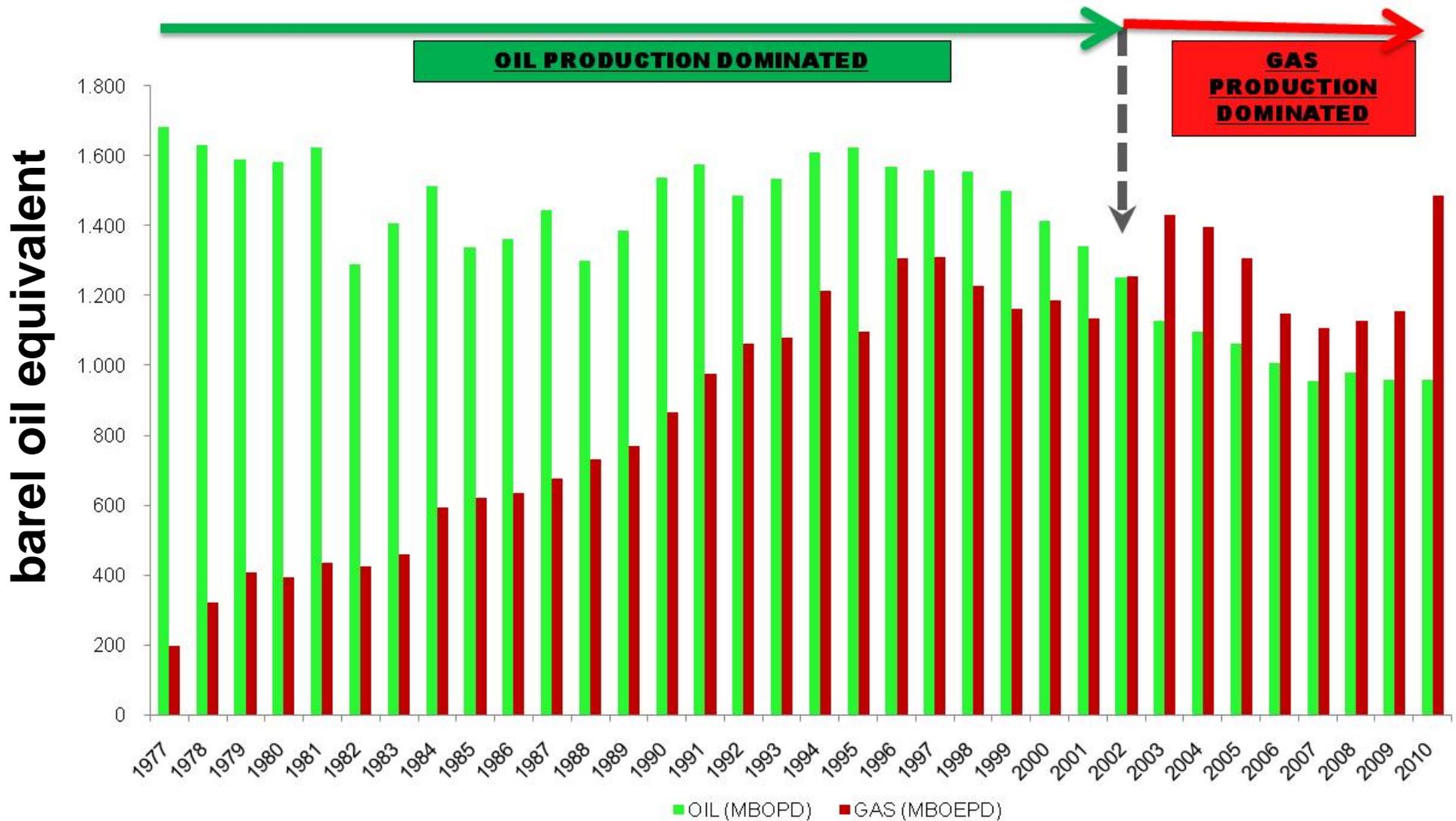
- **SHIFTING PARADIGM WITHIN OIL AND GAS INDUSTRY**
- **POTENTIAL OF GAS DEVELOPMENT IN INDONESIA**
- **DEVELOPMENT OF GAS INFRASTRUCTURE IN INDONESIA**
- **UNCONVENTIONAL OIL AND GAS IN INDONESIA**



SHIFTING PARADIGM WITHIN OIL AND GAS INDUSTRY



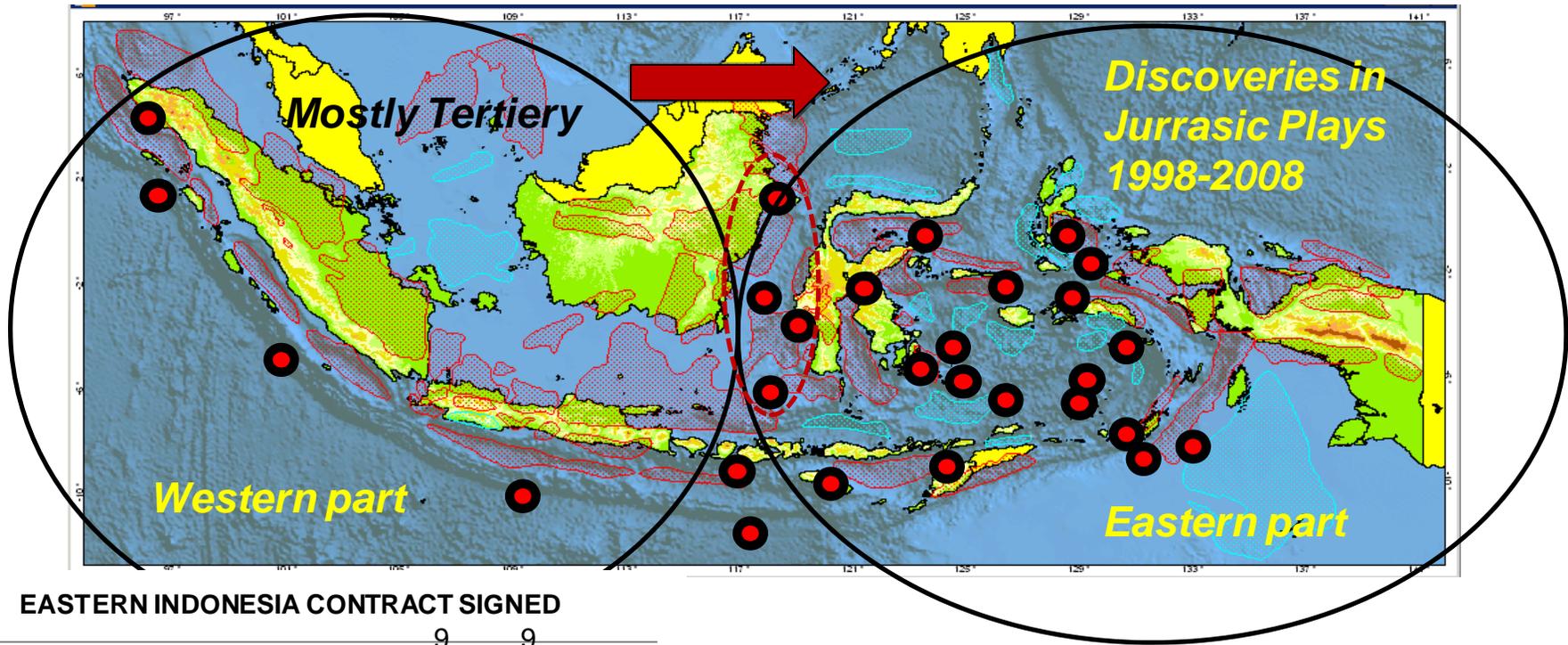
FROM OIL TO GAS





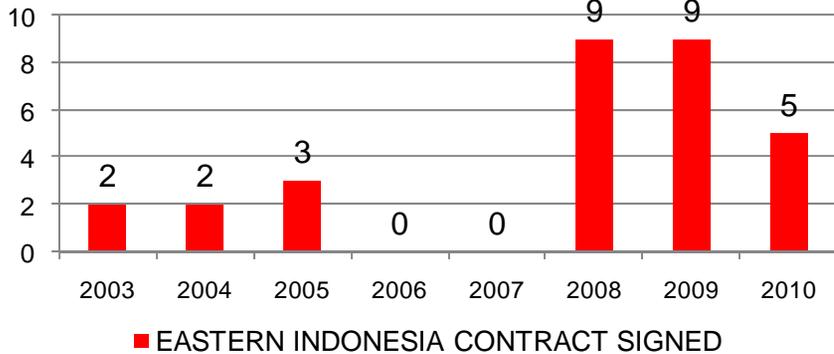
FROM WEST TO EAST

More reserves found and exploration activities occurred in the eastern part of Indonesia mainly **deepwater project**



● *Deep Water Area*

EASTERN INDONESIA CONTRACT SIGNED

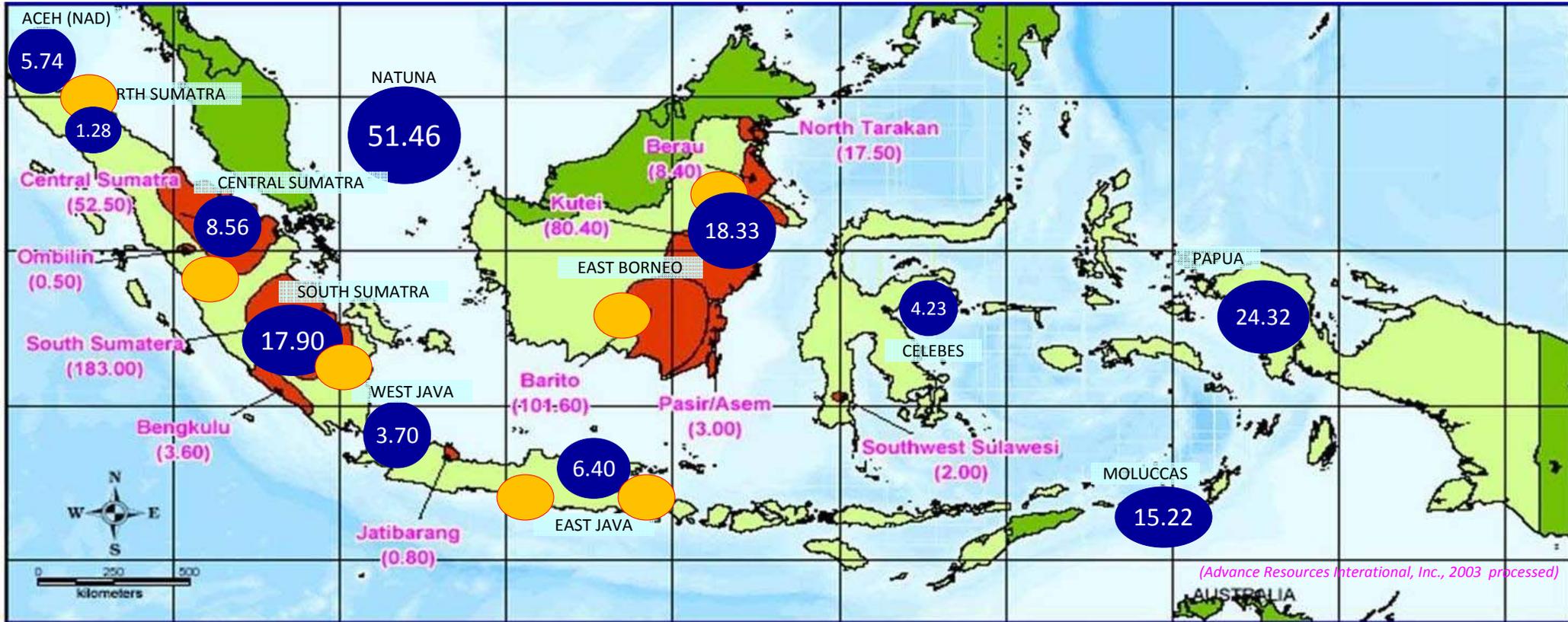


Most of bidding acreage located in eastern side of Indonesia

POTENTIAL OF GAS DEVELOPMENT IN INDONESIA



NATURAL GAS RESOURCES – RESERVES & CBM RESOURCES, SHALE GAS POTENTIAL



(Advance Resources Interational, Inc., 2003 processed)

● GAS RESOURCES = 334.5 TSCF
● GAS RESERVES (As of December 31st 2010)

PROVEN	=	104.71 TSCF
POTENTIAL	=	48.18 TSCF
TOTAL	=	152.89 TSCF

(As of January 1st 2011)

● CBM RESOURCES = 453.30 TCF
 Total CBM Basin = 11
 (Advance Resources Interational, Inc., 2003)

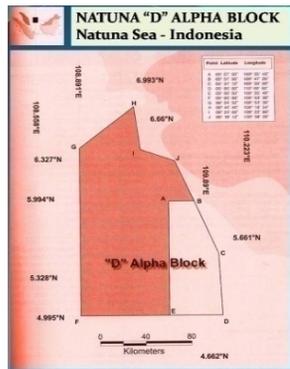
Signed Contracts up to Desember 2011 :
 42 CBM PSCs

● SHALE GAS POTENTIAL

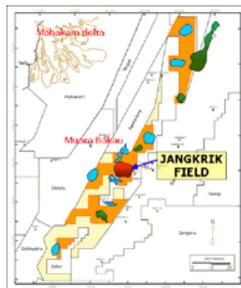
- Currently, the Government has been doing initial study shale gas potential in Indonesia
- Some rock samples have been taken from several regions for laboratorium analysis



FUTURE GAS DEVELOPMENT

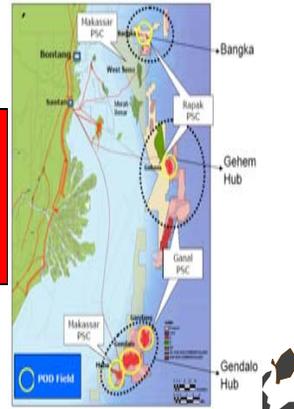


D-ALPHA



Muara Bakau

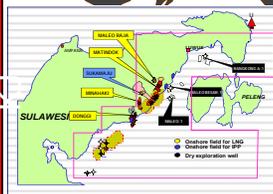
IDD



Tangguh Train 3



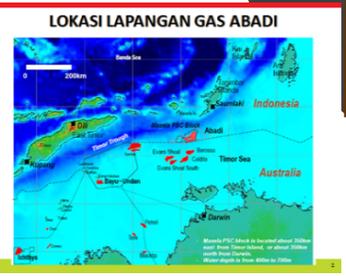
MATINDO



CEPU

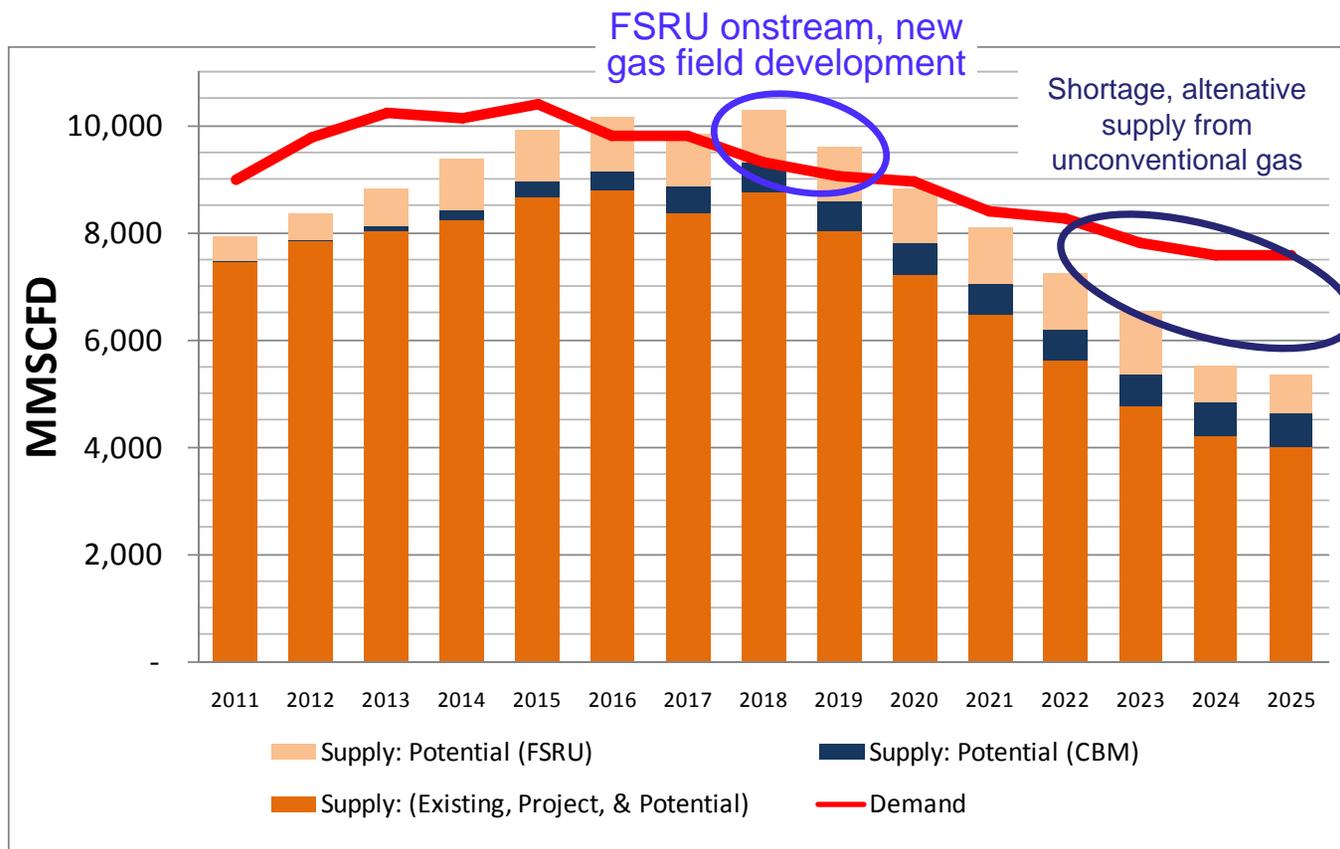


MASELA





INDONESIA GAS BALANCE (2011-2025)

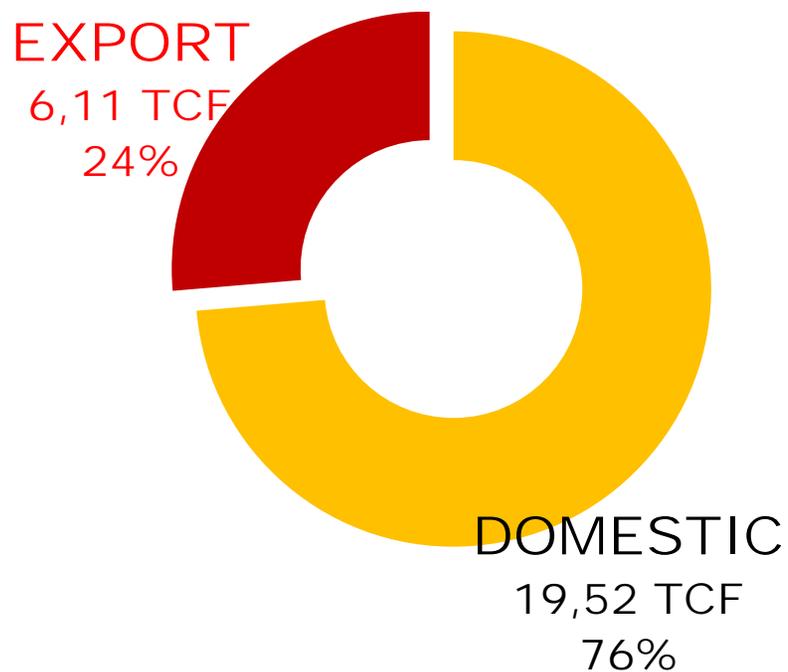


- High conventional oil & gas demand
- Rising oil prices and other energy commodity prices
- Consideration to develop unconventional oil & gas
- Surplus in 2016 (FSRU on stream, new gas field development)
- Shortage in 2022 (alternative supply from unconventional gas)

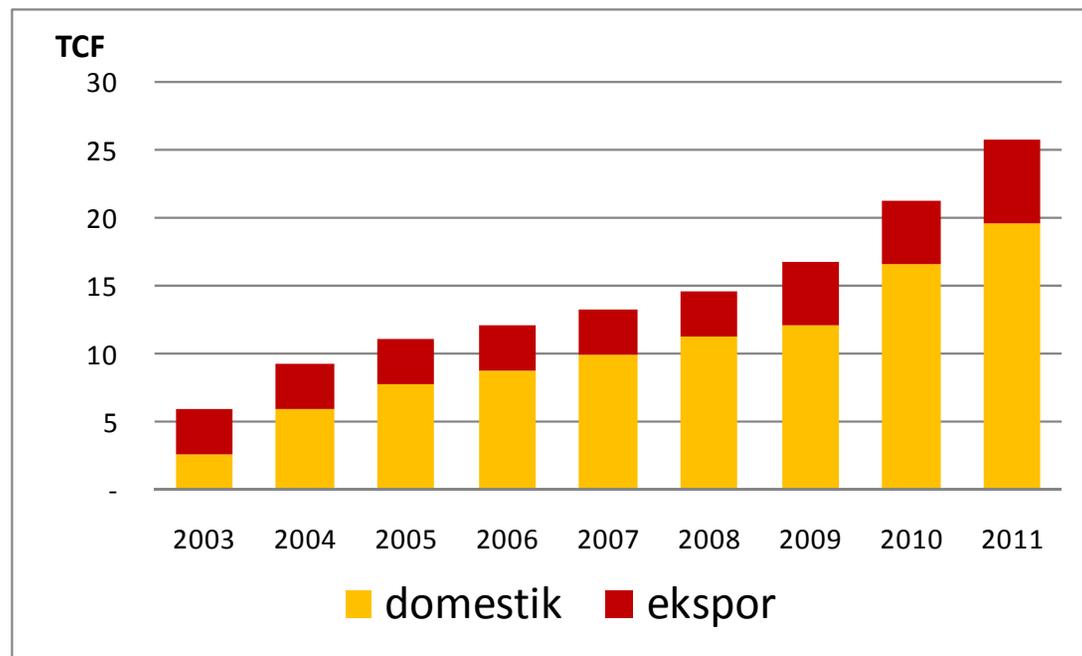
DEVELOPMENT OF GAS INFRASTRUCTURE IN INDONESIA



Comparison of Accumulation Volume Contract Domestic vs. Exports status Nov 2011



Comparison of Accumulation Volume Contract Domestic vs. Exports During 2001 – Nov 2011





National Gas Pipeline (transmission & distribution)

Gas for Transportation:

- Buses in the City (short distance) → CNG
- Taxi / Private Car → LGV
- Inter-Provincial Buses (long distance) → LNG

City Gas (Gas for Household)

- Households that close to the gas sources or gas transmissions pipeline
- Gol began a preliminary study of city gas in 2008 and builds Gas Distribution Networks for Household:
 - 2009: Surabaya & Palembang
 - 2010: Tarakan, Depok, Bekasi, & Sidoarjo
 - 2011: Bontang, Sengkang, flats in Jabodetabek, Sidoarjo II, and Bekasi II
 - 2012: Prabumulih, Kab. Bogor, Jambi, Sidoarjo III, and Cirebon

Floating Storage Regassification Unit (FRSU)

- LNG Receiving Terminal will be built in 3 location: West Java, North Sumatra, and Central/Eastern Java

Small scale LNG receiving terminal

- Development mini LNG Plant 1st stage: Samarinda, Balikpapan, Bali & Southeast Sulawesi

UNCONVENTIONAL OIL AND GAS IN INDONESIA



UNCONVENTIONAL OIL & GAS

Developing unconventional oil & gas in Indonesia

Coal Bed Methane (C B M)

- Pilot Project was done by Lemigas at Rambutan Field in 2004
- Since 2008 until 2011, have signed **42 CBM PSC's** all around Sumatera and Kalimantan
- CBM for electricity in surrounding CBM areas started in 2011

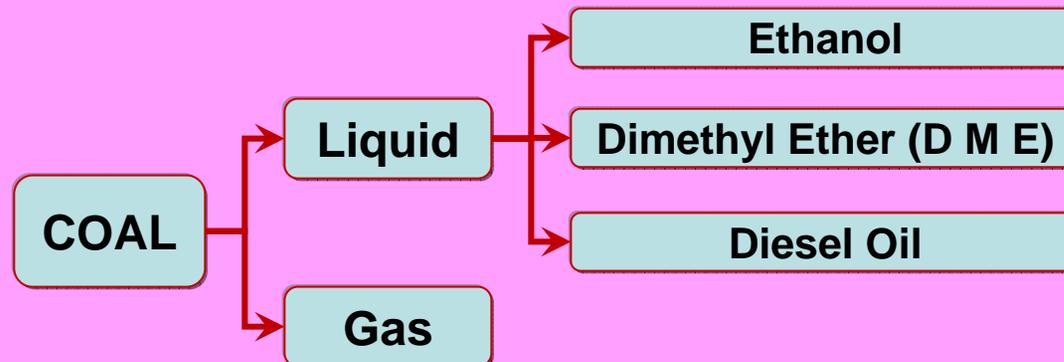
Shale Gas

Identification of potential shale gas in indonesia: **Sumatra**: 3 basins (baong shale, telisa shale, & gumai shale); **Java**: 2 basins; **Borneo**: 2 basins; **Papua** (klasafet formation)

Oil Sand, Tight Gas, Biogenic Gas

R&D studies is ongoing

Coal Development for Oil & Gas substitute





WHY DEVELOP UNCONVENTIONAL OIL & GAS IN INDONESIA

- Demand for conventional oil and gas is progressively increase;
- Abundance of unconventional oil & gas resources associated with conventional oil and gas;
- To meet the high demand of gas both domestically;
- Massive potential resources of CBM (453 TCF) and high-ranked indications of shale gas (Baong Shale, Telisa Shale, Gumai Shale and Klasafet Formation)



CONTRACTOR ECONOMICAL IMPROVING WITH MORE ATTRACTIVE TERMS & CONDITIONS

**BEFORE REVISED
(2008 – 2009)**

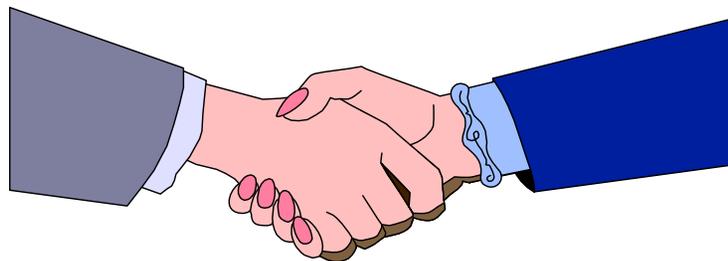
**AFTER REVISED
(2009 – Now)**

EXPECTED CONDITION

Terms & Conditions	Remarks	Remarks	Remarks
Split	Depend on field condition	Depend on field condition	Depend on field condition
Cost Recovery	90% (ceiling cost)	100% (no cost ceiling)	100% (no cost ceiling)
Handling Production before Commerciality	Not to be sold	Can be sold, with the distribution of results according to the split in the Contract but the cost can not be recovered	Can be sold, with the distribution of results according to the split in the Contract but the cost can not be recovered
Contract Duration	30 Years	30 Years	Given legal certainty for investment returns that are tailored to the ability of field (may > 30 years)



THANK YOU



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