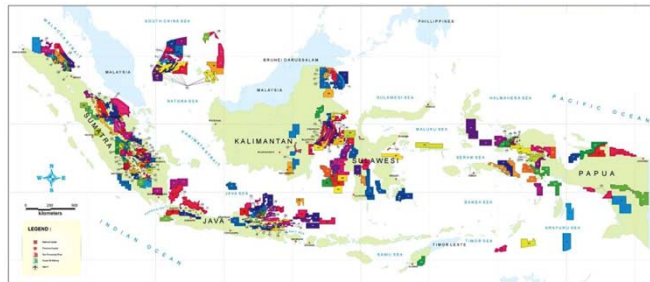




## Indonesia's Upstream E&P Outlook and Mid-Downstream Opportunities

**Indonesia's Leading Energy Networks**



\*Image above depicts the location of oil and gas upstream asset/ blocks in Indonesia

**Offshore Vessel & Rig Connect Asia  
FPSO Conference  
19 - 20 April 2016, Singapore**

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## Outline



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[illegible]

Law No 30 / 2007, Oil and Gas Law No. 22/ 2001

Government Regulation PP No 79 / 2014

Visi 25/25 – Ministry of Energy and Mineral Resources (MEMR) and National Energy Council

**Policy Direction Goals**

- Energy Law No. 30/ 2007
- Diversification : Towards Renewable Energy
- Conservation : Efficient Energy Use
- Intensification : Exploitation of Energy Sources to increase resources

Geothermal Law No. 12/ 2014  
Oil and Gas Law No. 22/ 2001

**PRIMARY ENERGY MIX 2010**

Source	Percentage
Oil	47 %
Gas	21.9 %
Coal	26.38 %
NRE	4.8 %

**PRIMARY ENERGY MIX 2025**

Source	Percentage
Oil	20 %
Gas	30 %
Coal	22 %
NRE	24 %

**BAU 4300 Million BOE**

Source	Percentage
Oil	41.7 %
Gas	20.6 %
Coal	34.6 %
NRE	3.1 %

**MEMR VISION 25/25**

Source	Percentage
Oil	30 %
Gas	23 %
Coal	25 %
NRE	22 %

**ENERGY CONSERVATION (33,85%)**

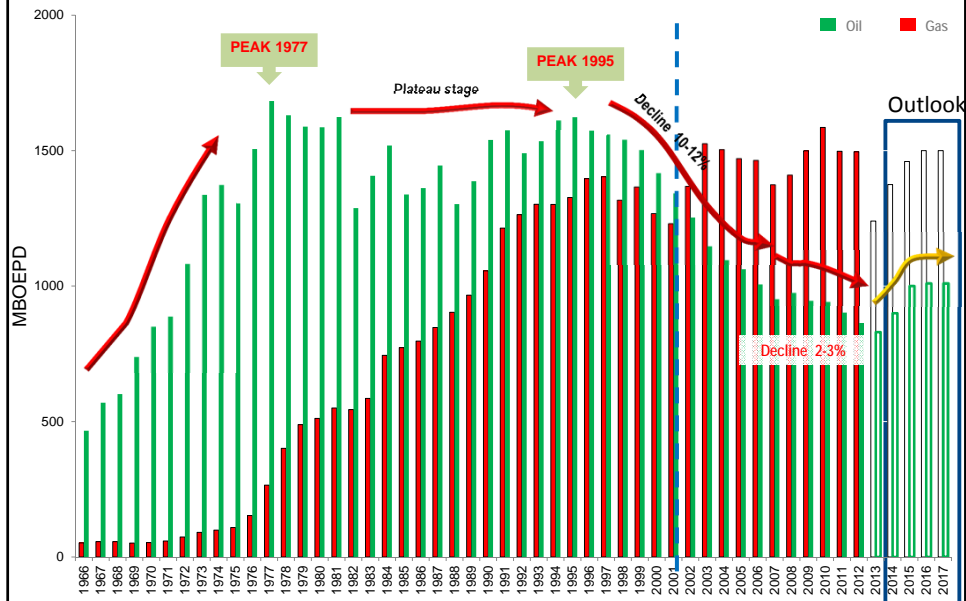
**DIVERSIFICATION**

**Timeline:**

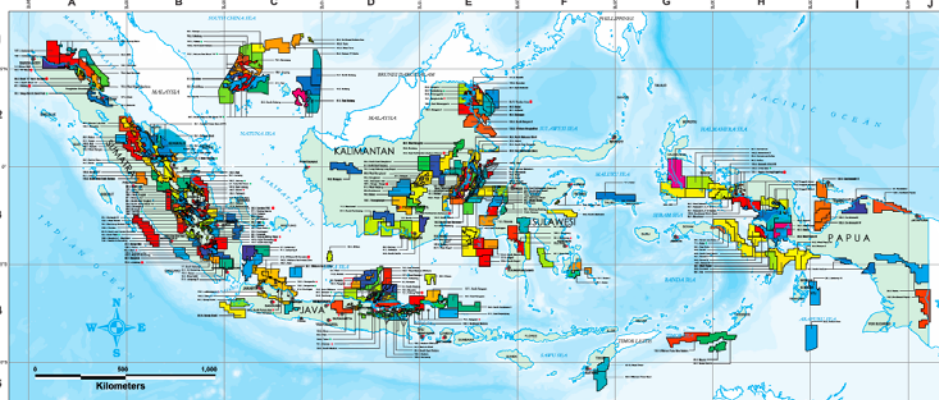
- 1985: First oil discovery in North Sumatra
- 1991: The biggest discovery before WWII (Cikidang Akar field)
- 1993: Government signed first PSC in Aceh
- 1976: PSC 40% Tax Rate
- 1984: PSC 35% Tax Rate
- 1994: PSC 30% Tax Rate
- 2002: Formation of BP Migas and RPH Migas
- 2008: OPEC Membership suspended
- 1912: Standard Oil exploration in South Sumatra
- 1944: Calhat Miras - largest oil field in Southeast Asia was discovered
- 1962: Indonesia joined OPEC
- 1978: First LNG plant entered production & PSC share changes from net to gross production
- 2001: New Oil and Gas Law No. 22 promulgated & PSC share changes from net to gross production (revoking Law No. 44 and Law No. 6)
- 2003: Pertamina becomes PT Pertamina (Persero) with profit making intent

Source: Energy Nusantara, Pertamina, MEMR

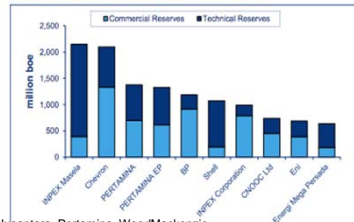
**Oil and gas production: historic and outlook. Gas is the trend with the increasing gas production outlook despite declining oil production trend**



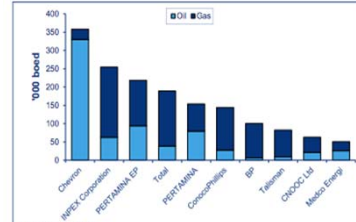
**Indonesia's current reserve and production are concentrated in western part with the country's future is in the frontier area in the eastern part**



Remaining Commercial and Technical Reserves at 01/01/2013

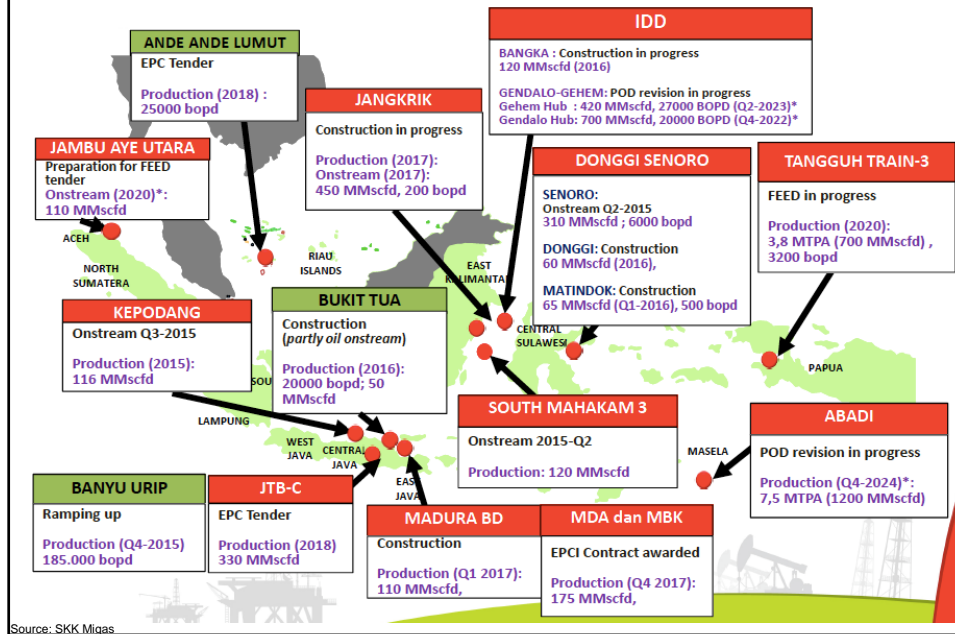


Liquids and Gas Production 2013

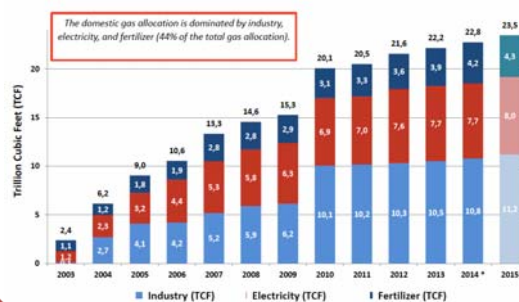
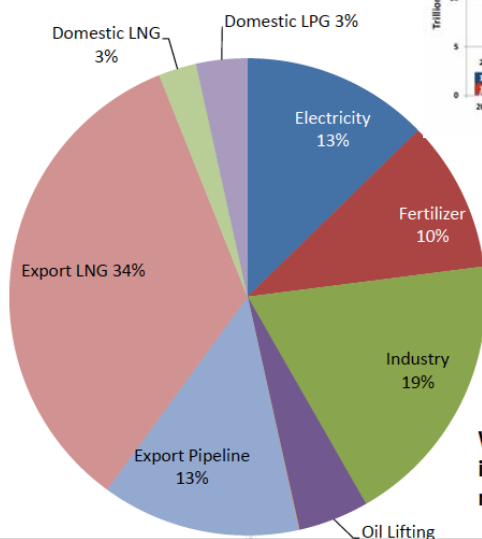


Source: Energy Nusantara, Pertamina, WoodMackenzie

## Major Upstream Projects until 2025. Dominated by Gas Projects.



## Growing Domestic Gas Demand 53% domestic Vs 47% export



- Insufficient domestic gas infrastructure.
- Electricity (power generation):
  - Primary energy mix for power generation: 62% coal, gas 17%, petroleum fuel 8%, renewables 13%.
  - Current electrification ratio: 84%.
  - Total installed capacity: 52 GW.
  - Next 35 GW project will be in place.

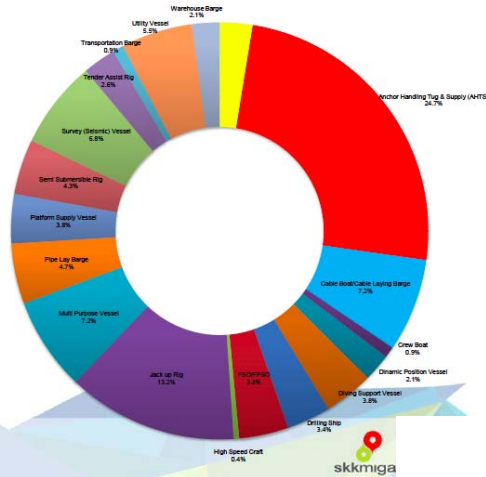
**Will need more gas for domestic consumption if infrastructures are ready and electrification ratio raised to 100% in 2020**

## Offshore Projects Shipping Requirement 2011 - 2015



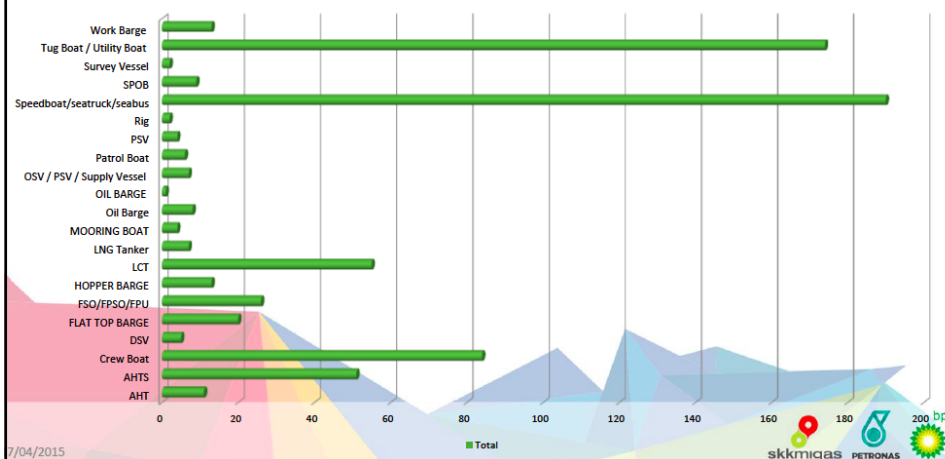
### Vessel Requirements 235 Units

No	Ship Type	Amount	%
1	Accommodation Work Barge	6	2.6%
2	Anchor Handling Tug & Supply (AHTS)	58	24.7%
3	Cable Boat/Cable Laying Barge	17	7.2%
4	Crew Boat	2	0.9%
5	Dinamic Position Vessel	5	2.1%
6	Diving Support Vessel	9	3.8%
7	Drilling Ship	8	3.4%
8	FSO/FPSO	9	3.8%
9	High Speed Craft	1	0.4%
10	Jack up Rig	31	13.2%
11	Multi Purpose Vessel	17	7.2%
12	Pipe Lay Barge	11	4.7%
13	Platform Supply Vessel	9	3.8%
14	Semi Submersible Rig	10	4.3%
15	Survey (Seismic) Vessel	16	6.8%
16	Tender Assist Rig	6	2.6%
17	Transportation Barge	2	0.9%
18	Utility Vessel	13	5.5%
19	Warehouse Barge	5	2.1%



Source: Energy Nusantara, SKK Migas

## Marine Fleet Demand/ Type



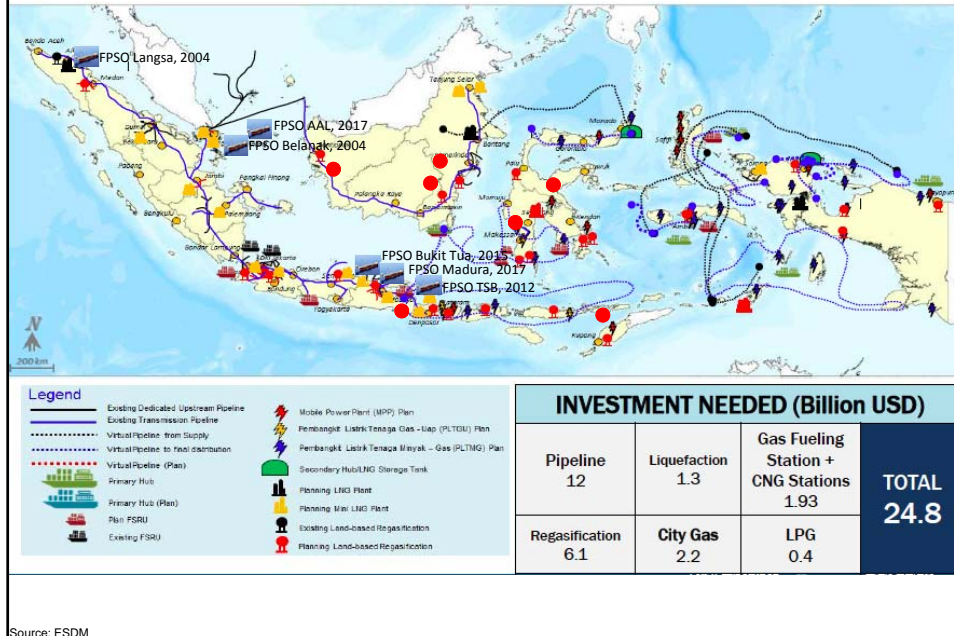
7/04/2015

skkmigas PETRONAS bp

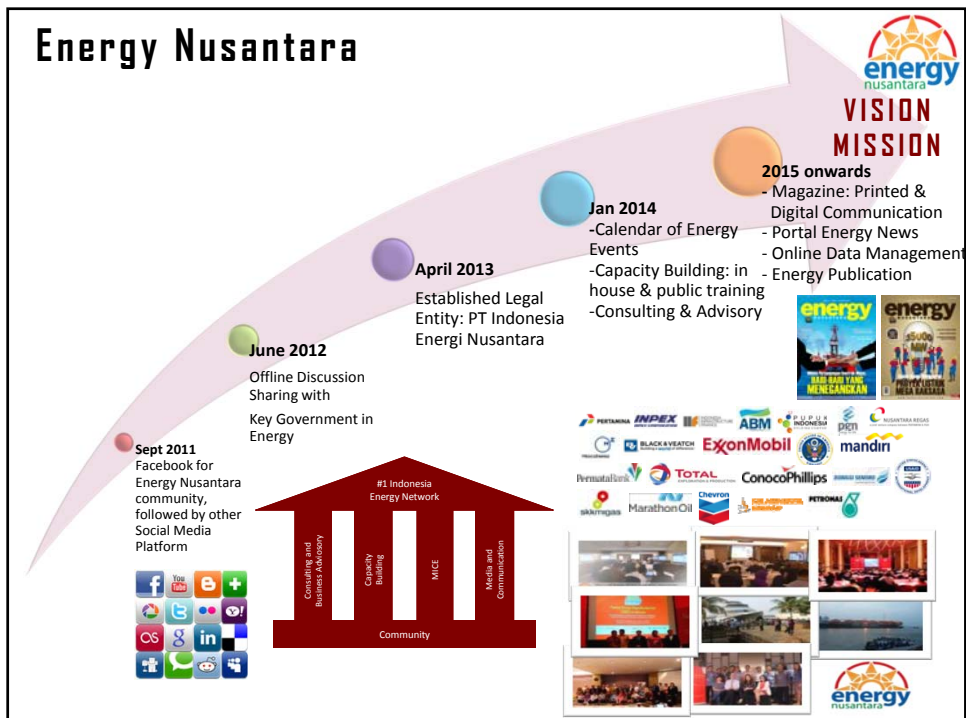
Source: Energy Nusantara, SKK Migas



## Gas Infrastructure: Government Program and Reality



## Energy Nusantara



## Window to Indonesian Oil, Gas, Energy & Maritime Business



PetroEnergy is created to meet every single needs of oil, gas, energy and maritime business which comes in 3 integrated packages:

- e-Technical Data Magazine
- e-Indonesian Petroleum Directory E&P
- e-Interactive Wall Map of Indonesian Petroleum Working Areas



## Key takeaways

- Upstream Indonesia oil & gas has shifted from oil era to gas era: more gas production and reserves compared to oil.
- Future upstream projects mainly located in offshore.
- Upstream is ready to support gas allocation for domestic, provided readiness of downstream infrastructures.
- Indonesia is actively constructing FSRU to support the growth of domestic demand.



## Thank you



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