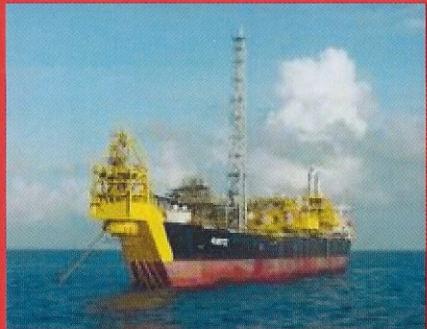
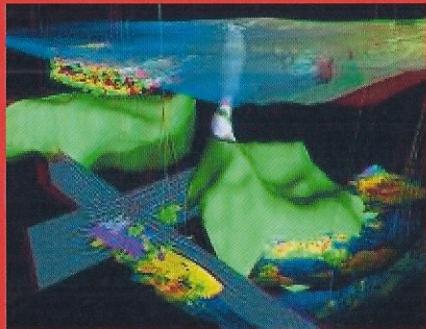


Gas Directorate Vision, Mission and Strategy



BOC BOD Retreat
Jakarta, November 30th, 2012

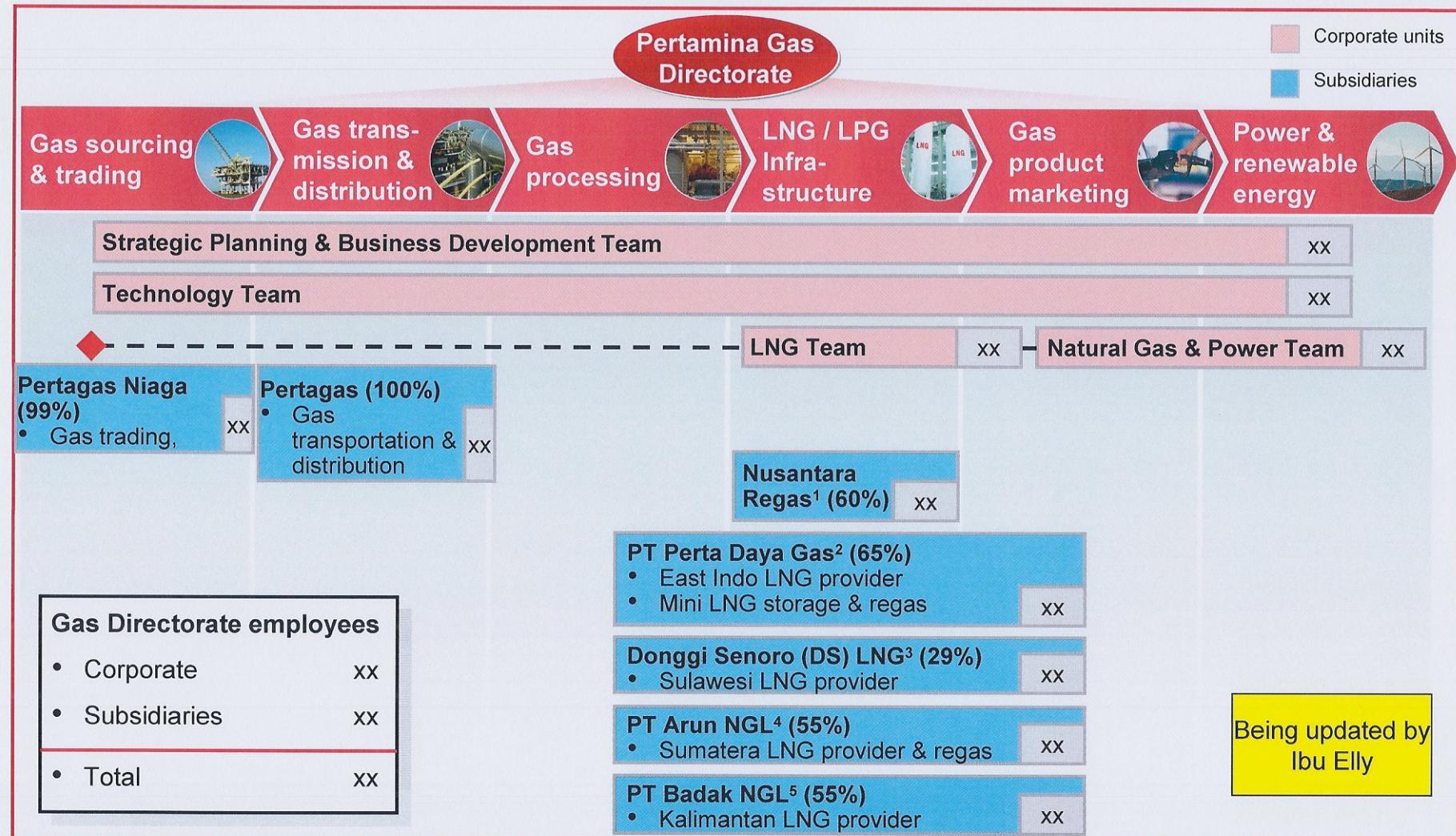


Executive summary

- The Gas Directorate has been formed to capture the opportunities presented by the gas and renewable value chain in Indonesia
- Gas Directorate has formulated its Vision, Mission and Strategy, with it's strategy centered around 4 key pillars
 - **Integrated gas infrastructure:** develop critical pipeline infrastructure, LNG facilities, and mini-LNG plants to address demand supply imbalances expected in Indonesia and move to a market leadership position domestically
 - **Domestic and global sourcing:** Develop new domestic and global supply sources to bring increased gas to domestic markets
 - **Maximize downstream opportunities:** Build on Gol mandate for Pertamina to roll out CNG across major cities in Indonesia to develop a strong downstream business portfolio
 - **Gas and renewable power :** Invest in power IPP's, including gas fired, geothermal, biomass and other renewable sources, leveraging government incentives and favorable policies
- Gas Directorate's Strategic direction will require **building capabilities around 6 key enablers** to ensure successful execution of strategic initiatives

Gas Directorate has been formed to capture opportunities across the gas and renewable value chain in Indonesia

PRELIMINARY



1 Pertamina (60%), PGN (40%)

4 Pertamina (55%), Exxon Mobil (30%), JILCo (15%)

2 Pertagas (65%), Indonesia Power (35%)

3 Sulawesi LNG Dvlpt Ltd. (59.9%), Pertamina Hulu (29%), Medco LNG (11.1%)

3 Pertamina (55%), VICO Indonesia (20%), JILCo (15%), Total E&P Indonesia (10%)

Pertamina Gas Directorate's Vision, Mission, and Strategy



SOURCE: Pertamina Gas Directorate

**A**

The global market for gas remains tight, with Pertamina's peers making significant investments in infrastructure to maintain domestic market leadership

Key trends in global gas market...

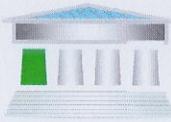
- Gas will continue to remain an important part of the global energy mix
- The global LNG market is expected to remain tight, with Asian LNG import prices continue to be linked to crude prices
- NOCs have made significant investments in national infrastructure to sustain market leadership

...have prompted NOC investment in national infrastructure



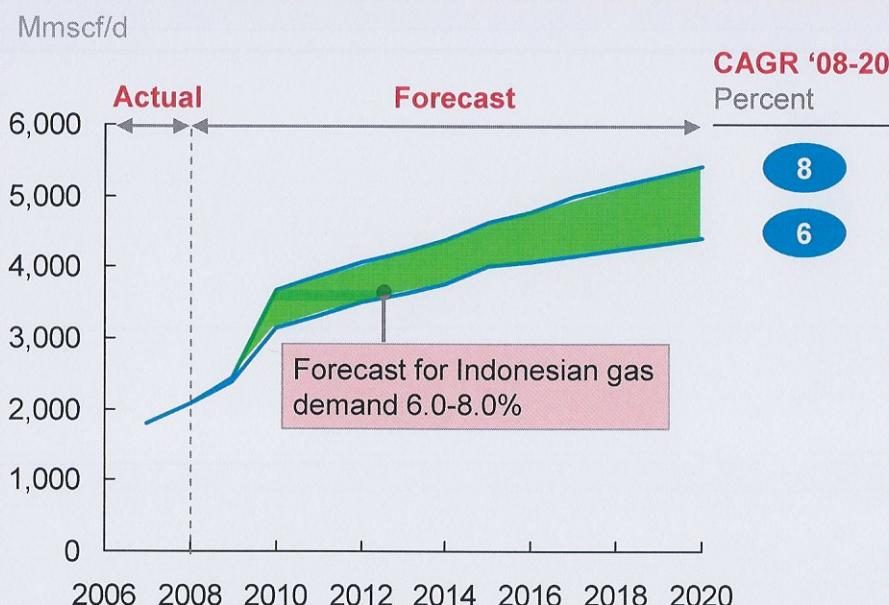
- Plans to increase pipeline capacity from 5,580 to 6,980 mmscfd by 2013
- Has set aside ~USD 12.3 bn to develop pipeline, LNG, and downstream infrastructure
- Plans to double capacity of existing LNG terminal, and build 2nd LNG terminal by 2017
- 85% completion of 500 km Sabah-Sarawak Gas Pipeline, ready by 2013
- Current Bintulu LNG complex with capacity of 23 mtpa, with plans for 2nd and 3rd LNG terminals in Pengerang and Lahad Datu
- 1st FLNG awarded EPCIC contract, 2nd FLNG awarded dual FEED
- Expanding to 14,000 km pipelines with capacity of 10,587 mmscfd
- Planning 50 mtpa LNG handling capacity by 2017
- Up to USD 6bn set aside to develop natural gas infrastructure

¹ Using McKinsey Global gas model as demand forecast
SOURCE: McKinsey Global gas model; team analysis

**A**

Indonesia's domestic demand for gas is projected to grow strongly, led by demand from Java

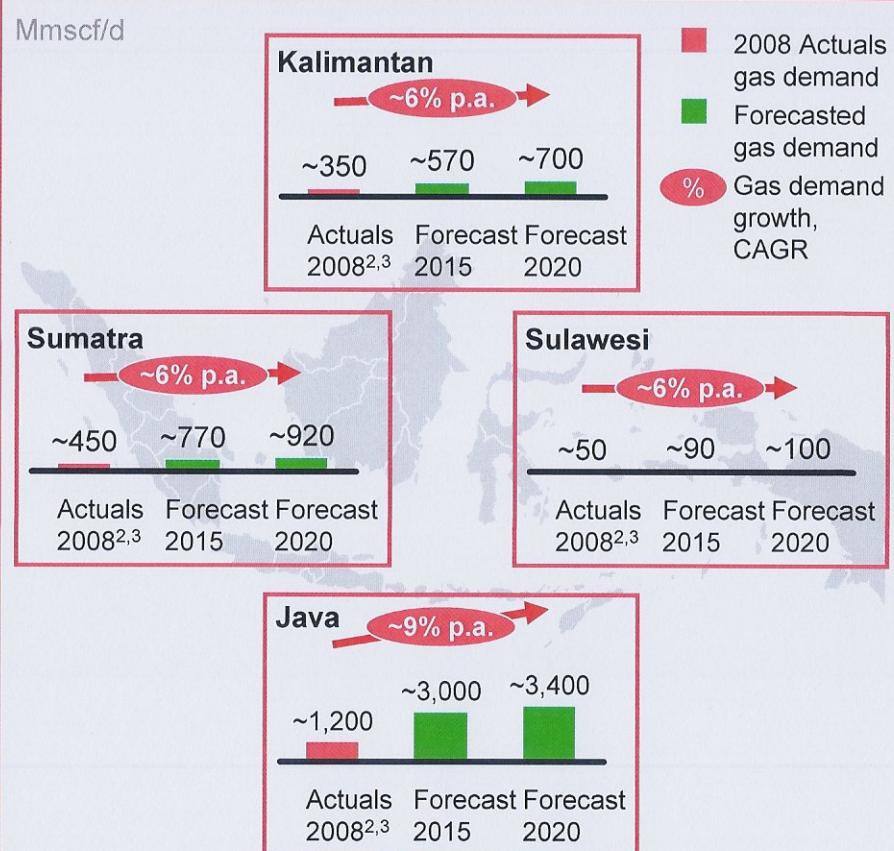
Indonesian domestic gas demand¹ is expected to grow significantly (6- 8% p.a.) until 2020...



Demand growth driven by

- Strong growth in new gas fired power and substituting oil based plants (8-10% pa)
- Industry demand annual growth between (5-7% pa)
- Gas demand by fertilizer to grow (by 5-6% pa)

...with bulk of this demand and projected growth led by Java (~65%)



1 Excl. gas demand for export, LNG plants, and re-injection to oil production

3 Sector level assumption of gas demand used to split total Indonesian demand over regions

2 Energy Balance 2008 by Ministry of Energy and Mining Resources

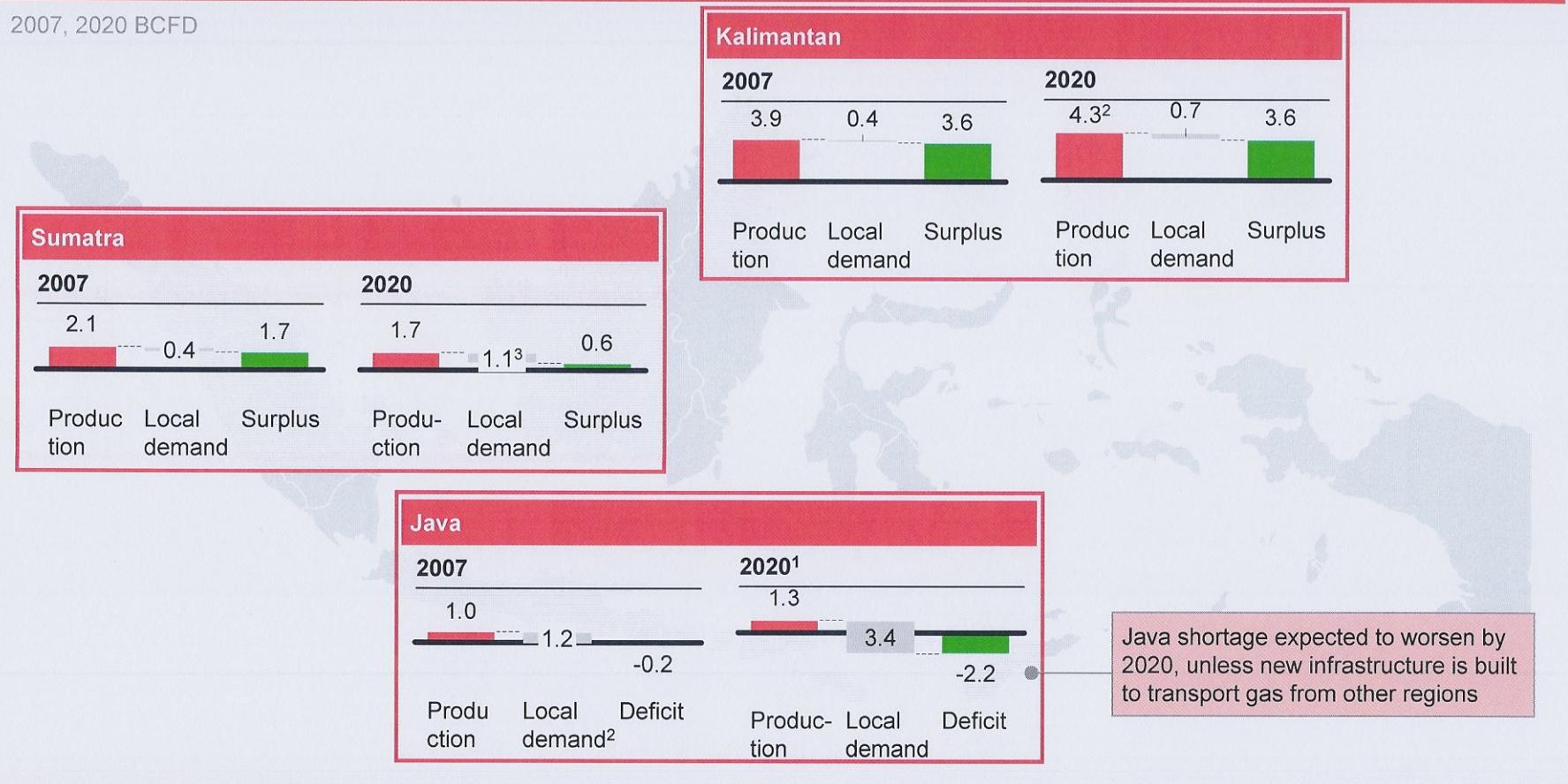
**A**

Regional demand supply imbalances will need to be addressed

- Java expected to have supply shortfall while Kalimantan and Sumatra expected to be supply surplus

Demand-Supply balance

2007, 2020 BCFD

¹ Potential reserves / Current production² Demand shortfall as per BPHMIGAS – includes unmet latent demand³ Sumatra demand shown indicates sales to Duri for steam flooding and excludes local fertilizer sales that are assumed to be price out by Duri and SSWJ imports



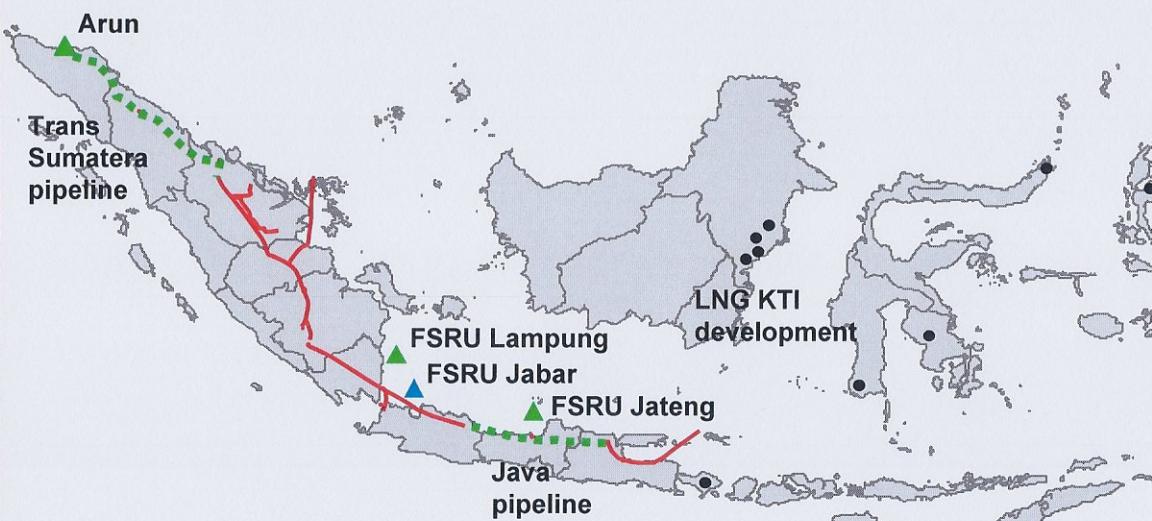
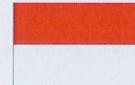
A This will require setting up of new infrastructure – Gas Directorate is well positioned to capture this opportunity

Gas Directorate's planned key infrastructure development projects

Key projects

Pipeline, regas, and LNG development

- Existing pipeline ······ Planned pipeline
- ▲ Existing FSRU ▲ Planned FSRU
- LNG KTI development



West Java

- Cirebon – KHT Pipe
- Tegalgede - Muara Tawar Pipe

Central Java

- Gresik - Semarang pipe
- Central Java Regas
- Surabaya - Cirebon Pipe

East Java

- Grati Pipe

Trans Sumatera

- Arun LNG Receiving & Regas
- Lhoksueumawe-Medan
- Medan Dumai

East Indonesia

- LNG KTI

- Mini LNG Plant Salawati

- Simenggaris – Bunyu pipe
- Tempino – Plaju oil pipe
- Power & Renewables

Other infrastructure

- NGL plant Sumsel
- LPG plant Pondok Tengah
- Arun IPP

Value chain expansion

- CNG Transport
- CNG Industry
- LNG Indomingo

Maximize downstream

- LNG Trading & sourcing

Sourcing & trading

- Gas for RU II & IV
- LPG Trading
- LPG Transhipment
- Nusantara Regas West Java

Others

Infrastructure – next steps



- Develop detailed bottom-up gas balance, including through market survey of industrial demand, and align with key stakeholders (e.g., ESDM, BPH Migas)
- Develop detailed infrastructure blueprint for Arun regas and FSRU Jateng / TJP X
- Develop capital allocation plan for key projects
- Accelerate rollout of key projects by setting up PMO and war rooms at the Gas Directorate



B LNG will be key to global gas demand-supply balance – Pertamina's peers have already moved to secure long-term LNG contracts and equity stakes in global producers

SELECTED EXAMPLES

Key trends in global LNG market

- As domestic gas supply in growth markets deplete, demand for LNG imports will rise
- With the global LNG market expected to remain tight, Asian LNG prices will likely continue to be linked to crude
- There remains uncertainty around LNG projects (e.g., capex blowout concerns in Australia, regulatory ambiguity in the USA and Africa) that will drive LNG exports

Strategic moves by Pertamina's peers

2

Securing long-term contracts of LNG supplies

- E.g., Petronas & PTT signs 20-year 1.5-2.0 mtpa LNG deal with Qatargas respectively
- E.g., Gail secures 20-year 2.5 mtpa LNG deal with Gazprom
- E.g., Petronas expecting 1st cargo from Gladstone JV by 2015

1

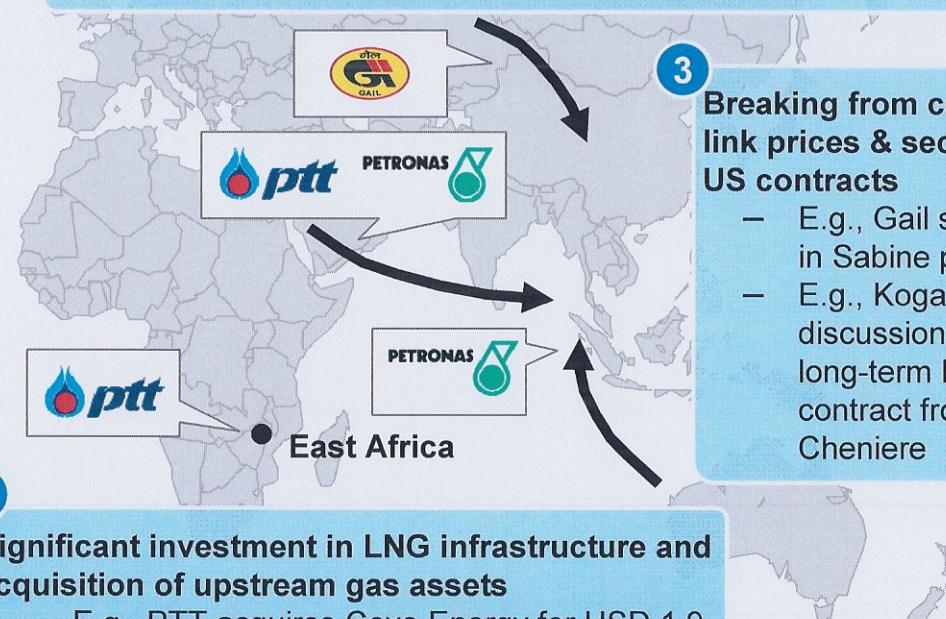
Significant investment in LNG infrastructure and acquisition of upstream gas assets

- E.g., PTT acquires Cove Energy for USD 1.9 bn for stake in Mozambique gas resources

3

Breaking from crude-link prices & securing US contracts

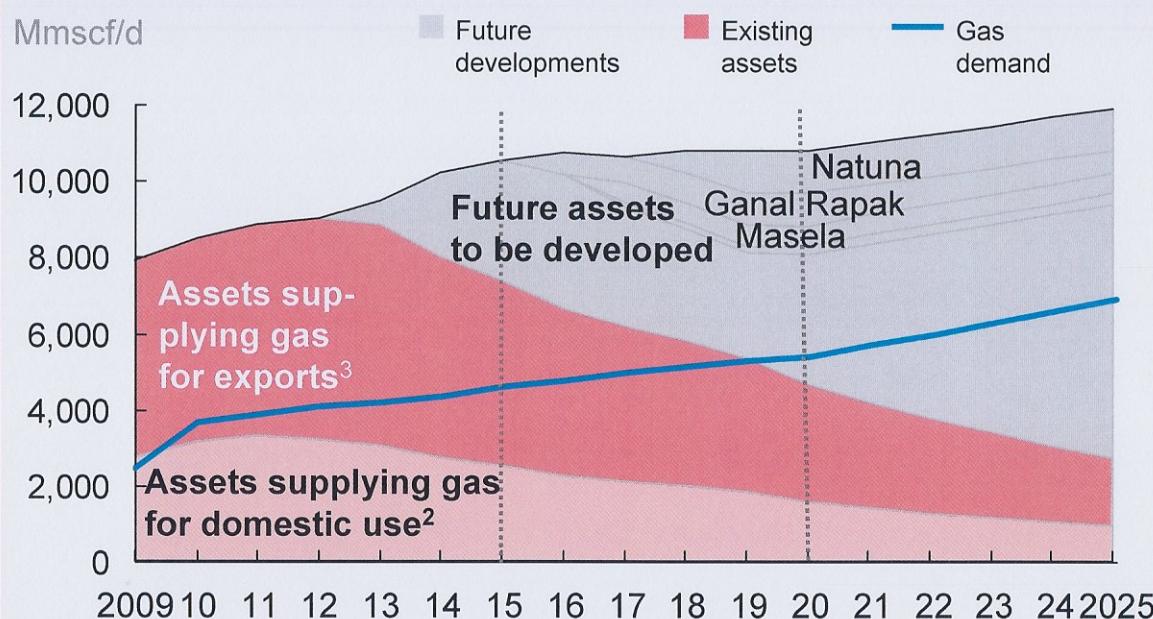
- E.g., Gail stake in Sabine pass
- E.g., Kogas in discussion for long-term LNG contract from Cheniere





B As supply sources deplete, increased allocation for domestic markets will be required to meet domestic shortfall

Existing supply sources are expected to decline, requiring new fields to route supply for domestic needs



- Growth in gas export volumes driven by:
 - Lack of domestic infrastructure to channel gas supplies to demand centres
 - Attractive export prices vs. domestic prices

1 Based on extrapolation of 2020 demand numbers at 5%
Madura Offshore and Poleng

2 Includes Subang, Pendopo, Corridor, ONWJ, West Madura, Kangean,

3 Supplies to Bontang, Arun and Tangguh including Mahakam, Berau, Wiriagar, Muturu & North Sumatra

4 Potential reserves/Current production

5 Demand shortfall as per BPBMIGAS – includes unmet latent demand

6 Sumatra demand shown indicates sales to Duri for steamflooding and excludes local fertilizer sales that are assumed to be price out by Duri and SSWJ imports

Implications

- More gas currently exported will need to be routed to domestic either through:
 - Current LNG export contracts allowed to expire and cargos routed to domestic markets
 - Increase in DMO obligations



- B Gas Directorate has already moved to secure x LNG cargoes and is looking to enter into more long-term contracts

Pak Didik will provide data by noon tomorrow

Domestic and global sourcing – next steps



- Continue discussions with regulators on increasing allocation of domestic gas for domestic use
- Redouble efforts, including breadth of supplier outreach, to lock in long term LNG contracts from global suppliers
- Explore opportunities to take equity stakes in gas fields

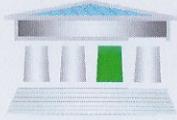
C Delhi and Bangkok provide learning's on successful CNG rollout



	 Delhi	 Bangkok
CNG rollout speed	<ul style="list-style-type: none"> • 375 thousand CNG vehicles in 2011 • 100% penetration of public transport 	<ul style="list-style-type: none"> • 300 thousand vehicles in 2011 • CNG Station number increased from 2 to 467 between 2002-2005
Requirements for success	<p>① CNG pricing</p> <ul style="list-style-type: none"> a For consumer b For producer c For distributor <p>② Regulation</p> <p>③ Infrastructure</p>	<ul style="list-style-type: none"> • CNG price discount is 50% to diesel price and 70% to gasoline price during time of rollout • Low interest rate loan for conversion kit & 2.5% subsidy for new CNG vehicles <hr/> <ul style="list-style-type: none"> • Government allocates domestic gas production to CNG consumption at 2.7 US\$/MMBTU for APM gas and 5.5 US\$/MMBTU for non-APM gas in 2009 <hr/> <ul style="list-style-type: none"> • CNG price high enough to provide ~20% ROE for IGL • Safety and performance standards of the CNG engines enforced <hr/> <ul style="list-style-type: none"> • Supreme Court Mandated conversion of all buses & three wheelers to CNG in first 4 years roll-out <hr/> <ul style="list-style-type: none"> • IGL (JV by SOE GAIL and private Bharat Petroleum) invested in infrastructure; RBI¹ provides cheaper loans for infrastructure • Government lease land to CNG developers • PNGRB² accelerates license approval.

1 Reserve Bank of India

2 Petroleum & Natural Gas Regulatory Board

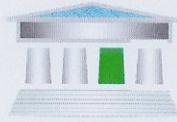


C Gol's plan to roll out CNG across major cities in Indonesia will be a key driver of downstream expansion, though government incentives will be key to ensure success

Current Government proposal				
①	a For consumer	<ul style="list-style-type: none"> • CNG price set at 3,100 Rp/LSP in Jakarta area and 3,500 Rp/LSP in other cities • 14,000 free conversion kits provided for the public transport vehicle CNG conversion 		
	b For producer	<ul style="list-style-type: none"> • Gas supply of 36 MMSCFD secured for 2012-2017 from Medco, Pertamina, Talisman & Santos • Average price of secured 36 MMSCFD is 4.4 US\$/MMBTU 		
	c For distributor	<ul style="list-style-type: none"> • CNG price of 3,100 Rp/LSP expected to provide 4% margin to Pertamina²: -10% margin for Mother station/Daughter station model, and 13% margin for SPBG online model (Including PPN) • Pertamina will be the operator of CNG stations 		
②	Regulation			
③	Infrastructure			
Potential savings of up to US\$ 2 billion in fuel subsidies				
Key constraints				
<ul style="list-style-type: none"> • Government may not meet its commitment on IDR 4.5 trillion of infrastructure investment funding for 2013 • No agreement reached yet on government subsidies for feeder gas price of US\$ 4.4/mmbtu for CNG • Returns at current CNG price of IDR 3,100 / LSP are not sufficient for operator/ investors • Providing free conversion kits is not economically viable for converting 250,000 vehicles between '13-'17 				

1 Public Vehicle Conversion Plan (National) by Ministerial Regulation of Mineral & Energy Resources No. 19/2010

2 Assuming 60% SPBG online stations and 40% Mother/Daughter stations



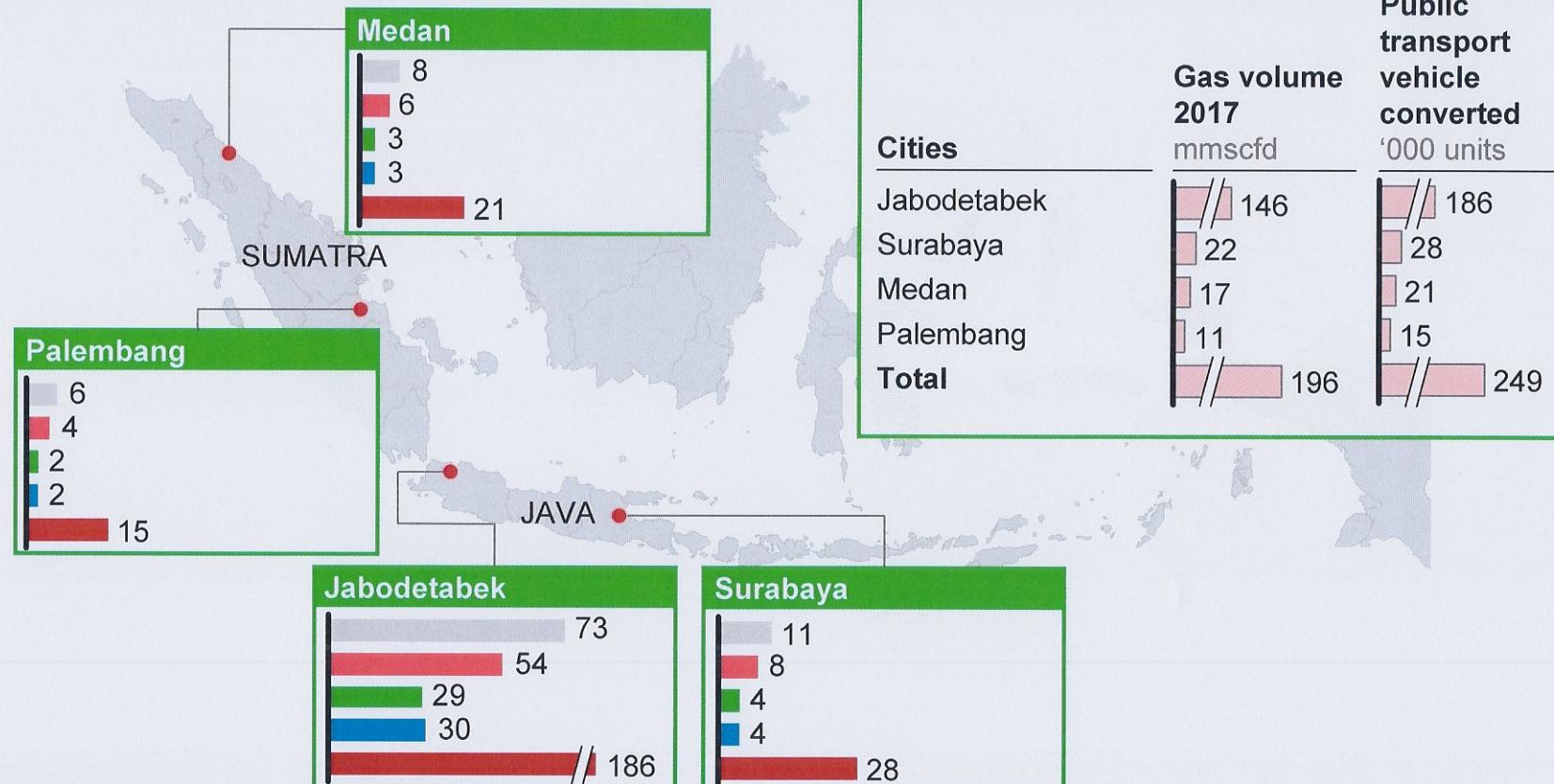
C Focus is on 4 key cities with highest demand: Jabodetabek, Surabaya, Medan, and Palembang

CNG rollout in targeted cities in Indonesia

Number of vehicles converted by 2017¹

Thousand

Bus Angkot Total
Taxi 3-wheeler

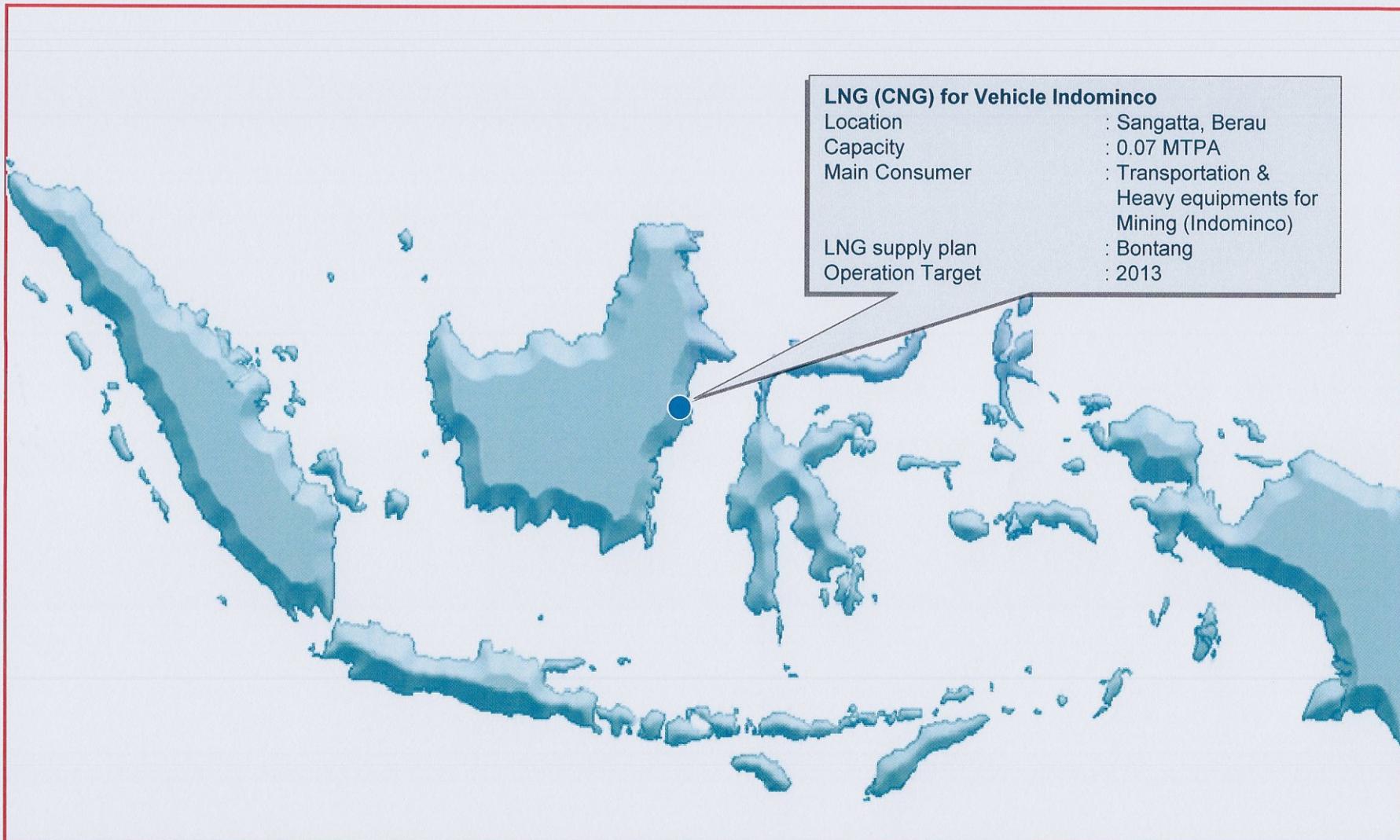


1 Assuming 100% conversion of the specific vehicles

SOURCE: Pertamina CNG business model, Team analysis

C

CNG for private industrial vehicles is an additional growth avenue for Pertamina – LNG Indominco



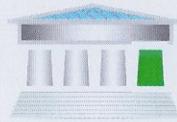
Downstream opportunities – next steps



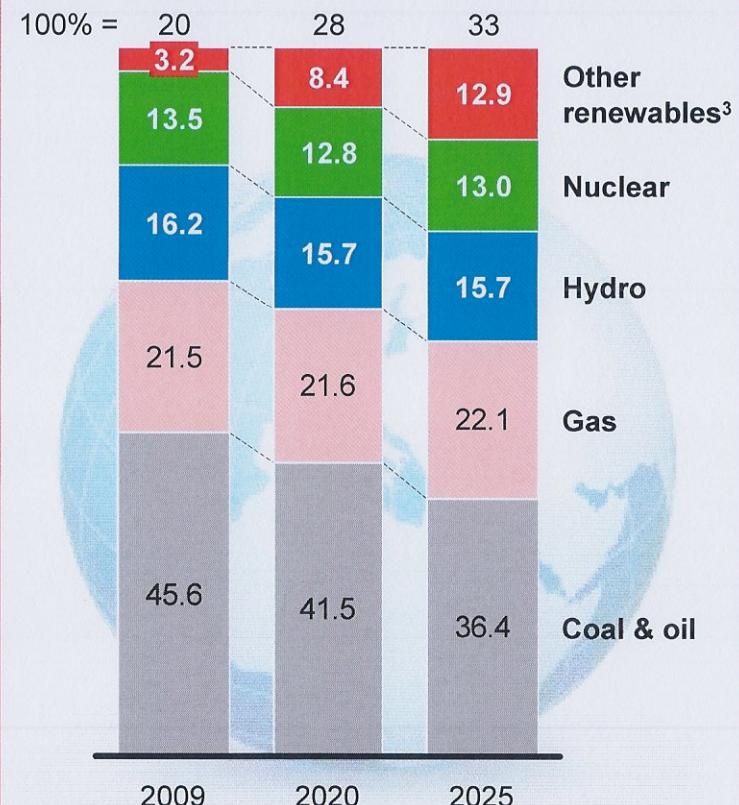
- Continue conversation with Gol on capex budget allocation and other key support needed for roll out of CNG across Indonesia
- Successfully launch pilot for LNG Indominco and roll out to other industrial customers

D Global majors have made significant investments in renewable energy

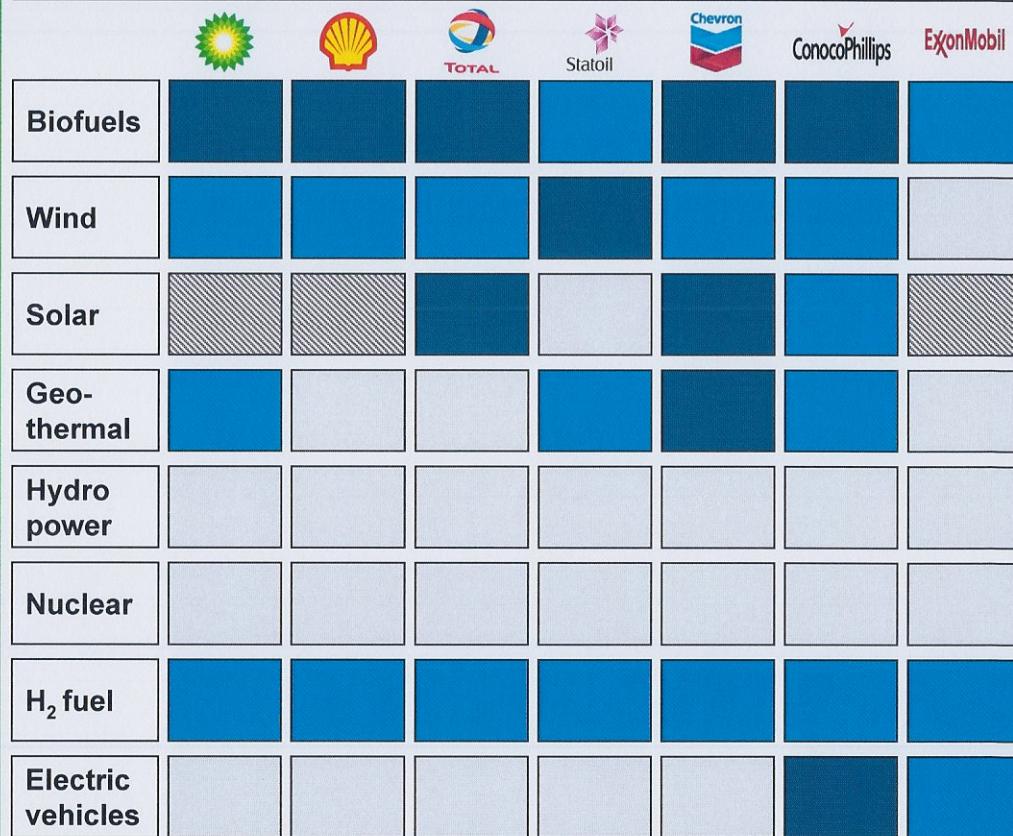
- High priority
- Present
- Absent
- Exited



Electricity demand mix 2009-25 (New Policies¹)
PWh²



Major oil companies' investment efforts into developing a range of renewable energy technologies



1 World Energy Outlook 2011 – New Policies Scenario takes into account broad policy commitments and plans that have already been implemented to address energy-related challenges as well as those that have been announced; assumes only cautious implementation of current commitments and plans

2 1 PWh = 10¹⁵ watt hour

3 Includes biomass, wind, geothermal, solar PV & CSP, and marine

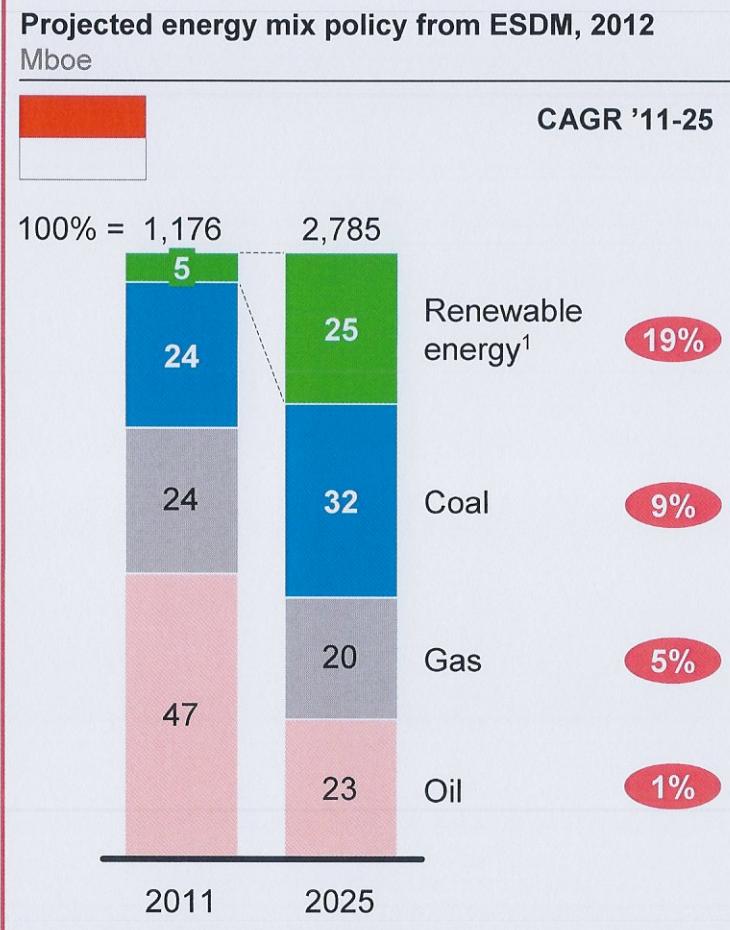
Source: World Energy Outlook 2011; Company websites; Litsearch; McKinsey team analysis

D

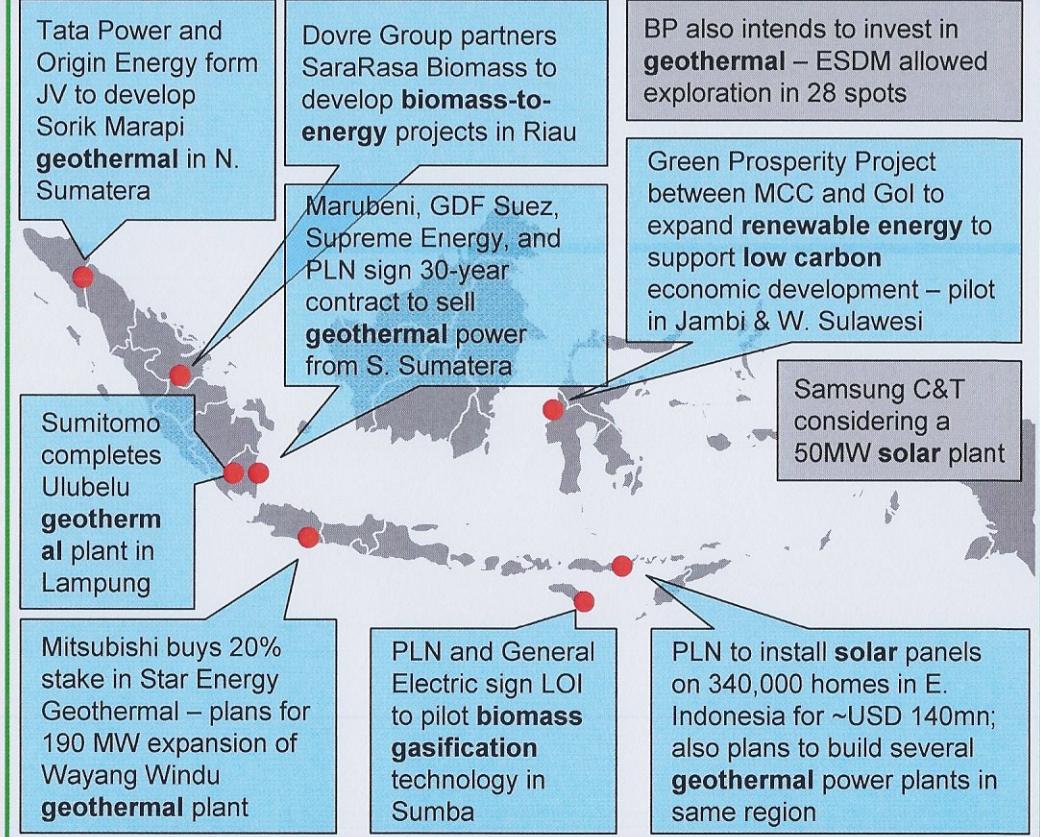
Renewables expected to play an increasing role in Indonesia's energy mix, and domestic and global players are moving to capture this opportunity



SELECTED EXAMPLES



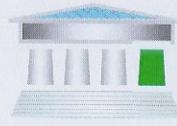
Announced investment / development efforts of renewable energy in Indonesia



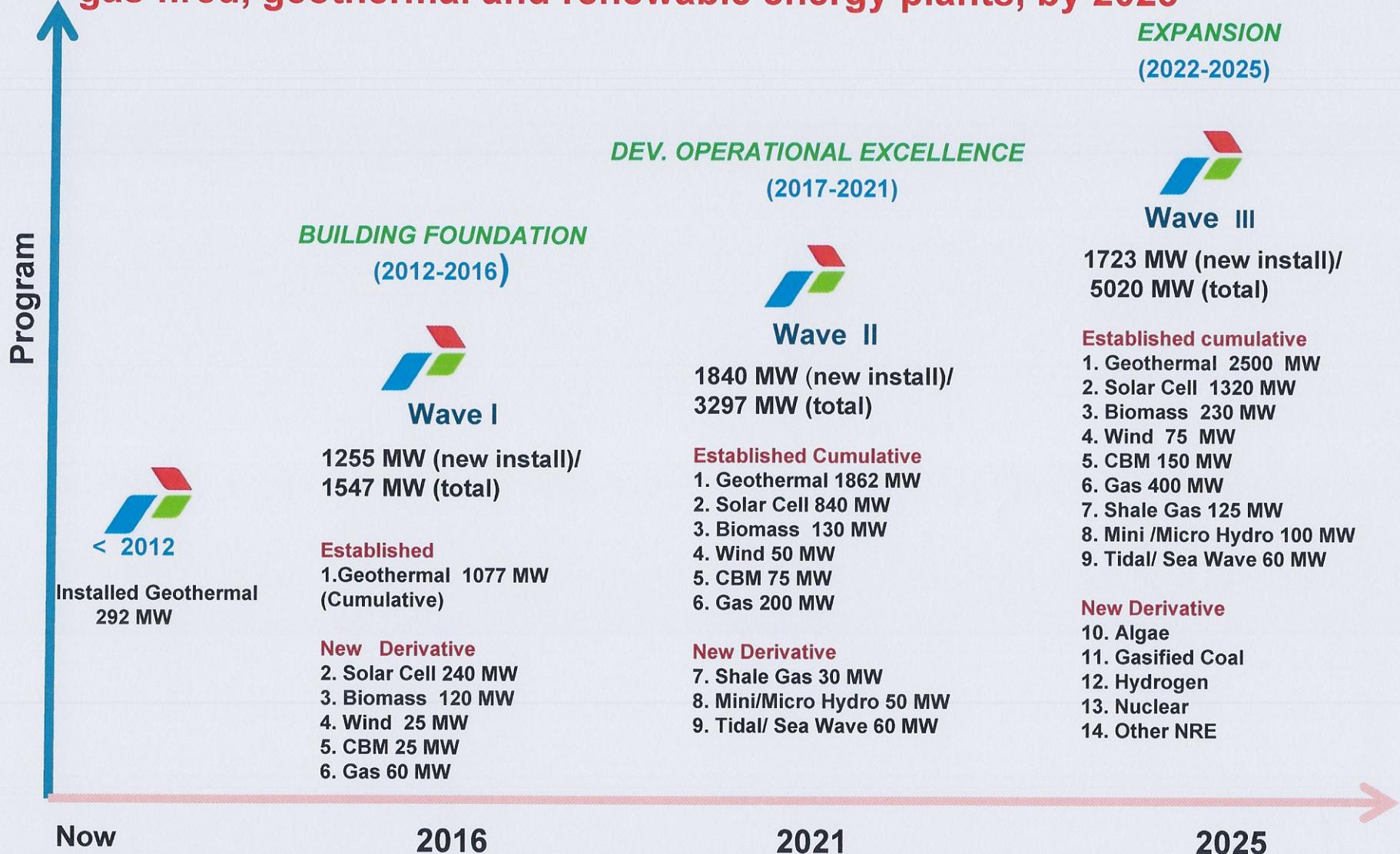
¹ Includes biomass, geothermal, hydro, ocean, solar, new energy

D

Gas Directorate aims to generate ~5 GW of power, including gas fired, geothermal and renewable energy plants, by 2025



EXPANSION
(2022-2025)



Gas and renewable power – next steps



- Conclude internal discussions on integrating Geothermal business into Gas Directorate and establish working model with Hulu
- Develop business plans, identify locations and sound out potential partners for developing biomass, wind, solar and CBM IPP's X
- Develop business plans including locations and source of gas for gas fired IPP's ✓

6 critical enablers are needed to implement Gas Directorate's strategic initiatives



1 Determining responsibilities between Corporate and subsidiaries

2 Securing sufficient capacity

3 Building new capabilities

4 Implementing structured processes

5 Instill good corporate governance

6 Improve HSSE quality

Implications for Gas Directorate

- Identify roles and responsibilities for Corporate vs. subsidiaries
 - Decide ownership of projects within Gas Directorate (subsidiaries vs. Corporate)
 - Assign managers for each of the projects who are fully responsible for project execution
 - Setup PMO within corporate to manage several projects
-
- Capex requirements will increase from ~US\$ 200 mln for 2012 to up to US\$ 1.0 bln by 2014; Therefore need significant project management capabilities to execute all the projects
 - Similarly, Pertagas will need an enhanced sales force to capture downstream markets
-
- Build new capabilities, specifically:
 - CNG business building
 - LNG sourcing
-
- Design and implement a robust and standardized stage-gate process for project execution & financing
 - Clear project and initiative monitoring processes
-
- Develop and design clear operating procedures
 - Timely and accurate disclosure of material information regarding the Directorate
 - Effective monitoring of corporate governance processes by committees / BOD
-
- Lay down clear policies and educate employees on HSSE issues
 - Continuously monitor performance on HHSSE matters, including through working and BOD level committees

A scorecard will track the critical enablers for Gas Directorate's strategy

