

# KOGAS Investment in Australia

(AKBC/KABC 38<sup>th</sup> JOINT MEETING)

Better Energy, Better World

Nov 2017



# KOGAS Overview(Business Scope)

## Domestic Business Stable Profitability



### LNG Purchasing

- World 2<sup>nd</sup> largest LNG buyer



### Construction & Operation of LNG Storage Tanks and nationwide pipelines



### Supply of Natural Gas

- City Gas and Power Sector

## Overseas Business Growth Opportunity



### Exploration and Production(E&P) Mozambique, Iraq, Myanmar, etc.

- Engines for Business Expansion & Growth
- 25 Project in 13 Countries(As of Sep, 2016)

# KOGAS Investment in Australia

## KOGAS Investments and LNG Purchases

### ▶ Project Investments

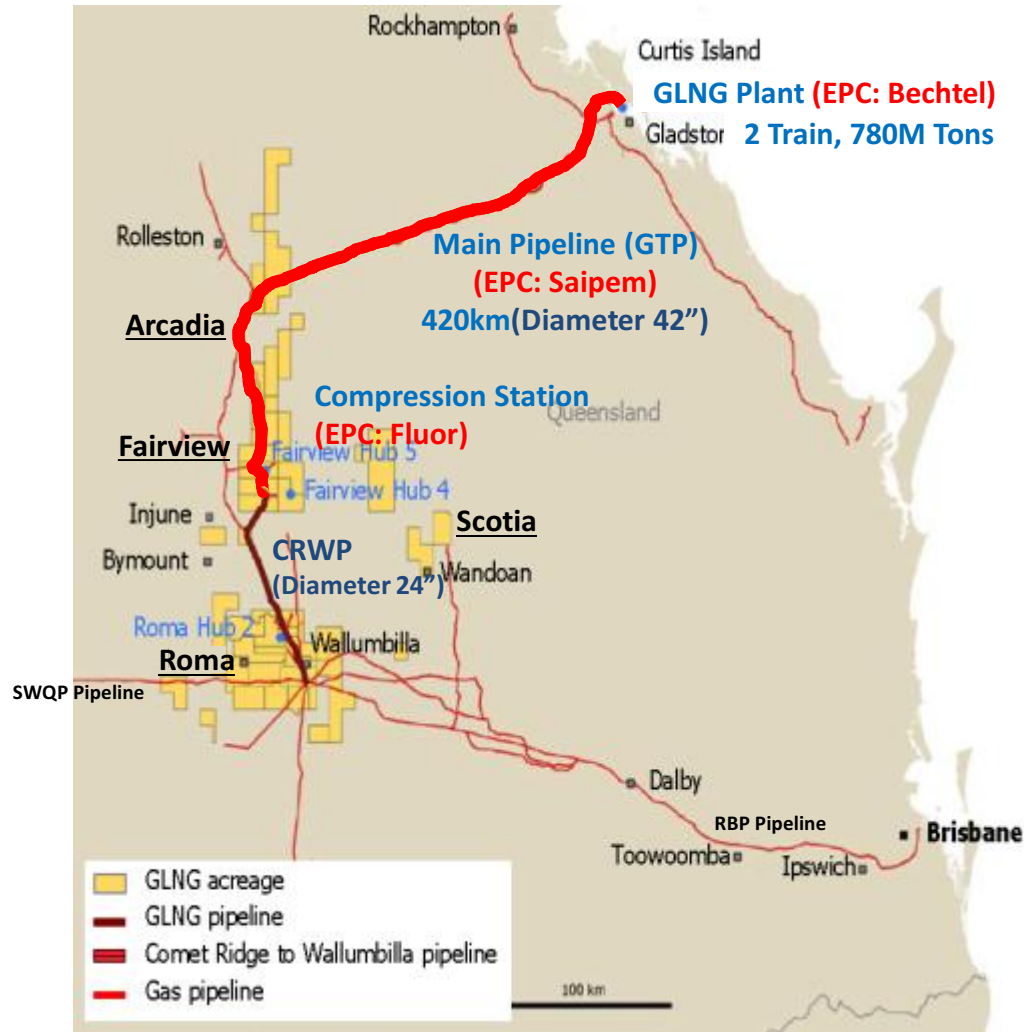
GLNG Project	Prelude FLNG Project
<ul style="list-style-type: none"> <li>▪ Entry : February 2011</li> <li>▪ Interest Held : 15%</li> <li>▪ Project window : 2011-2044</li> </ul>	<ul style="list-style-type: none"> <li>▪ Entry: March 2012</li> <li>▪ Interest Held : 10%</li> <li>▪ Project window : 2011-2042</li> </ul>





### ▶ LNG Purchases : around 10 million tons of LNG expected from 3 projects

GLNG Project (Operational)	Prelude Project (Under Construction)	Ichthys Project (Under Construction)	NWS Project (Contract completed)
<ul style="list-style-type: none"> <li>➢ 3.5MM tons/year</li> <li>➢ 2015-2034</li> <li>➢ FOB</li> </ul>	<ul style="list-style-type: none"> <li>➢ 3.64MM tons/year</li> <li>➢ 2013-2037</li> <li>➢ DES</li> <li>➢ Shell Portfolio</li> </ul>	<ul style="list-style-type: none"> <li>➢ 2MM tons/year</li> <li>➢ 2018-2031</li> <li>➢ DES</li> </ul>	<ul style="list-style-type: none"> <li>➢ 0.5MM tons/year</li> <li>➢ 2003-2016</li> <li>➢ DES</li> </ul>

# KOGAS Investment in Australia

## GLNG Project



<b>Partners</b>	<b>Santos 30.0% (Operator)</b>	
	<b>Petronas 27.5%</b>	
	<b>TOTAL 27.5%</b>	
	<b>KOGAS 15%</b>	
<b>Assets</b>	<b>Fairview, Roma, Arcadia, Scotia</b>	
<b>Pipeline</b>	<b>420km(42 inch)</b>	
<b>Plant</b>	<b>7.8 MTPA</b>	
<b>Capex</b>	<b>USD \$18.5bn</b>	
<b>1<sup>st</sup> Cargo</b>	<b>Train 1 : 2H 2015 Train 2 : 1H 2016</b>	
<b>SPA</b>	<b>KOGAS 3.5 Petronas 3.5(MTPA)</b>	

SWQP : South West Gas Pipeline  
 RBP : Roma to Brisbane Pipeline  
 CRWP : Comet Ridge Wallumbilla Pipeline

# KOGAS Investment in Australia

## Prelude FLNG project

Location	Western Australia
Gas Field	Prelude
Joint Venture Partners	KOGAS : 10% Shell(Operator) : 67.5% Inpex : 17.5% OPIC : 5%
EPCI Contractor	Technip / Samsung Consortium("TSC")
Production Capacity	LNG : 3.6mtpa Condensate : 1.3mtpa LPG : 0.4mtpa
Construction Period	2011 ~ 2017



Length : 488m, Width : 74m, Height : 43m

# Why Australia?

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- **Safe Political Environment**

- **Strong, established democracy with rule of law**

- **Open, Stable Economy**

- **3.3% Yearly Growth Since 1990**
- **Average inflation of around 2.5% for the past 15 years**
- **A major economy in Asia-Pacific Region**

- **Enhance Stability**

- **Stable supply of natural gas for the Korean domestic market**
- **Diversification of gas supply portfolio**

# Australian LNG Projects

Status	Project	Capacity (MTPA)	Start-up	Location
Operational (8)	North West Shelf	17.6	1989	Western
	Darwin	3.6	2006	Northern
	Pluto	4.8	2012	Western
	QCLNG	8.5	2014	Eastern
	GLNG	7.8	2015	Eastern
	Gorgon	15.6	2016	Western
	AP LNG	9.0	2016	Eastern
	Wheatstone	8.9	2017	Western
Under Construction (2)	Ichthys	8.9	2018	Western
	Prelude	3.6	2018	Western
Possible or Speculative (3)	Bonaparte	2.0	2018	Western
	Scarborough	6.0	2028	Western
	Cash Maple FLNG	2.0	TBD	Northern

# Australian Domestic Gas Security Mechanism (ADGSM)

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## ○ Concerns

- **Misinformation – Apples & Oranges**
- **LNG Market and Domestic Market – linked but different**

## ○ Moving Forward

- **KOGAS understands Australian Concerns**
- **Working very hard to play its part in being a good corporate citizen**
- **Industry Solution**



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# Closing Remarks

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**Thank You!**