# Australia – The Future for Oil and Gas

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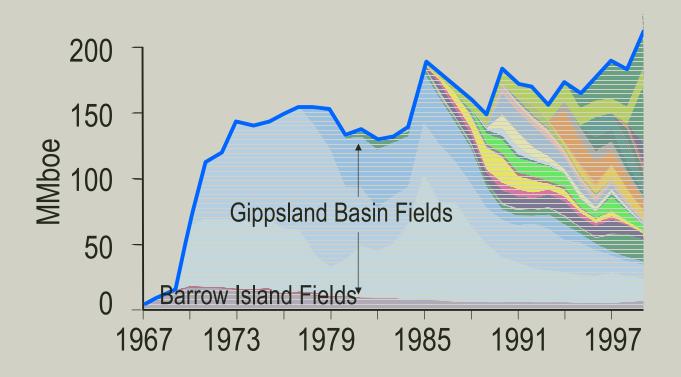
President and CEO

BHP Billiton Petroleum

Asia Pacific Petroleum Conference Singapore, September 2003



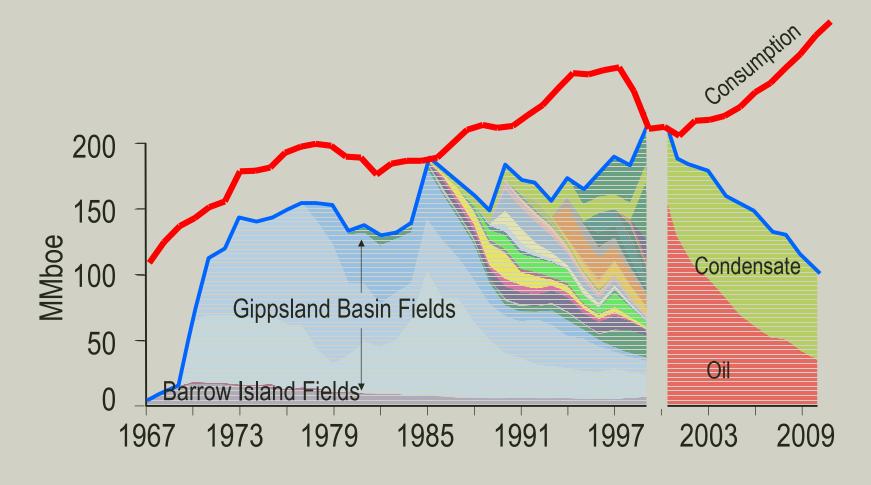
## Australia – historical production



Production profiles of individual Australian fields and cumulative production forecast at 50 per cent probability derived from industry data.



### Australia – production vs consumption



Production profiles of individual Australian fields and cumulative production forecast at 50 per cent probability derived from industry data.

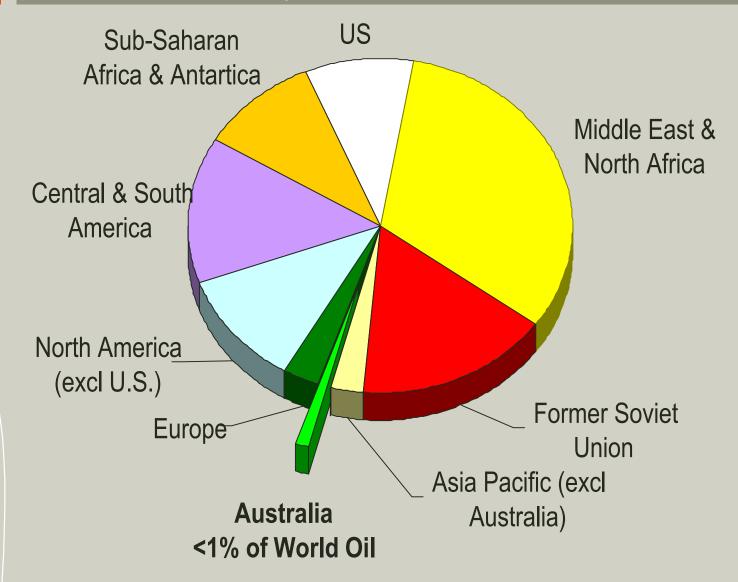


# Australia – some future liquids developments

Field name	Product	Liquids reserves	Startup
Gorgon	Gas/condensate	316 MMbbl	2009
Mutineer/Exete	r Oil & Gas	120 MMbbl	2006
Stybarrow	Oil & Gas	Appraisal	2006
Enfield	Oil & Gas	43 MMbbl	2005
Cliff Head	Oil	25 MMbbl	2005
Yolla	Gas/condensate	24.5 MMbbl	2004
Kipper	Oil & Gas	13 MMbbl	2006
Egret	Oil	11 MMbbl	2005



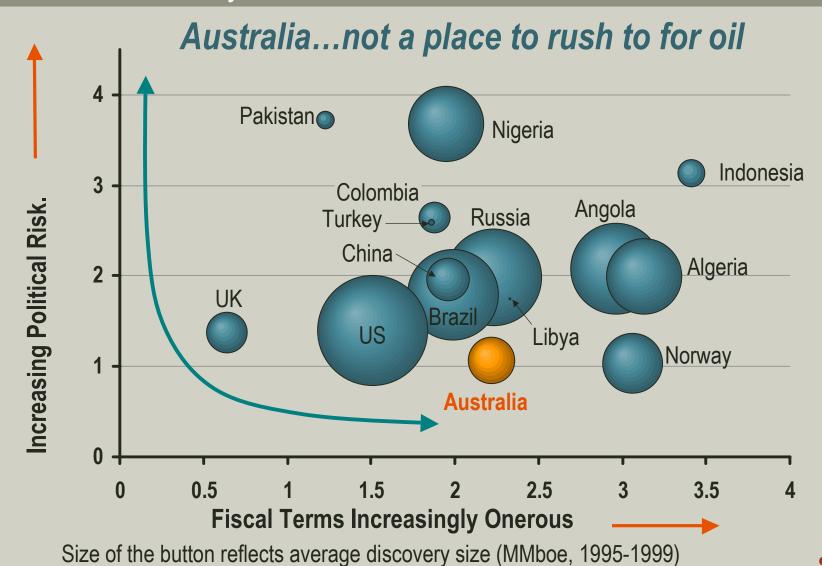
## Global Prospectivity – world undiscovered oil





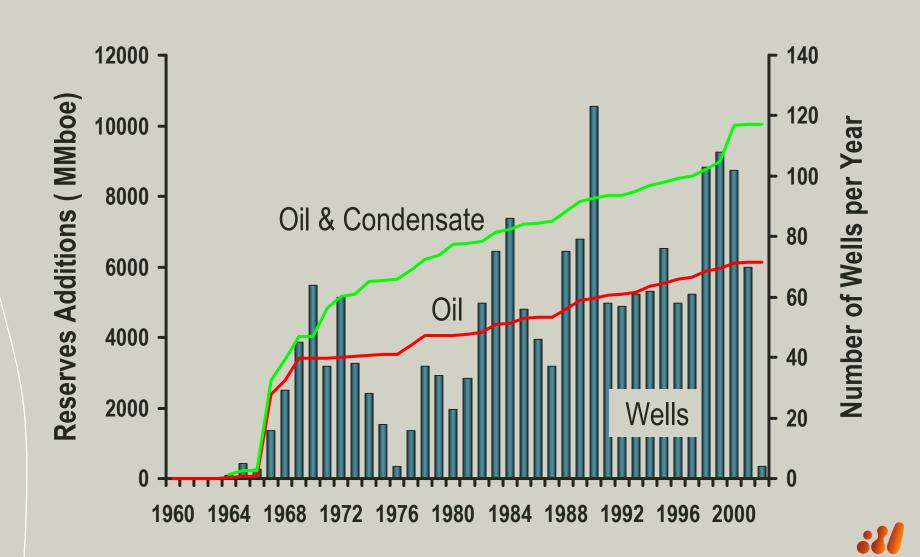
Source: USGS

#### **Global Materiality**



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#### Australia – maturity in shallow waters



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### Australia – activity in maturing areas

- Shallow water basins are well explored
- Infill exploration close to infrastructure will continue
  - 'new' technology application (3D seismic)
  - incremental reserves
- New plays in existing shallow water
  - eg. Enfield area in WA-271-P

But these are unlikely to yield material quantities of hydrocarbons...



**bhp**billi

## Australia – the potential of frontier basins



#### Australia – oil

#### **Trends in industry:**

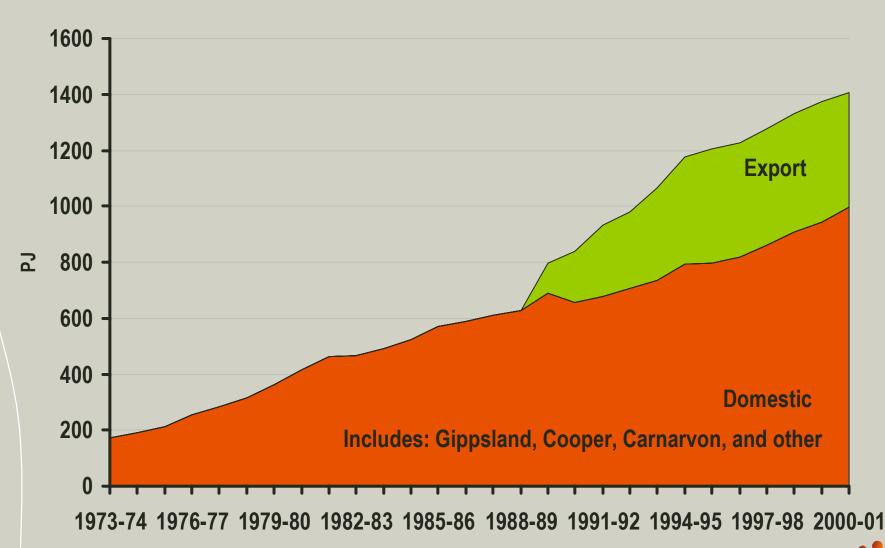
- Declining liquids production
- Industry focus is diverging
  - Minors focus on mature areas, generally smaller prizes
  - Majors focus on larger opportunities
- Australia regarded as maturing, and lacking prospectivity
- Some untested frontier areas, mainly offshore

#### Responses:

- Funding for technical data
- Review of fiscal terms



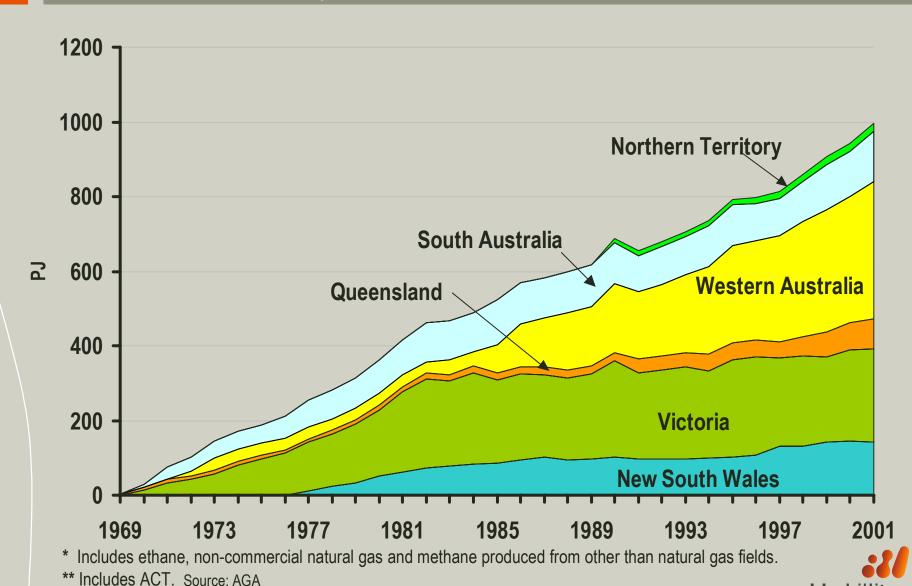
### Australia – history of gas production



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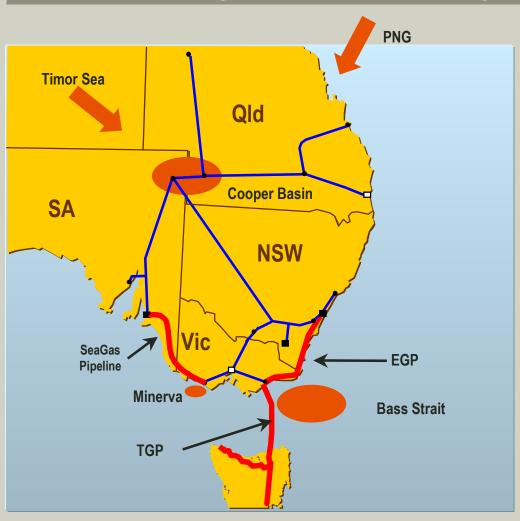
Source: AGA

## Gas consumption by State\*



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## Australia – progressive inter-linking of markets



- 10 Years Ago
  - Bass Strait gas sold in Victoria
  - Cooper Basin sold in NSW& South Australia
- Now
  - Eastern Gas Pipeline
  - Tasmania supply July 2002
  - South Australia pipeline to be completed by 2004

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- Other interconnection proposals
- Timor Sea & PNG discussion

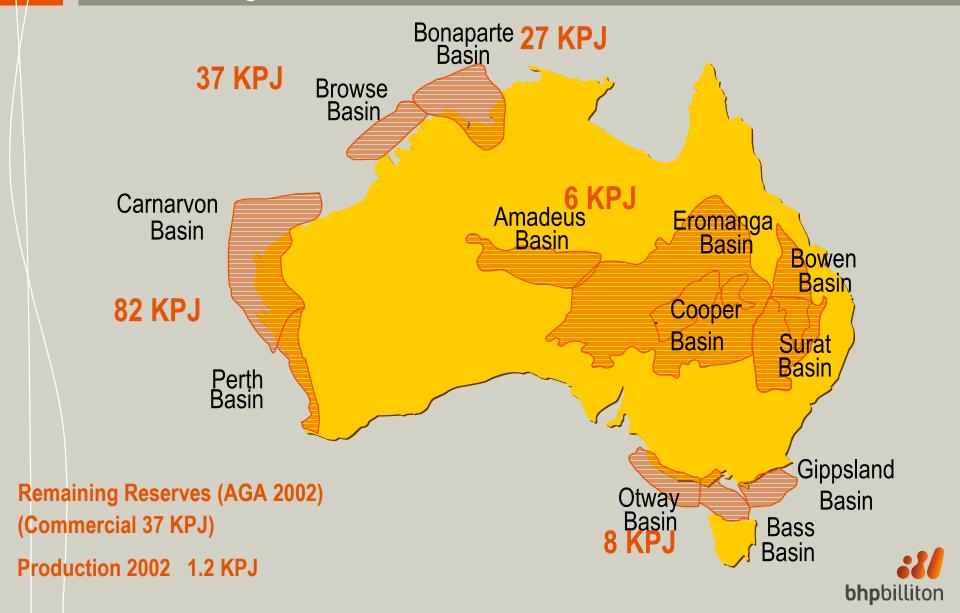
#### Australia – domestic gas

#### **Trends in industry:**

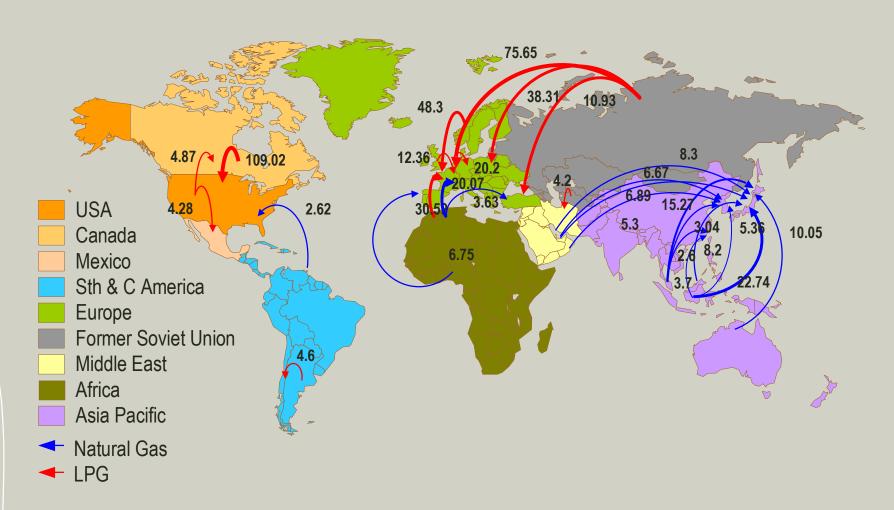
- Continuing increase in number of upstream suppliers
- New gas supply source likely to be required for SE Aust. ~ 2010/15
  - Including necessary transmission pipeline investment
- Gas pipeline network growing without Govt. sponsorship/incentives
- Emerging role of coal bed methane
  - Level of ongoing investments dependant on supply experience and available market
- Continued retail and pipeline consolidation
- Gas market remaining relatively immature and shallow

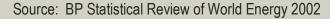


#### Australia – gas resources



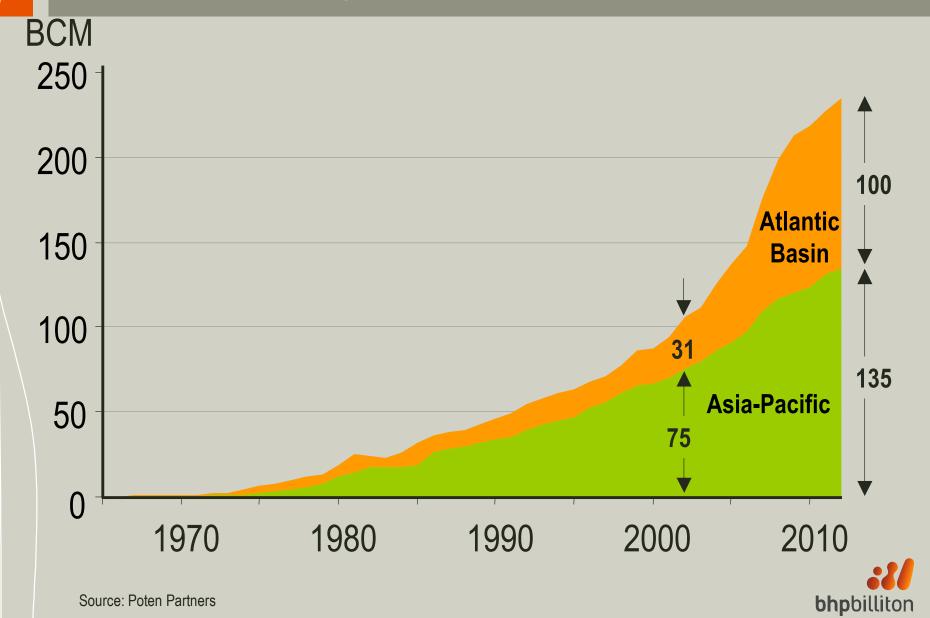
### Major Gas Trade Movements Trade flows (billion cubic metres)



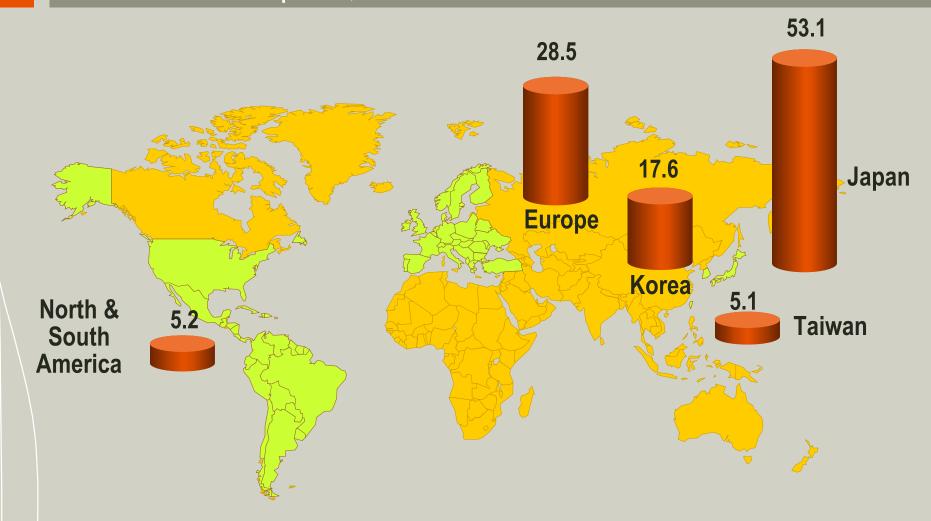


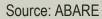


## LNG – continues to grow



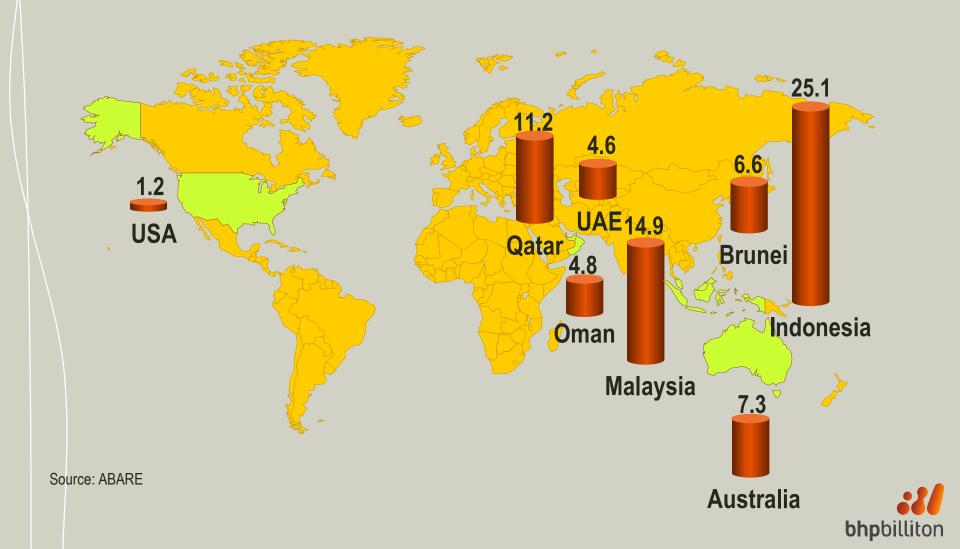
# LNG – world imports, 2002 (million tonnes)



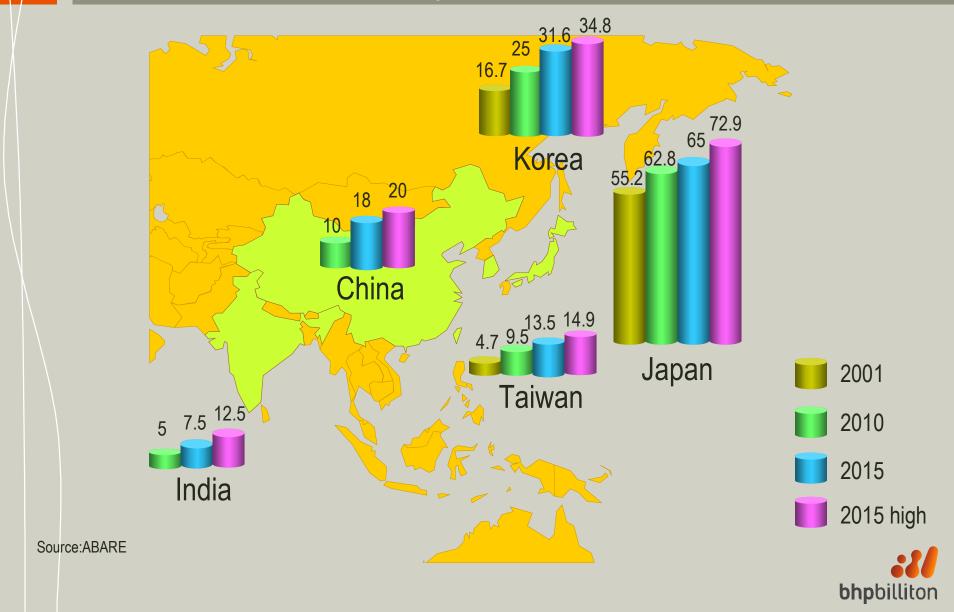




# LNG - supply to Asia, 2002 (million tonnes)



## LNG – Asian demand projections (million tonnes per annum)



# LNG – capacity expansion plans



Source: ABARE



#### LNG – market dynamics

#### **Trends in industry:**

- Fierce producer competition is lowering prices and margins
- Cost base of liquefaction is reducing
- LNG moving to "commodity status" in global market
- New LNG markets slow to materialise
- US emerging as a market
- Around 2010, expect another Australian producer of LNG other than NWS



#### Summary

- Australia will need to compete for exploration dollars
- Domestic gas market is immature but developing
- Australia positioned to supply growing LNG market

