



# **Australia's gas reserves: export commodity or strategic resource?**

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# The DomGas Alliance

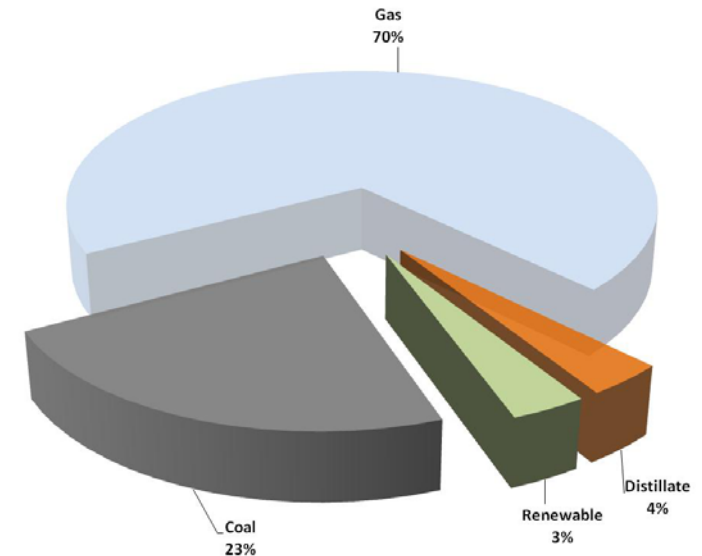


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# WA's gas dependent economy

- Most energy- and gas-dependent economy in Australia
- Natural gas supplies **half** of WA's primary energy
- Natural gas fuels **60%** of the State's electricity generation
- Energy underpins WA's mining, minerals processing and power generation industries



# Demand for gas will continue to grow

- Current WA consumption – over 1000 terrajoules per day (TJ/d)
- WA will require over 1000 TJ/d of new gas to meet new and replacement demand by 2014-15 (DomGas Alliance) or 2020 (BHP Billiton).
- This must come from **new** capacity and reserves backing.
- Existing supply capacity (North West Shelf Project 70%, Apache JVs 30%) fully utilised and fields are expected to decline.



# WA gas security challenges

- Serious domestic gas shortage – since 2004
- Users unable to secure long term supply in substantial quantity
- Prices have risen dramatically – to be around **three times** the price of new gas in Victoria
- WA domestic gas prices now among the highest of any gas producing or exporting economy in the world



## At the same time, producers continue to expand LNG exports

Recent domgas contracts	Recent LNG contracts
<p>Oct 2008 – Santos 6 year contract to supply Moly Mines</p> <p>Jan 2009 – Santos 7 year contract to supply CITIC Pacific</p> <p><i>WA gas users unable to secure long term contracts</i></p> <p><i>Significant unfilled demand</i></p>	<p>Dec 2008 – Shell 20 year contract to supply China</p> <p>Aug 2009 – ExxonMobil 20 year contract to supply India</p> <p>Aug 2009 – ExxonMobil 20 year contract to supply China</p> <p>Sept 2009 – Chevron 15 year contract to supply Korea</p> <p>Sept 2009 – Chevron two 20 year contracts to supply Japan</p> <p>Sept 2009 – Chevron 20 year contract to supply Korea</p>



# Does Australia have abundant gas reserves?

- Australia has “vast” or “hundreds of years” of gas: Federal Government and LNG industry claims
- Ambitions for Australia becoming an “LNG superpower”, overtaking Qatar as the world’s biggest LNG exporter
- But according to ABARE, Australia has 98 trillion cubic feet Tcf of gas or just **1.4 %** of world reserves
- This represents just 57 years supply **at current production**



# World natural gas reserves

<b>Country</b>	<b>% World resources</b>
Russia	27 %
Qatar	15 %
Saudi Arabia	4 %
United Arab Emirates	4 %
United States	3 %
<b>Australia</b>	<b>2 %</b>

Source: US Energy Information Administration and ABARE



# Challenges: availability

Project	Domestic gas supply	Start-up
Reindeer	Up to 120 TJ/d	From 2011
Macedon	Up to 200 TJ/d	From late 2012
Gorgon – if “commercial”	Up to 150 TJ/d 300 TJ/d	From end 2015 By 2021
Julimar	May be processed as LNG through Pluto	?
Pluto – if “commercial”	5 years after LNG	?
Total WA new supply needed	1000 – 1100 TJ/d	
Prospective new supply	470 TJ/d	
<b>Potential Shortfall</b>	<b>500 TJ/d</b>	

## Challenges: affordability

- Mining, minerals processing and power generation highly sensitive to energy prices
- Rising gas and electricity prices for business and households – e.g. recent gas tariff increase
- Loss or relocation of industry and employment overseas and interstate – e.g. chemicals, alumina refining



# Greenhouse implications

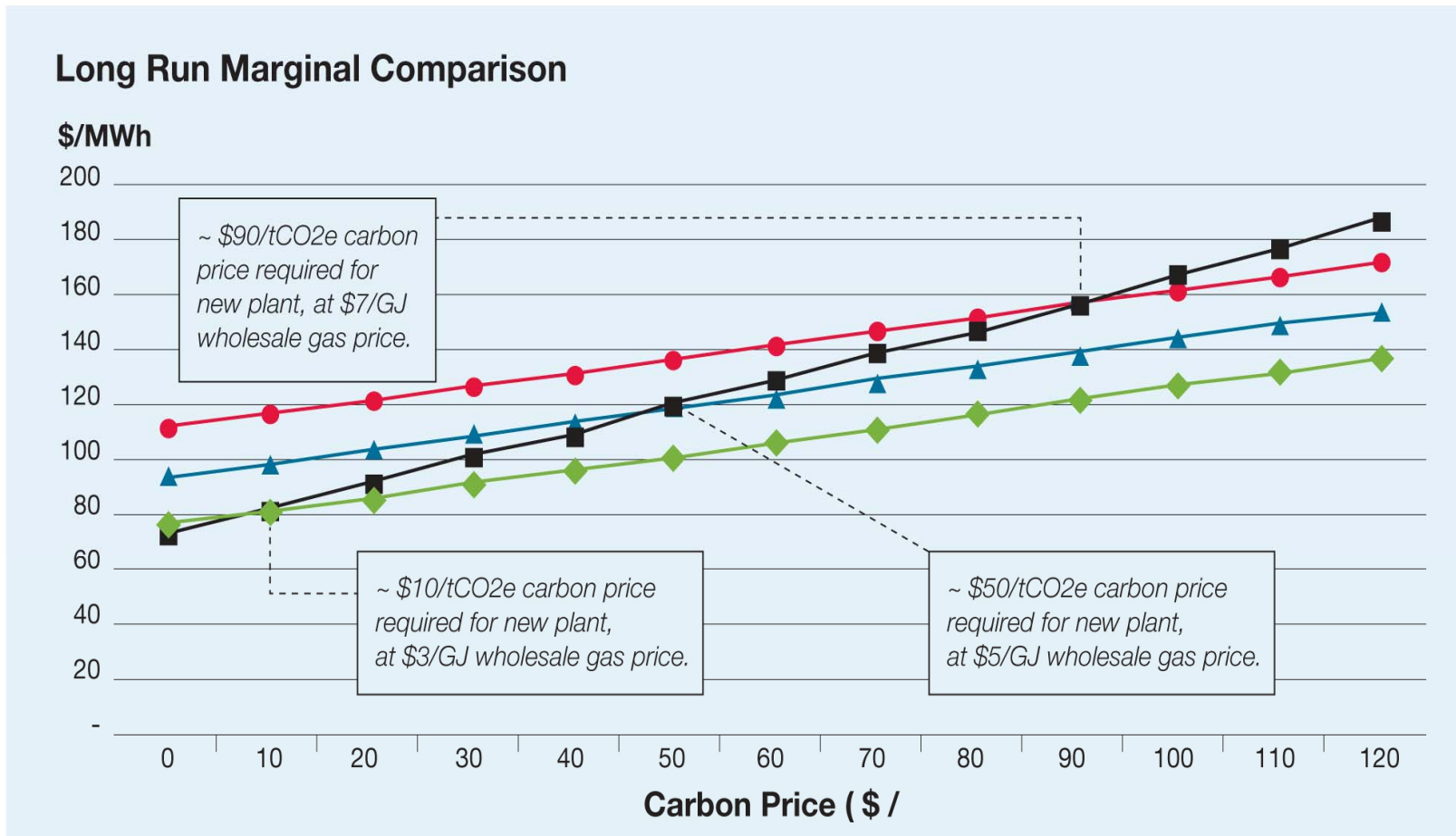
- At current prices, natural gas no longer competitive with coal for baseload power generation and most resource processing
- Two recent State government baseload electricity generators have been coal (Bluewaters 1 and 2)
- Gas shortage is potentially the **single biggest contributor** to WA emissions growth over the next decade



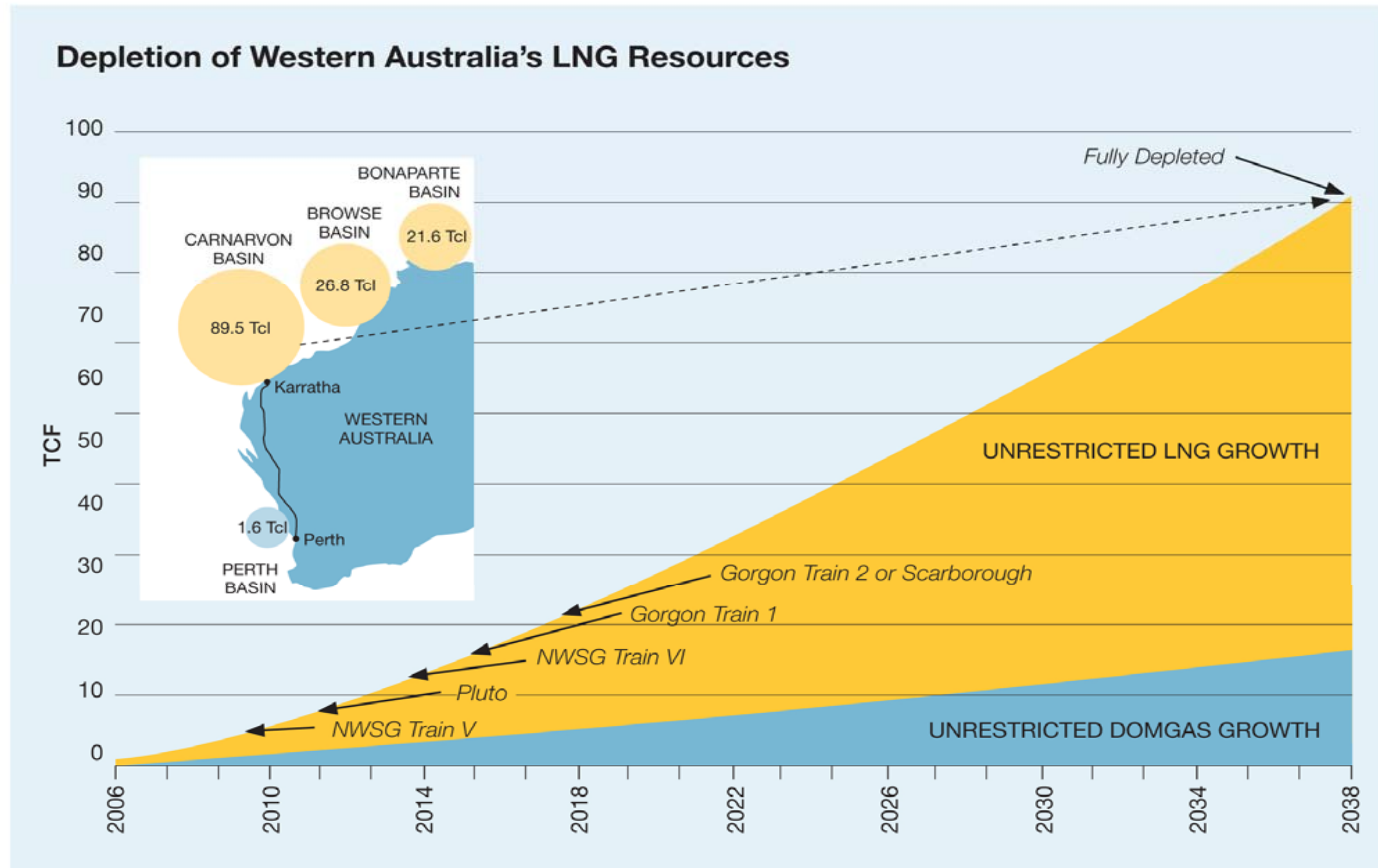
Gas fired  
cogeneration plant

# This is unlikely to change under ETS

\$7/GJ gas vs. \$2/GJ coal for new baseload power generation plant



# Challenges: longevity



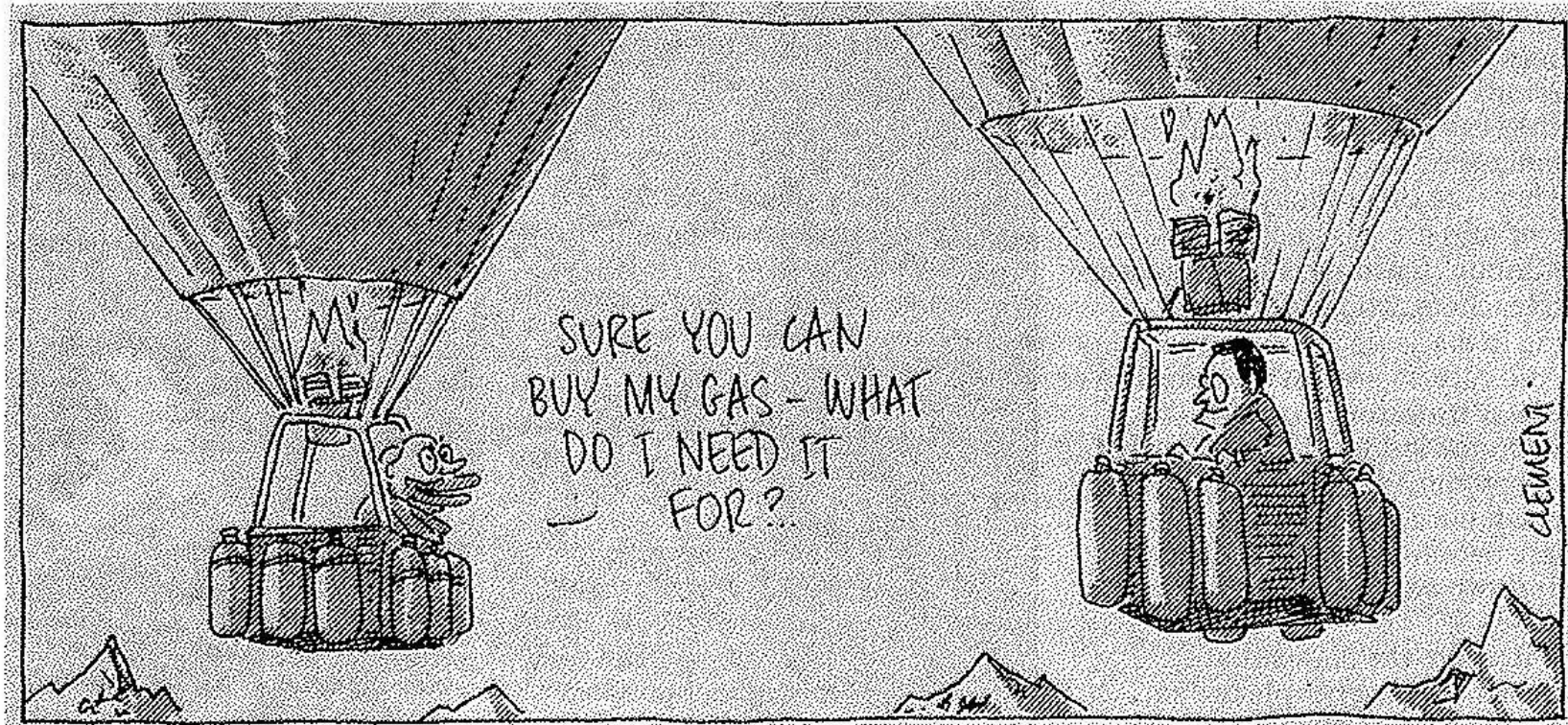
**This does not take into account “contracting out” of gas production under 20-25 year LNG contracts!**

# Policy responses

- Remove anti-competitive joint selling arrangements
- Strengthen the WA gas reservation policy and implement a national reservation policy
- Stringently enforce retention leases – to ensure producers do not warehouse gas resources
- Tax and royalty incentives for domgas
- Support midstream infrastructure and tight gas projects
- Federal Government Energy White Paper – export focused!



# Mature debate on energy security needed - focus to date has been exports



Australian Financial Review  
12 September 2007



**DOM GAS  
ALLIANCE**

