Australia’s natural gas boom: higher prices, serious shortages

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Australia’s energy consumption by fuel

- Natural Gas 23%: 1371 PJ
- Coal 37%: 2229 PJ
- Petroleum 35%: 2058 PJ
- Renewables 5%: 286 PJ

Source: BREE, Energy in Australia 2012
Australia’s electricity generation by fuel

- Coal: 74%
- Natural Gas: 15%
- Renewables: 8%
- Other: 1%
- Oil: 1%

Source: BREE, Energy in Australia 2012
Demand for gas is growing

**Australia's natural gas consumption**

- 2004-05: 1052 PJ
- 2005-06: 1108 PJ
- 2006-07: 1187 PJ
- 2007-08: 1237 PJ
- 2008-09: 1250 PJ
- 2009-10: 1371 PJ

*Source: BREE, Energy in Australia 2012*
East Coast – massive increase in production needed
Yet, sharp rise in prices

Source: Dart Energy and Innovative Energy Consulting
Despite a growth in production …

• Australian industry cannot secure long term contracts at affordable prices

• Gas prices have risen sharply
  - East Coast: from $3-4 per gigajoule → $6-7 per gigajoule
  - West Coast: from $2.50 per gigajoule → $8-9 per gigajoule

• Manufacturing, value-adding and jobs are affected

• The market has failed to deliver
Impact on jobs and investment

- Dow Chemicals - prices now uneconomic for new chemical manufacturing
- Rio Tinto - cannot secure long term supply for Qld operations
- National Generators Forum - members cannot secure long term contracts
- Incitec Pivot - gas prices mean Australia less attractive than US for $700 million ammonia plant
- Alcoa – suspends multi-billion Wagerup refinery expansion
- Cement Australia in Gladstone unable to secure gas contract
- Coogee Chemicals – shuts plant because of rising costs
- Wesfarmers Chemicals – gas prices make it uneconomic to invest in new value-adding
## Impact on annual gas bills

<table>
<thead>
<tr>
<th></th>
<th>Annual gas consumption (PJ)</th>
<th>Annual gas bill at historical prices</th>
<th>Annual gas bill at new prices</th>
<th>Additional cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queensland</td>
<td>199</td>
<td>$597 million</td>
<td>$1.2 billion</td>
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<tr>
<td>NSW</td>
<td>155</td>
<td>$477 million</td>
<td>$954 million</td>
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<tr>
<td>Western Australia</td>
<td>566</td>
<td>$1.4 billion</td>
<td>$4.5 billion</td>
<td>$3.1 billion</td>
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</tbody>
</table>

Source: Annual gas consumption from BREE, *Energy in Australia 2012*. Domestic gas prices used are: Western Australia $2.50/GJ historical, $8/GJ new; Eastern States $3/GJ historical, $6/GJ new
What are the causes?

• Most of Australia’s gas resources now controlled by the world’s biggest oil and gas companies

• Commercial preference to sign multi-billion$ LNG contracts for foundation customers

• Selling to many smaller Australian companies will not happen voluntarily

• There is no policy outside WA to ensure our energy resources are prioritised to supply Australian industry and households
Top 20 World Natural Gas Reserves

Top 20 Natural Gas Reserves with Full International Oil Company Access

Top 20 Natural Gas Reserves with Full International Oil Company Access and Unrestricted Gas Exports

Australia is the **only country** where international oil companies can access and export gas without prioritising domestic supply.

It is also the only major gas producing country suffering **serious gas shortages and sharply rising prices as production increases**.

The market has failed to ensure supply.
United States and Canada

- US Energy Agency has conditioned LNG exports on gas producers ensuring supply and affordable prices for US industry

- US gas prices around $2 / GJ, compared to $6 - 9 in Australia

- Canada requires export permits and export price tests to ensure domestic market is not disadvantaged by gas exports
Egypt

• Egypt has a 66% reservation policy

• One-third for export, one-third for domestic supply, one-third “to save for our children”

• Egypt accounts for 29% of Apache Energy’s global revenue and 22% of global production
  (10% and 9% in Australia)
A domestic reservation policy is in Australia’s national interest

- Reservation will address market failure and ensure supply
- Leverages Australia’s competitive advantage in energy
- Promotes manufacturing and value-adding industries
- Queensland Bligh Government’s policy “to set aside future gas fields for future domestic supply if needed” has not worked
Reservation in Western Australia

- 15% domestic reservation policy introduced in 2006

- Policy will take effect as new projects come on-stream

- Wheatstone Project has committed to supply domestic gas equivalent to 15% of LNG production targeting 2016

- Domestic supply will rise over time to 500 TJ/day as LNG production increases to eight LNG trains

- Gorgon Project also includes a domestic supply commitment
WA Parliamentary Inquiry

“In the absence of a gas reservation policy it is unlikely that LNG producers would develop adequate domestic gas processing facilities.”

“There is no evidence to suggest that the state’s current approach to domestic gas reservation obligations has deterred LNG producers from pursuing development opportunities in Western Australia.”

- Report on Domestic Gas Prices, March 2011
NSW Parliamentary Inquiry

“The Committee recommends that the NSW Government implement a domestic gas reservation policy, under which a proportion of the coal seam gas produced in New South Wales would be reserved for domestic use.”

“Such a policy could assist to contain price increases, enhance energy security, and reduce the State’s dependence on coal for power generation.”

Reservation has not discouraged investment in WA

Chart: WA petroleum exploration expenditure ($)

Data source: ABS
West Coast – higher prices not justified by costs

Source: Lifting costs from Woodside 2010 Annual Report; includes North West Shelf Project (38.5 MMboe) and Otway (0.9 MMboe); Conversion factor 1 boe is approx. 6.1 GJ
Conclusion

- A domestic gas reservation policy is in Australia’s national interest

- It will ensure supply and put downward pressure on prices for manufacturing, value-adding and jobs

- Reservation works in practice and will not discourage new gas developments