Making Sense of Australian Gas Policy

WEO2017 focus theme
ANU Energy Update
Copland Lecture Theatre, Canberra
Wednesday, 29 November
About APPEA

• The Australian Petroleum Production & Exploration Association (APPEA) represents the collective interest of Australia’s upstream oil and gas industry.

• APPEA has around 200 members; oil and gas explorers and producers active in Australia and companies providing goods and services to those explorers and producers.

• APPEA member companies produce around 98% of Australia’s oil and gas.

www.appea.com.au
Australia’s upstream oil and gas industry – by the numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of primary energy</td>
<td>62%</td>
</tr>
<tr>
<td>Value of production</td>
<td>$30 billion</td>
</tr>
<tr>
<td>Share of Australia’s GDP</td>
<td>1.9%</td>
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<tr>
<td>LNG capital investment since 2010</td>
<td>&gt; $200 billion</td>
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<tr>
<td>LNG exports (2016-17)</td>
<td>$23.7 billion</td>
</tr>
<tr>
<td>Share of commodity exports (2016-17)</td>
<td>11%</td>
</tr>
<tr>
<td>LNG exports (2020-21 forecast)</td>
<td>$44 billion</td>
</tr>
<tr>
<td>Share of commodity exports (2020-21 forecast)</td>
<td>20%</td>
</tr>
<tr>
<td>LNG operating expenditure</td>
<td>$8–$9 billion per annum</td>
</tr>
<tr>
<td>Employment</td>
<td>55,000 to 65,000</td>
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</tbody>
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Four points (and a detour) along the gas policy road ...

• Gas’ critical role in the Australian economy.
  – Industry, power and export.
• The role of gas as a cleaner energy source.
  – Integrating energy and climate change policies: some observations.
• The role of natural gas in complementing renewable energy.
  – Gas is essential as we continue the move towards a low emissions economy.
• Making sense of Australian gas policy.
  – Good luck with that.
Natural gas: key to a low carbon world
The global context: growing gas demand

Gas prices – “apples for apples” comparisons matter …

Australians don’t pay more for gas than export customers
Comparing apples to apples – wholesale gas prices to end users

Wholesale gas prices to end users in Australia are sometimes higher than LNG prices (on the ship) due to internal transportation and retail costs and margins.

End users of gas in Asia pay additional regasification, transport and retail costs, leading to costs significantly higher than for Australian end users.

Indicative wholesale gas prices in Asia (2017)

Australia West
Australia East
Malaysia**
Indonesia**
Vietnam**
Thailand
India
Singapore
South Korea
China
Japan

Note: Many end user gas markets are opaque, and price levels vary greatly by location, seller, buyer, volume and terms. Prices herein represent what Wood Mackenzie consider indicative of marginal prices at the higher end of price ranges across various markets.

*Indicative maximum price levels in US$/mmBtu. **piped gas prices, not LNG imports

Source: Extract from APPEA’s (forthcoming) Unconventional Gas Report to COAG (2017)
Wholesale price levels by country – 2016

Source: International Gas Union (2017)
Wholesale price levels by country – 2016

Source: International Gas Union (2017)
Wholesale price levels by country – 2016

Source: International Gas Union (2017)
Gas and renewables – natural partners

• Natural gas can and should play a key role in complementing renewables in the move to a cleaner energy future.
• Gas-fired generation has quick ramp-up times and lower capital costs than traditional baseload technologies.
• Renewables and fast-reacting gas-fired power general technologies are complementary and can be jointly installed to meet the goals of cutting emissions and ensuring a stable supply.
• This mean that as the penetration of renewable energy increases, so will the requirements for increased back-up capacity.
• A debate that sets up renewables and gas as being in opposition misses this important point.
A very “full” gas policy agenda

• COAG Energy Council Gas Market Reform Package.
• Gas Market Reform Group.
• 2017-18 Budget package.
• Actions agreed with the Prime Minister in March 2017.
• ACCC wholesale gas market monitoring.
• The 2017 Review of Australia’s Climate Change Policies.
• The Australian Domestic Gas Security Mechanism.
• The National Energy Guarantee.

All of this comes on top of a very active reform process over the last decade ...

And this is just the national energy and climate change related policy agenda ...
Developed and planned gas resources are not enough to meet projected demand.
– McKinsey & Co estimate around $50b in new investment is required between now and 2030.

Multiple options exist to balance demand and supply, all of which are commercially or politically challenged today:
– Develop more onshore gas resources in Queensland; develop new onshore gas resources in NSW and Victoria; build pipeline infrastructure to bring gas from NT.

Enabling investments required to balance supply/demand in the long-term requires choices to be made today.

The various gas market reform processes underway are important, but will be of limited value if more gas cannot flow into the market.

More supply is critical.
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THANK YOU!
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