WEO2015 theme – Unconventional gas: an industry perspective

*Presentation to the 2015 ANU Energy Update*

Damian Dwyer
Director – Economics

8 December 2015,
Canberra
Outline

• Who is APPEA?
• An overview of the Australian oil and gas industry.
• The rise of unconventional gas (both in Australia and overseas).
• A focus on unconventional gas: reserves and resources.
• A focus on unconventional gas: developments.
• The *World Energy Outlook 2015* and unconventional gas: some Australian industry perspectives.
• Policy priorities.
• Conclusion and the way forward.
Who is APPEA?

• The Australian Petroleum Production & Exploration Association represents the collective interest of Australia’s upstream oil and gas industry.
• APPEA is funded by subscriptions from its member companies.
• APPEA member companies produce around 98% of Australia’s oil and gas.

www.appea.com.au
National industry overview

- Share of primary energy: 65%
- Value of production: > $29b pa
- Direct tax payments: ~ $8b pa
- Estimated share of GDP: 2.1%
- Oil reserves to consumption: 13 years
- Gas reserves to production: ~ 70 years
- Gas resources to production: > 400 years
- Exploration expenditure: $3.8b pa
- Exploration activity: Offshore ↓↓ Onshore ↓
The rise of unconventional gas: Australia

Source: APPEA/EnergyQuest (2014)
The rise of unconventional gas: US

Source: Energy Information Administration (2015)
Focus on unconventional gas: resources

Source: Core Energy Group (2015)
Focus on unconventional gas: development

• Since 1996, unconventional gas developments (primarily natural gas from coal seams) have grown from nothing to now supply around 40% of the east coast gas market and 90% of the Queensland market.
  – If you include production for export as LNG, this proportion rises to 55%.
• Linked to the resources picture outlined above, the use of unconventional gas is expected to grow.
Focus on unconventional gas: development

Source: EnergyQuest (2015)
Natural gas: strong global growth expected through to 2040*


* Primary Energy Demand by Fuel in the “New Policies Scenario”
Unconventional natural accounts for more than 60% of the increase ...

* Primary Energy Demand by Fuel in the “New Policies Scenario”
... and remains a largely US story, with steady growth in Australia ...

* Primary Energy Demand by Fuel in the “New Policies Scenario”
Unconventional gas and LNG: a world first

• Australia currently has five LNG projects (North West Shelf Venture, Darwin LNG, Pluto LNG, Queensland Curtis LNG, Santos GLNG) that export LNG to a range of countries, including Japan, China and Korea.

• There are five further projects (including Australia Pacific LNG) under construction that cumulatively involve capital expenditures of around $160 billion.
Unconventional gas and LNG: a world first

• Australia currently has five LNG projects (North West Shelf Venture, Darwin LNG, Pluto LNG, Queensland Curtis LNG, Santos GLNG) that export LNG to a range of countries, including Japan, China and Korea.
• There are five further projects (including Australia Pacific LNG) under construction that cumulatively involve capital expenditures of around $160 billion.
Australian LNG projects

- Prelude
- Gorgon
- Wheatstone
- Barrow Island
- Karratha
- Onslow
- Darwin
- Ichthys
- Darwin LNG
- Pluto
- North West Shelf Venture
- Australia Pacific LNG
- Santos GLNG
- Queensland Curtis LNG

The WEO 2015 and unconventional gas: some Australian industry perspectives

• A “stocktake” on the 2012 *Golden Rules for a Golden Age of Gas*.  
• United States, Canada and Australia assessed.  
• Notes similarities between Canada and Australia with land access issues due to the mineral rights being vested in the Crown.
The WEO 2015 and unconventional gas: some Australian industry perspectives

• For Australia, recognises the excellent work done in Queensland.
• There is also recognition of the Australian Government’s leadership role in both the COAG Energy Council (CSG harmonised regulatory framework) and through the establishment of the independent expert scientific committee to provide advice on the impact of CSG and coal mining projects on water resources.
• This contrasts with the regulatory responses taken by the NSW and Victorian state governments.
  – There is no mention of unconventional activity in other Australian jurisdictions.
The WEO 2015 and unconventional gas: some Australian industry perspectives

• Co-operation between groups of regulators, industry and other stakeholders can play a very useful role in research, encouraging best practice and evaluating lessons learned.
• Where gas resources are not owned by the landholder, ensuring that the landholder benefits from unconventional gas activity will be key to gaining and maintain the industry’s social licence.
• Continued meaningful involvement of local communities is essential, possibly through purpose-built institutions.
The regulatory regime

- Unconventional gas tightly regulated in all jurisdictions.
- Approach is varied and lessons from individual jurisdictions not always shared.
  - Regulatory regimes most well established in SA, Qld and more recently WA.
  - NT developing its regulatory regime.
  - NSW has a regulatory regime that is less welcoming of the industry.
  - Victoria and Tasmania have moratoriums in place.
  - ACT does not a regulatory regime.
Policy priorities

- The need for market-based energy policy.
- Maintaining industry access to resources.
- Further gas market development.
- Climate change policies that encourage abatement at least cost and recognise the role of natural gas.
- Red tape and green tape reduction.
www.appeaconference.com.au
WEO2015 theme – Unconventional gas: an industry perspective

*Presentation to the 2015 ANU Energy Update*

Damian Dwyer
Director – Economics

8 December 2015,
Canberra