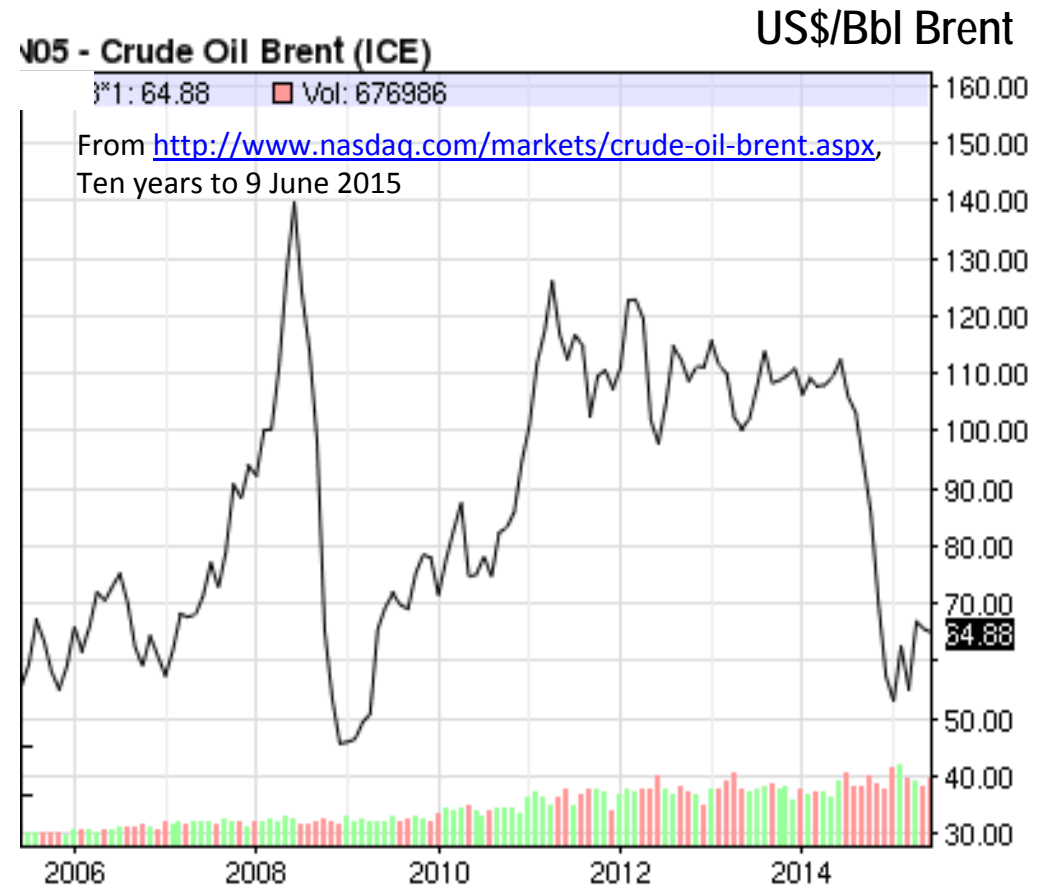
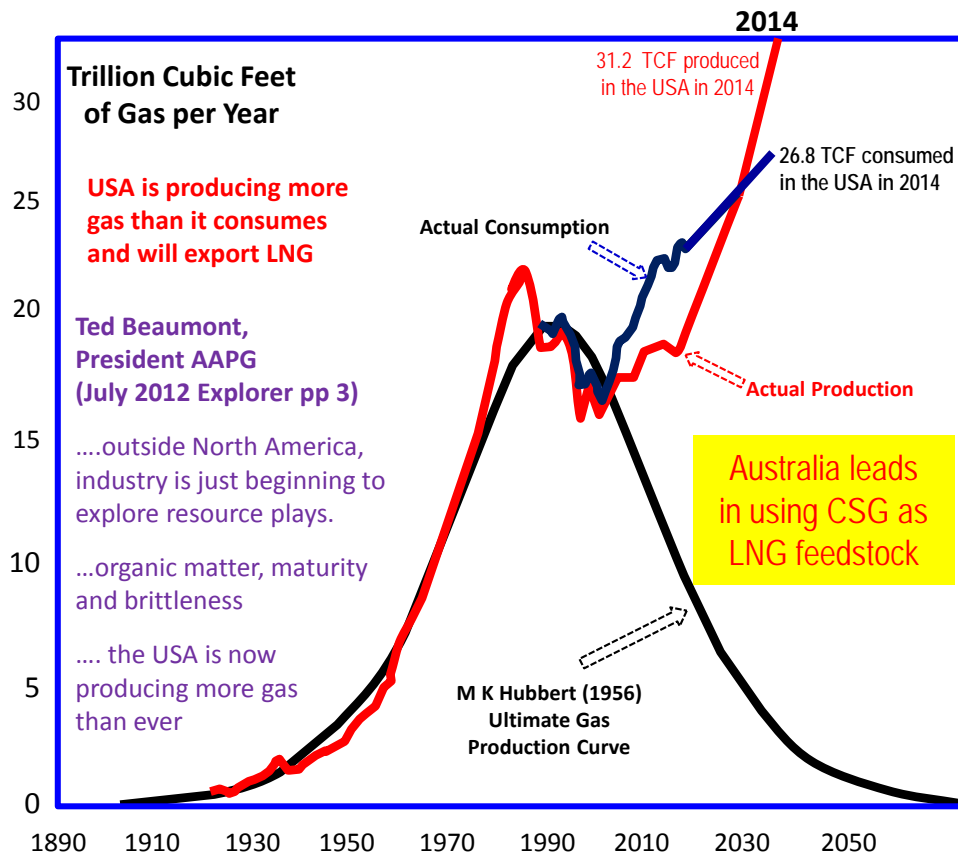


# ISES 2015, Bali, 12<sup>th</sup> June 2015

## The Story of Shale



**Barry Goldstein**  
 Executive Director  
 Department of State Development  
 South Australian State Government

**\$/barrel for  
Brent Crude**

# Guide to Crude Oil Price Implications

Ed Crooks, pp 8, Financial Times 8 Nov 14

\$160 Venezuela balances budget

\$130 Iran balances budget

\$115 Breakeven for highest cost USA shale oil

\$114 Iraq balances budget

\$110 Russia balances budget

\$100 Supports new Canadian oil sands

**CONTEXT**

\$95 Average crude price to boost airline profits by \$15bln

\$90 Saudi Arabia balances budget

\$80 High cost deepwater offsh. Angola, Brazil, Norway and UK

\$60 Median break-even for USA shale oil (assoc'd gas ~free)

\$50 Kuwait balances budget

**US\$65/B Brent Crude**

\$40 Break-even for lowest price USA shale oil

# Context – International, fungible price for LNG sales

## National Natural Gas Market Overview: World LNG Landed Prices

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

## World LNG Estimated April 2015 Landed Prices



# OBJECTIVES:

## Safe, secure and competitively priced natural gas

Gas price parity based on FERC's April 2015 landed LNG

US\$7.45 to 7.85 per gigajoule (GJ) for LNG in Asia

Less ~US\$ 6 per GJ for pipeline, LNG processing & transport

< **US\$1.85 / GJ** benchmark for net-back for gas price parity

Gas price parity based on 15% of Brent oil (US\$65/barrel)

US\$9.75 per gigajoule (GJ) for LNG in Asia

Less ~US\$ 6 per GJ for pipeline, LNG processing & transport

**A\$3.75 / GJ** benchmark net-back for gas price parity

Foreign exchange rates are a local factor in price parity

Comparative advantages delivered from locally produced natural gas include less transport & LNG processing costs

# Experience and Regulatory Framework in South Australia



Fracture stimulation has been used safely in South Australia since 1969, in both conventional and unconventional wells.



More than 700\* wells have been fracture stimulated in the deep sandstone reservoirs of South Australia's Cooper Basin.



No fracture stimulation allowed outside the Cooper Basin without detailed assessment to inform stakeholders ahead of consultation.

South Australia has a **BAN** on all oil, gas, geothermal energy and gas (including greenhouse) gas storage operations **UNTIL** potentially significant risks, risk mitigation strategies and residual risks are established and after **EFFECTIVE CONSULTATION** with potentially affected people, enterprises and organisations under **STATEMENTS OF ENVIRONMENTAL OBJECTIVES (SEOs)** resolve that operations- and region-specific risks are simultaneously reduced to as low as reasonably practical and meet community expectations for net outcomes

# 45 Years

of fracture stimulation (fracking) in South Australia

# 0

Negative impacts identified



Water resources



Soil



Native vegetation and fauna



Landscape and heritage



Air quality



Health and wellbeing of people and enterprise

Thereafter, SEOs are approved and operators give **NOTICE OF ENTRY (NoE)** with sufficient project details to enable stakeholders to make informed decisions whether or not to object to land access.

Every potentially directly affected person, enterprise and organisation is given **NoE** can be a show-stopper with disputes resolved in court. **~14,500 NoEs since 2000 without a single instance of court proceedings**

# Fact checked answers to Frequently Asked Questions (FAQs)

- FAQ Sheet – Unconventional Gas and Oil in the South East of South Australia  
[http://www.pir.sa.gov.au/data/assets/pdf\\_file/0003/218109/FAQ - South East Unconventional Gas and Oil.pdf](http://www.pir.sa.gov.au/data/assets/pdf_file/0003/218109/FAQ_South_East_Unconventional_Gas_and_Oil.pdf)
- 
- Whole-of-government submission to South Australian Natural Resource Committee Inquiry Into Unconventional Gas (Fracking)  
[http://www.petroleum.dmitre.sa.gov.au/data/assets/pdf\\_file/0009/240120/Inquiry into Unconventional Gas Fracking.pdf](http://www.petroleum.dmitre.sa.gov.au/data/assets/pdf_file/0009/240120/Inquiry_into_Unconventional_Gas_Fracking.pdf)

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