A global gas revolution: Implications for Australian Energy Policy

25 June 2014
Key themes

• By 2017-18 Australia could be the world’s biggest gas exporter, generating more than $53 billion a year in export earnings.

• Unconventional gas (coal seam gas in Australia and shale gas in the US) is creating a global energy revolution.

• Strong Asian demand and high prices means local consumers will face export parity prices for Australian homes and businesses.

• Non-trivial policy implications:
  • Pressure for protection (domestic gas reservation)
  • Unexpected climate change outcome
  • Un-burnable carbon
  • A gas “death spiral”? 
In the US, the market is working and shale gas is delivering

All forecasts are wrong, some are useful

Source: EIA, US Geological Survey
Global prices have separated

but maybe not be for long

Source: World Bank
The Australian market is responding
NSW households have already seen gas price increases

Victorian average gas bill: $800-900 per year

Averages are dangerous!

For some businesses the increase will be a very big deal
And has been in balance

Daily gas flows on a winter’s day in 2011

- **Bowen-Surat Basins**
  - **Qld**: 516 Gals
  - **Cooper Basin**: 585 Gals
  - **SA**: 366 Gals

- **Otway-Bass Basins**
  - **NSW**: 610 Gals
  - **Vic**: 1160 Gals
  - **Gippsland Basin**: 585 Gals
  - **Tas**: 53 Gals

- **Vic Storage**
  - **Camden CSG**: 257 Gals

- **Pipeline**
  - **NSW**
  - **Vic**
  - **SA**

- **Demand**
  - **Supply source**
And gas could be very tight within 3-5 years unless commercial solutions are reached.

Daily gas flows on a winter’s day in 2016

- **Cooper Basin** (SA) - 349
- **Bowen-Surat Basins**
- **Qld** (832)
- **Exports** (4,838)
- **Bowen-Surat Basins**
- **NSW**
  - Demand: 633
  - Supply: 480
- **Vic Storage**
- **Otway-Bass Basins**
- **NSW**
  - Demand: 633
  - Supply: 480
- **Vic** (1171)
- **Camden CSG**
- **Gippsland Basin**
- **Tas** (79)

**Daily Gas Flows (Thousand Cubic Feet Per Day):**
- Cooper Basin to Bowen-Surat Basins: 314
- Cooper Basin to Camden CSG: 84
- Camden CSG to Vic Storage: 44
- Vic to Qld: 227
- Qld to Exports: 605
- Export to NSW: 288
- Vic to Gippsland Basin: 778
- Gippsland Basin to Tas: 79
Things had been looking for good for gas

But, then along came the market.
Contract and spot prices make a big difference

Brown coal
$6/t

Black coal
$75/t

Gas
$8/GJ

And, that’s not all
Electricity consumption has been falling - unprecedented

Source: AEMO (2012, 2013)

And, that’s without the Renewable Energy Target
So, the outlook for gas generation is very uncertain.

Source: AEMO (2012)

So, is this the beginning of a gas “death spiral”?
A climate conundrum

• There is no shortage of gas
  • Global resources are more than 200 years of supply – great news for energy users, possibly very bad long-term news for climate change.
  • A fuel of transition looks more like a destination

• To meet the two degrees warming constraint requires the world to stop burning fossil fuels by around the middle of the century (without CCS).

• So we already have four times the gas we can ever burn.

• Financial markets:
  • Don’t believe in the political commitment
  • Are assuming they can all get out first
  • Have got something very wrong
Conclusions

More than $160 billion investment is good for the economy. Governments should resist self-interested calls to cap prices or reserve gas for the domestic market.

Governments must:
- End the coal seam gas impasse in New South Wales.
- Create a more transparent and efficient gas market including new trading hubs, a published gas price index pipeline capacity trading and elimination of joint marketing.
- Find a way to bipartisan, long-term carbon pricing credibility

Industry must:
- Get the gas to market and commercial deals should get done.
- Resolve the full life-cycle emissions challenge
- Address its credibility problem with communities

For Australia, getting gas right presents very big challenges
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