

**Western Australian Parliamentary Economics and Industry Committee**

**Inquiry into domestic gas prices**

BP Australia, July 2010

**Introduction**

BP Australia welcomes the opportunity to contribute to the Western Australian Parliamentary Economics and Industry Committee's inquiry into domestic gas prices. Through two separately managed businesses, BP is both a substantial supplier of natural gas through our share in the North West Shelf Venture, and an industrial consumer of natural gas at the BP Kwinana oil refinery.

BP also notes submissions from North West Shelf Gas (NWSG) on behalf of its domestic gas sellers, of which BP is one, and from the Australian Petroleum Production and Exploration Association (APPEA), of which BP is a member. In this brief submission we do not repeat the arguments and facts presented in those submissions, but instead make complementary comments that consider:

- The regionalised nature of natural gas markets due to the intrinsic qualities of gas, and some examples of different markets;
- Features of the Western Australian market;
- Recommendations for future domestic gas policies.

**The regionalised nature of gas markets.**

Natural gas is fundamentally different as an energy source to its two principal competitors, oil and coal. Oil and coal can both be transported easily and without perishing at very low cost to anywhere in the world and this has created an integrated global market (and price) for them. Gas, by comparison, cannot be transported without substantial infrastructure (expensive pipelines, or yet more expensive liquefaction plants, specialised shipping fleets, and regasification terminals) and energy consumption. The LNG process can consume up to 15% of the initial energy resource.

Because gas does not travel well, geographic distance creates substantial barriers between markets. Although there is some evidence that the global gas market is integrating and that this integration has progressed during the economic downturn, this is not a smooth and easily predictable process. During 2009, for example, natural gas reacted to the Global Financial Crisis (GFC) with the largest consumption decline of any fuel type: 2.1% overall, 3.1% in the OECD and a massive 7.3% in the former Soviet Union. Gas prices predictably fell, but the regional segmentation of markets led to sharp differences in the quantum: the fall was around 55% year on year in the US and the UK, but just 26% for the Average German Import Price and 28% in Japan.<sup>1</sup>

The regional nature of gas markets can be further demonstrated by a case study of the United States. As Figure One shows, in the US the price of gas rose more sharply than either oil or coal in the period from 1990, but then collapsed more sharply than either of them in 2009. To understand why gas prices responded more markedly than either of its main competitor fuels, we must look to the regional conditions of the US market.

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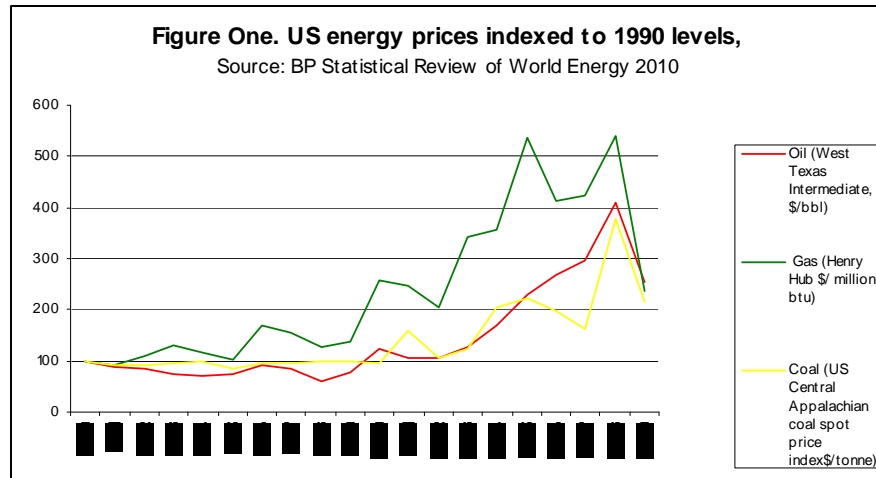
<sup>1</sup> BP Statistical Review of World Energy 2010, © BP 2010

During the first period, the US was broadly short of gas. Indeed, several proposals were developed to build LNG import terminals to meet this shortfall. However, this shortfall has been turned on its head over recent years – not only has demand fallen due to the GFC, but

also the supply side has been transformed by technological breakthroughs in the production of unconventional gas.

This unconventional gas, shale gas in particular, has transformed the US gas market. The “silent revolution” of

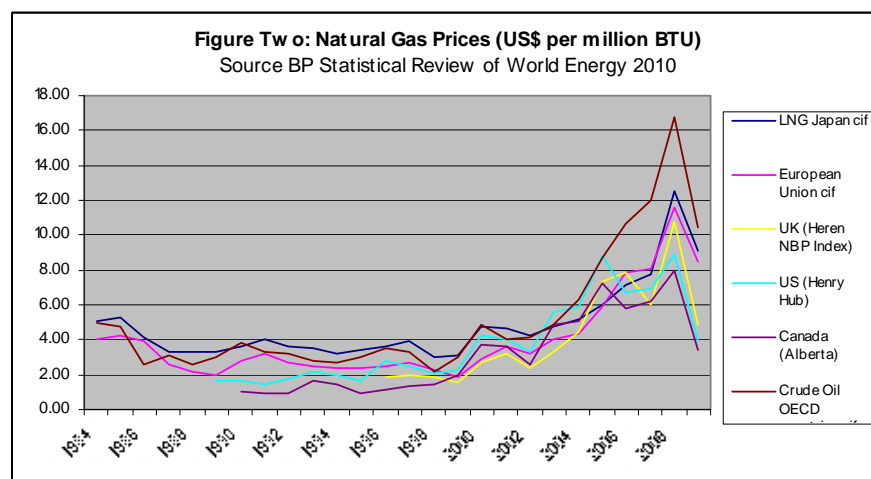
unlocking technologies such as horizontal drilling or hydro-fracturing has made accessible deposits previously considered unrecoverable; the addition of shale gas reserves helped to boost US proved gas reserves by almost 50% over the last decade. In 2009, for the third year running, the US had the world’s largest natural gas production increase and overtook Russia as the world’s largest gas producer.



We can see how these changes in US gas pricing are specific to the supply and demand characteristics of its own regional market. Whilst there are mechanisms to transfer these prices into other markets (increased US self-sufficiency adds to the LNG supply overhang in the Atlantic Basin, affecting European prices in countries exposed to LNG imports), the connection is partial when compared to the interconnectivity of oil markets.

The purpose of demonstrating that gas markets remain regionally distinct is to provide context to the Committee’s consideration of the elements in their Terms of Reference which seek to draw

comparisons with other markets, specifically LNG markets and the Victorian market. As Figure Two shows, whilst gas prices respond to general trends in primary energy

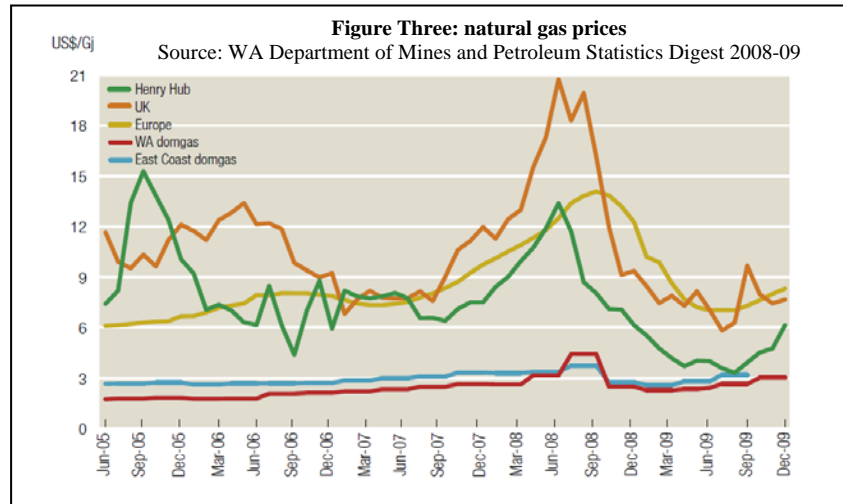


supply and demand, they do so differently in different markets. In Japan for example, prices remained more than double those in the US or UK in 2009.

Consequently the starting point for any comparative assessment of different gas markets should not be that those markets ought to, or normally would, exhibit the same prices. In fact, it is normal that prices are not the same between different markets. The conclusion that we can draw is that what matters for WA gas prices is WA’s specific conditions.

### Market conditions in Western Australia

As Figure Three shows, Western Australian Gas prices have typically been, and remain today, substantially lower than international prices, and somewhat lower than “east coast” Australian prices. The only exception to the latter observation can be explained by the temporary interruption to gas supplies following the Varanus Island Explosion in 2008.



However it is true that these average prices mask the fact that, at the margin, the price of new marginal supply of gas is likely to be higher. For example, media reports have suggested Santos was able to sell gas from its Reindeer project to Citic Pacific for \$7.80/GJ, a price more akin to those prevailing in international markets.<sup>2</sup>

Why should this be so? The answer to both the low average price and to the higher incremental price lies in the fundamental nature of the WA gas market, sometimes described as “lumpy”. Relative to the total size of the market, new sources of supply and new sources of demand are large, and therefore have a material impact on the supply-demand balance. For example, when the North West Shelf Venture began selling domestic gas, underpinned by a Take or Pay contract with the State Government, it very substantially boosted the supply availability of natural gas beyond what, at the time, could be conceived of in terms of demand. More than anything, this has contributed to the very low long run average gas price shown in Figure Three.

This low gas price attracted demand in the form of new energy intensive industries. At the same time, it disincentivised new investment in supply, and gradually supply and demand have come back into balance – a process of equalisation that rapidly accelerated during the recent resources boom. The provision of material new gas is therefore no longer a question of squeezing incremental supply out of existing sources – instead, it needs fundamentally new stand alone projects. These require higher prices to become viable – costs of developing new projects are substantially higher than they were in the mid 1980s when the NWSV domestic gas plants were built.

Additionally the value of resource commodities has risen substantively with the emergence of China and India as economic superpowers, able to purchase products at the international market price. This substantive incremental demand and associated competition for product has generally increased the cost of development/production, but additionally the overall value of the product sold. Gas is one of the many commodities that has been affected by this structural change in demand.

This is nothing more than the standard interaction between supply, demand and price that is the staple of economics text books. When prices are low, demand increases and investment in

<sup>2</sup> “Wheels back on Reindeer gas project” <http://www.businessday.com.au/business/wheels-back-on-reindeer-gas-project-20090107-7bz8.html> January 8th 2008

new supply is suppressed. This gradually leads to increasing prices until they begin to exert a balancing pressure in the opposite direction.

### **A new gas policy to prioritise supply**

All of the “problems” that some commentators attribute to the WA gas market (upward pressure on marginal prices, questions over energy security, doubt over ability to meet the full potential of future demand in a second resources boom) have the same fundamental strategic answer: increasing investment in new supply.

BP therefore recommends that increasing investment in new supply is placed as the core goal of Western Australian gas policy. The first thing that becomes immediately obvious when one adopts the goal of increasing investment in supply is that the policy of domestic gas reservations associated with LNG export projects is precisely the wrong response for a range of reasons.

- Firstly, it mortgages the future of Western Australia’s domestic gas supply to investment decisions that are driven by the economics of LNG projects. LNG projects are not only technically challenging and extremely expensive, they are also driven by the state of international LNG markets – that is to say, the amount of competing supply offered by other producing nations, and the state of demand in available consuming nations.
- Secondly, reservations can contribute excessive downward pressure on prices if they come into effect, because of the very lumpy nature of the supply they bring. One of the potential consequences is the crowding out of investment in exploration and development of alternative gas supplies that could better meet the needs of the State.
- Thirdly, since the LNG projects are located off the north-western coast of Australia, there are large transportation costs associated with bringing the gas to the south west. Compared to closer options, these transportation costs risk locking in a high cost to the WA economy for years to come.

We recommend therefore that the domestic gas reservation policy should be replaced by a new policy characterised by a suite of market based mechanisms to attract new investment in upstream supply. These would include:

- Allowing gas prices to rise and fall in a free market to a level at which both incremental supply and incremental demand are in balance, recognising that they do so from a low base when compared internationally;
- Continuing the implementation of measures recommended by the Gas Supply and Emergency Management Committee to improve market function, such as a Gas Bulletin Board, Gas Statement of Opportunities, and uniform gas specification;
- Maintaining the focus on regulatory reform to streamline approvals and minimise the regulatory burden on the upstream petroleum industry;
- Recognising that “gas is not oil”, and encouraging the Commonwealth to amend policy settings to better address the characteristics of gas projects, for example by allowing longer retention lease timelines for resources associated with them, and by transitioning to a cash flow based system of taxation with accelerated depreciation for gas projects as an interim step.
- Continuing to support the joint marketing of gas as a valuable and necessary component of maximizing gas supply and therefore competition into the Western Australia market.

### **Summary and conclusion**

- Although integrating partially, gas markets remain regionally segmented because gas is difficult to transport over geographic distance. There should be no underlying assumption that gas prices in WA should necessarily be the same as in separate markets. Rather, prices in each market will be set according to their own intrinsic characteristics.

- WA gas prices have been low when compared to international and Australian east coast markets on average and for a prolonged period. These low prices have encouraged new demand but have suppressed investment in new supply.
- At the margin, significant new quantities of incremental gas demand (eg new industrial projects) now need to be supplied through incremental gas projects, and therefore need to be priced in order to encourage that investment.
- WA's priority should be to establish policies that encourage increased investment in the supply of gas. Domestic gas reservations have the opposite effect, and should be replaced by a suite of new market based policies which encourage investment from gas producers.

2<sup>nd</sup> July 2010