

## The outlook of gas accessibility and price in Western Australia – challenges for gas users

Despite LNG continuing to make the headlines, there have been significant recent developments in Western Australia's domestic gas industry. Continuing development of the resources industry and a preference for gas on technical and environmental grounds is ensuring demand continues to rise, while prices at historically high levels are in turn driving investments in gas production, storage, transportation and demand load management to accommodate the needs of existing and prospective gas users.

Upstream projects that have been either advanced or approved in the past few years include the Gorgon LNG project, which will be the largest energy project ever undertaken in Australia, and the Devil Creek gas project that will supply up to 110 terajoules per day to the domestic gas market in Western Australia. Recent or planned downstream investments include expansion of the Goldfields Gas Pipeline, the Dampier to Bunbury Pipeline, and the Mondarra Gas Storage Facility.

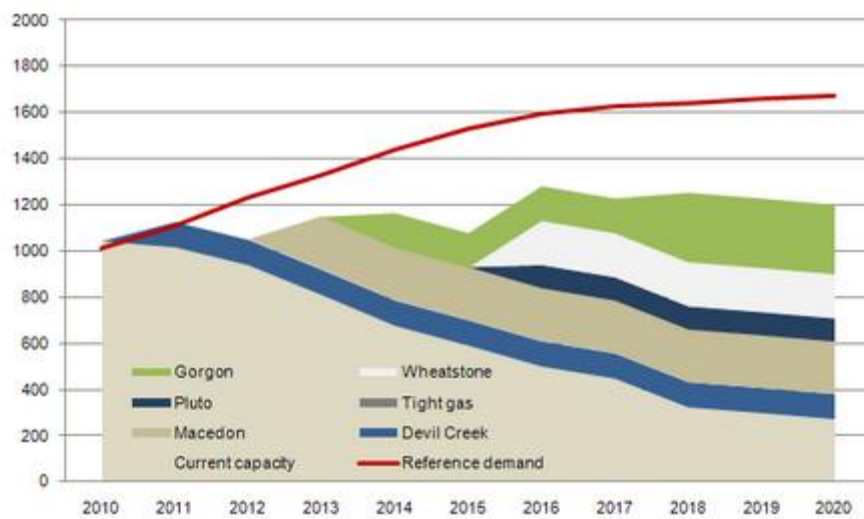


Figure 1: WA Government's view of gas supply/demand balance in WA.

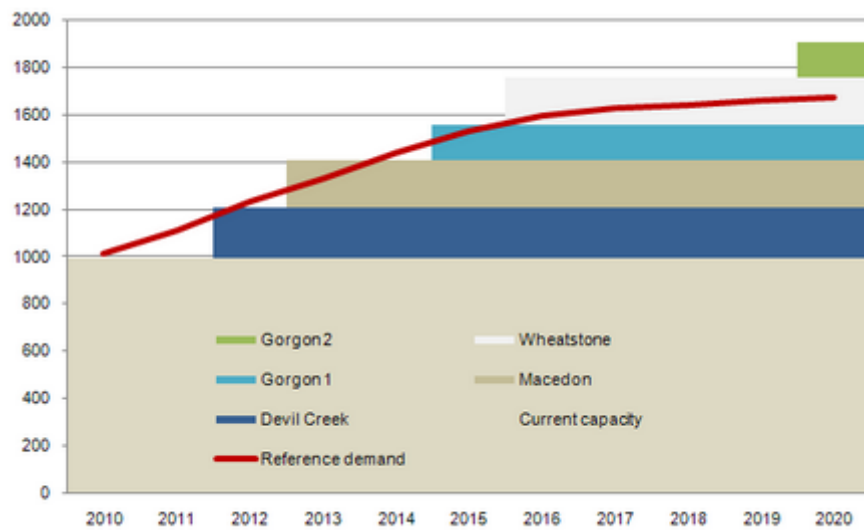


Figure 2: APPEA's view of gas supply/demand balance in WA.

Illustration: Conflicting views of the gas supply and demand balance in Western Australia provided by the State Government and APPEA as part of the Western Australian Strategic Energy Initiative in 2010.

The uncertainty of gas supply poses risks for large users.

In addition to gas supply investments, the policy framework is being put in place to support a broadening of the gas specifications, facilitating the entry of gas from BHP's Macedon project in 2013, while the Western Australian industry will soon have its own Gas Bulletin Board and Gas Statement of Opportunities.

At the same time, the domestic gas market in Western Australia faces a range of challenges. Project and operating costs continue to rise, and domestic gas prices are at historically high levels. The impacts of the export LNG market and lack of supply diversity and interconnection also create uncertainty regarding future gas security and price.

While the precise future shape of the market remains uncertain, Marchment Hill believe that the patterns of production, transport, use and trade of gas will change significantly, opening new opportunities and issues for gas users.

### Higher gas prices are here to stay

Western Australia has prospered on the back of cheap gas and its economy is heavily dependent on the industries that cheap gas supports. Mining and resource processing industries are the largest users of gas - although gas prices at the levels that gave birth to the alumina and fertiliser industries are a thing of the past.

Key to the price shift is the fact that the Western Australian energy value chain is tied to global markets at both ends. Underlining the trend, gas exploration and production costs are rising because many new field developments are in deeper water, with fewer liquids to offset the gas cost.

In the short to medium term (2011-15) Marchment Hill expect prices to rise on the back of constrained supply, as there will be limited new domestic gas coming to market in that period. The Reindeer, Halyard and Macedon reserves should all be producing gas, but with relatively modest quantities being made available. During that same period, we expect a declining output from Western Australia's major supplier, North West Shelf Gas. In the longer term (beyond 2015), supply shortfalls should be addressed, as Gorgon and Pluto are commissioned. Prices could settle around LNG netback – which is itself heavily dependent on world LNG and oil prices.

In all cases, the prices paid will depend on the size and length of the contract. Small gas contracts do not underwrite upstream investment, so small buyers looking for short contracts will generally pay a premium.

#### **Users will have less flexibility contracting gas**

With continuing strong demand from the resources sector and the upstream gas market expected to remain highly concentrated on the supply side, suppliers will have the upper hand in setting contract terms. Buyers can expect a larger take-or-pay component in their costs and limited opportunity to adjust their short term demand under their contracts. The need for short-term balancing of gas and transport in accordance with users' operational requirements will drive the development of new market mechanisms: we expect an increase in secondary trading, facilitated by aggregators, brokers and new trading platforms.

#### **Resources demand will put pressure on infrastructure**

The development of energy-intensive resources projects in the State's north-west and the mid-west will demand a significant investment in new gas systems.

We believe well-funded large users will increasingly look to develop their own energy infrastructure, using models that provide a return to investors commensurate with the stranding risks of those assets. Second tier miners who are not big enough to underwrite their own infrastructure may adopt infrastructure-sharing models. Government will undoubtedly choose to play a role to ensure that benefits are delivered to remote communities.

For regions with existing transportation infrastructure, capacity constraints will continue to emerge. Much of WA's gas transportation capacity is fully contracted to 'mature' end users or retailers. To gain access to transmission capacity, users need to contract for a term exceeding 10 years to underwrite the construction of additional pipeline capacity. This can be a risky business even for large users, and for any new retailer needing access to small quantities of flexible pipeline capacity it is a distinct barrier to entry.

There has been major new investment in transmission in response to increasing demand in Western Australia, most significantly capacity expansions of the Dampier to Bunbury Pipeline – the major link between the State's north-west shelf and gas demand hubs in Perth. The latest expansion to the Dampier to Bunbury Pipeline resulted in around 94 per cent of the pipeline now having being duplicated – options for further incremental expansions are likely to become scarce, so any future expansions could be large and costly.

*“Gas users must start thinking about how they will tackle supply and price risks to meet business objectives”.*

The current and coming changes in gas security, accessibility and price pose significant risks to many businesses. The viability of many new projects depends on certainty of energy supply, and energy prices influence ongoing production costs.

While Government and industry play important roles in setting policy and developing markets, WA will not have perfectly competitive, transparent and liquid energy markets any time soon. Users must ultimately form their own views about the future and develop their own energy position that minimises their exposure to gas supply and price risks, and maximises their opportunities.

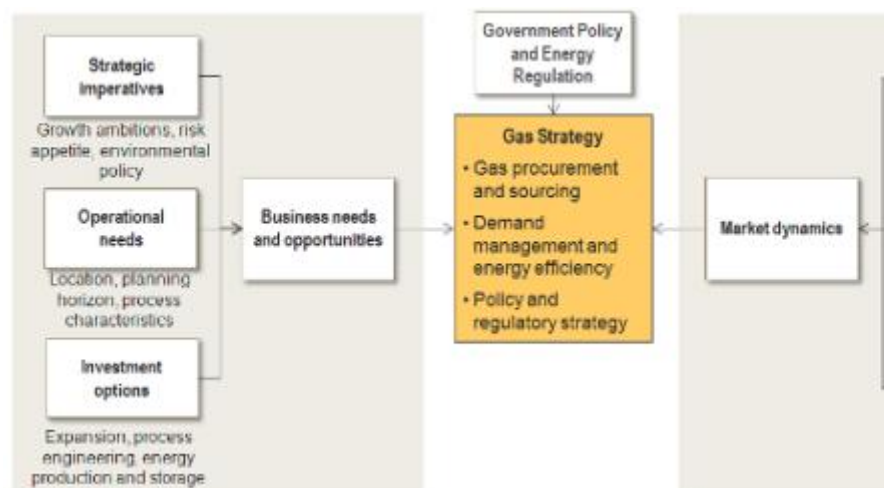


Figure 3: An effective Gas Strategy should focus on the cost drivers, risks and opportunities.

As legacy contracts reach their expiry, large gas users will need to develop a strategy to secure access to gas commodity and transport. An effective gas strategy should focus on the cost drivers, risks and opportunities that most strongly influence a business's performance to guide their actions in managing purchasing, operations and Government relations. Others may also seek to reduce their dependence or spend on gas through identifying and implementing energy efficiency and energy optimisation opportunities.

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