DOMGAS ALLIANCE

WA State Energy Initiative

Domestic Gas Action Plan:
Submission to the State Energy Initiative

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THE DOMGAS ALLIANCE

The DomGas Alliance is Western Australia's peak energy user group and represents natural gas users, infrastructure investors and prospective domestic gas producers.

Alliance members represent around 80 percent of Western Australia's domestic gas consumption and gas transmission capacity. Members supply gas and electricity to 200,000 businesses and 2 million Western Australians.

Members include: Alcoa of Australia, Alinta, Burrup Fertilisers, DBP, ERM Power / NewGen Power, Fortescue Metals Group, Horizon Power, Murphy Oil, Newmont Australia, Synergy and Verve Energy.

The Alliance promotes security, affordability and diversity of gas supply for industry, small business and households.

The Alliance commends the Government for its leadership on promoting Western Australia's energy security and provides this submission to the Strategic Energy Initiative Issues Paper.

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EXECUTIVE SUMMARY

The WA gas market

Western Australia has the most energy and gas-dependent economy in Australia. Natural gas supplies close to 60 per cent of the State's primary energy and 70 per cent of its electricity generation.

The WA domestic gas market is the largest in Australia and represents 40 per cent of Australia's natural gas consumption.

The WA gas market is bigger than NSW, Victoria and the ACT combined. It is almost as big as NSW, Victoria and Queensland combined.

The WA gas market is mature. It is characterised by diversity of downstream customers, a mix of short and long-term contracts, significant short and long-term trading and substantial transportation and storage capacity.

Challenges: Security

Western Australia is experiencing a serious shortage of domestic gas. Current and prospective gas users are unable to secure gas supplies in substantial quantity.

Announced new gas field developments will not meet the State's requirement for over 1000 TJ/day in new and replacement gas by 2015-2020.

Challenges: Competitiveness

Western Australia has one of the most uncompetitive gas markets in the country. It is a duopoly market in which just two supplier groups control close to 100 per cent of the market because of joint selling arrangements.

Producers exercise immense market power and can increase prices or withhold supply.

Domestic gas customers are forced to deliver premium returns to gas producers – in excess of that obtained from overseas LNG customers.

The Alliance supports Premier Barnett's position that gas should be supplied to the domestic market at a price that gives WA a competitive advantage in energy, and that domestic gas prices should reflect the price of gas exiting the domestic gas processing plant.

Challenges: Reliability

The 2008 North West Shelf Joint Venture and Varanus Island incidents highlighted challenges to supply. Reliability of supply depends on having reliable infrastructure assets, as well as diversity of supply and a significant expansion in the number of domestic supply sources.

Challenges: Cleaner Energy

At current domestic gas prices, natural gas is no longer competitive with coal for baseload power generation and major manufacturing and resource processing.

This is unlikely to change under an emissions trading scheme. Australia's current policy framework does not encourage the use of natural gas as the most effective and efficient means of reducing greenhouse emissions.

The domestic gas shortage could be the single biggest factor contributing to emissions growth in Western Australia over the next decade.

Action Plan Needed on Domestic Gas Supply

Urgent action is needed by the State and Commonwealth to address WA's worsening domestic gas shortage. Key actions must include:

- An improved exploration regime to promote domestic gas exploration;
- Stringent enforcement of retention leases to maximise supply into the domestic market;
- Giving teeth to the State's domestic reservation policy;
- Removing anti-competitive joint selling arrangements; and
- Promoting initiatives to lower development costs such as common-use infrastructure and open access arrangements.

Action: Offshore exploration management

The current offshore exploration release process is inefficient and discourages gas exploration and development.

While companies have nominated areas for exploration work, these have not been released on the basis that the Federal Government must first undertake work to demonstrate that the areas are attractive for prospective explorers.

An improved exploration licence regime should be implemented whereby explorers can reasonably obtain approval to explore any area not already under licence.

Action: Retention lease management

The bulk of WA's identified gas resources are held under retention leases. Developing resources for the domestic market will help meet the State's serious gas shortage.

Retention leases must not be used to indefinitely park gas reserves for possible LNG development when these resources could economically supply the domestic market.

The Joint Authority seems determined to give LNG projects precedence over domestic supply in approving the warehousing of reserves under retention leases. This approach appears in conflict with existing legislation, threatens WA's energy security and will lead to higher energy prices.

Action: Eliminate joint selling

Joint selling by gas producers significantly limits competition and can only result in higher prices for WA business and households.

Removing joint selling arrangements will increase competition by increasing the number of independent sellers. These same producers compete with each other in separately selling gas to overseas customers.

An assessment should be undertaken by the Government, such as the Economic Regulation Authority, on:

- the transformation of the downstream gas market as the result of State Government reforms since the 1990s;
- how this downstream market transformation compares to the upstream market which remains a duopoly;
- the impact of joint selling arrangements and ACCC authorisation on WA gas prices, competition and market development;
- whether separate selling is practical and feasible in the WA domestic gas market; and
- what arrangements need to be implemented by the Commonwealth and the State to enforce competition and remove joint selling.

Action: Domestic gas reservation

The current reservation policy needs teeth and must ensure:

- Certainty – domestic obligations should be made unconditional and not subject to a "commerciality" escape clause;

- Flexibility – LNG producers should be given sufficient flexibility in how they can meet their domestic supply obligations;

- Growth – the domestic supply commitment should expand with any future growth in project gas reserves, production or LNG exports; and

- Timeliness – the reservation commitment should be applied to both reserves and production; domestic gas should be supplied no later than LNG start-up and not unduly delayed.

Domestic supply obligations should be implemented by the Commonwealth in offshore WA waters to support and complement the State's reservation policy.

Such obligations are especially necessary given that gas fields ideally suited for domestic use are now being warehoused for possible LNG development through retention leases.

Action: North West Shelf State Agreement

An original intent of the North West Shelf State Agreement was to place priority on the availability of gas to the WA domestic market. This intent should be maintained in the ongoing administration of the Agreement.

The State Agreement provides a mechanism for the State to secure additional domestic supply commitments with respect to:

- the renewal or rolling-over of existing long term LNG export contracts;

- new LNG contracts entered into by the NWSJV; and

- new LNG developments such as the flagged LNG Train 6.

Action: Common-use infrastructure

Shared-use infrastructure could cut project costs by as much as half. This can facilitate development, reduce costs and promote domestic gas supply.

Concessions under the Commonwealth Petroleum Resource Rent Tax (PRRT) may however act as a disincentive for investment in shared use infrastructure.

Action: Tax, royalty and investment Incentives

To overcome WA's domestic gas shortages, Commonwealth and State tax, royalty and investment incentives should be provided to promote domestic gas exploration and development.

Key incentives could include:

- State royalty concessions such as royalty holidays, royalty rate reductions or rebasing the commodity value for royalty assessment;
- increased deductibility for pre-wellhead expenses from Commonwealth taxation;
- Flow Through Share scheme; and
- Commonwealth and State grants to promote domestic gas exploration and development.

Government responses to date

The State Government should be commended for its leadership on domestic gas security.

Initiatives taken by the State in 2009 include broadening pipeline gas specification, royalty incentives for tight gas projects and the Exploration Incentive Program. The Barnett Government has also endorsed the previous Carpenter Government's 15 per cent domestic gas reservation policy.

Fundamental changes are however needed to remove barriers created by government to greater competition and upstream supply. These barriers include government intervention to endorse joint selling and to endorse producers warehousing domestic gas fields for possible LNG development.

Consequences of action vs. inaction

Domestic gas security is the most critical challenge facing Western Australia today. The consequences of inaction are profound:

- loss of clean, secure and affordable energy supply for the State;
- sharply rising energy costs for industry, small business and households;
- loss of industry competitiveness and downstream, value-adding industries;
- lost investment, development opportunities and jobs; and
- significantly higher greenhouse emissions and damage to the environment.

THE WEST AUSTRALIAN GAS MARKET

Key Points

- Western Australia has the most energy and gas-dependent economy in Australia.
- Natural gas supplies close to 60 per cent of the State's primary energy and 70 per cent of its electricity generation.
- The WA domestic gas market is the largest in Australia and represents 40 per cent of Australia's natural gas consumption.
- It is bigger than NSW, Victoria and the ACT combined. It is almost as big as NSW, Victoria and Queensland combined.
- It is a large and mature market with a diversity of downstream customers, a mix of short and long-term contracts, significant short and long-term trading and substantial transportation and storage capacity.

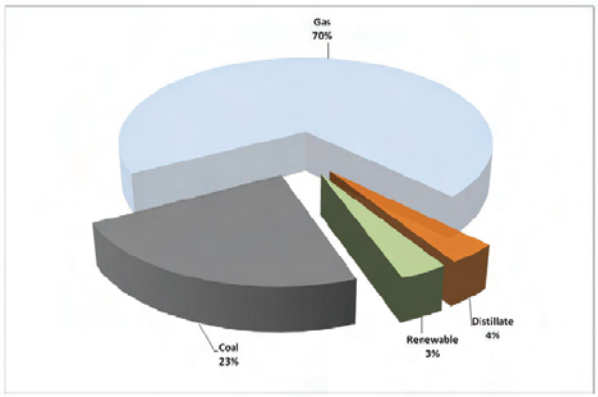
1. WA's gas dependent economy

Energy security is a matter of vital importance for Western Australia. Access to secure and affordable energy has underpinned the State's economic growth and development for the past 25 years.

Secure and affordable domestic gas supply enabled the growth of the State's key value-adding industries such as alumina, chemicals, fertiliser, manufacturing and other resource-processing industries.

It has also underpinned living standards through affordable gas and electricity prices for WA business and households.

Affordable energy is critical to the State's ability to grow, attract investment, create employment and sustain living standards.



It underpins potential new developments such as the Oakajee Port and magnetite industry.

Western Australia is the most energy dependent economy in Australia.

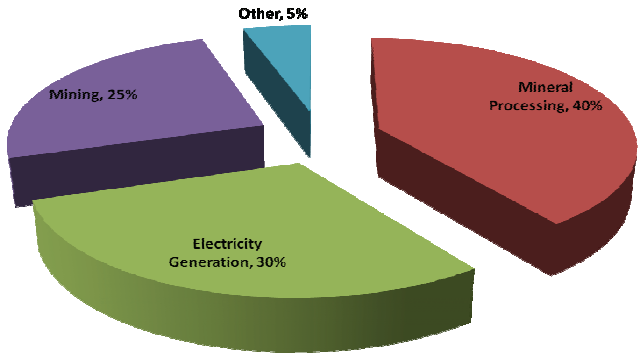
For every million dollars of Gross State Product generated, around 6.28 terajoules of energy is consumed. This compares to 5.32 terajoules for Australia as a whole.[1]

Western Australia is also the most gas-dependent economy in Australia. Natural gas supplies 56 per cent of the State's primary energy needs.[2] It fuels almost 70 per cent of the State's electricity generation.[3]

In contrast, natural gas supplies 22 per cent of the primary energy needs of Australia as a whole.[4]

Manufacturing, electricity generation and mining together account for up to 90 per cent of annual domestic gas consumption in Western Australia.

Chart: WA natural gas customers



Availability and affordability of natural gas therefore has a major direct impact on industry, small business and households through both gas and electricity prices.

The emphasis placed by the Issues Paper on domestic gas supply is appropriate and recognises the State's critical dependence on secure and affordable gas supply.

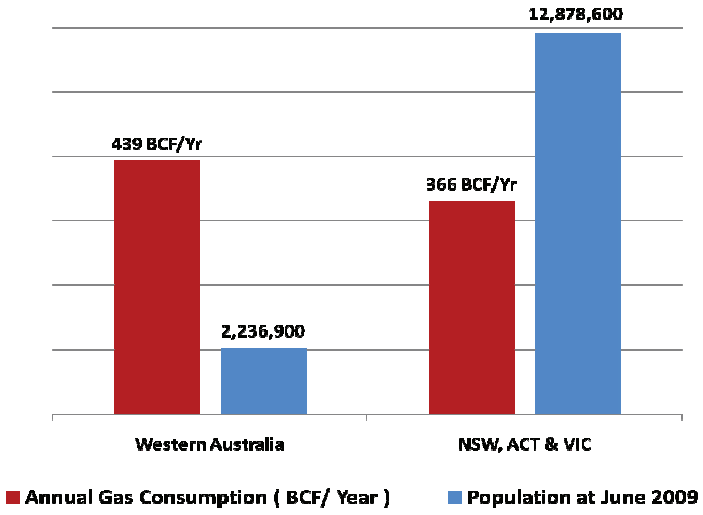
[1] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.42, citing ABARE and ABS statistics.
[2] ABARE, *Energy Update 2009*.
[3] CCIWA, *Meeting the Future Gas Needs of Western Australia*, May 2007, p.41.
[4] ABARE, *Energy Update 2009*.

2. WA is Australia's largest domestic gas market

The WA domestic gas market is the largest in Australia. According to ABARE, Western Australia accounts for almost 40 per cent of Australia's total natural gas demand.[5]

The State consumes more gas than New South Wales, ACT and Queensland combined; and almost as much as New South Wales, Victoria and Queensland combined.[6]

Chart: Domestic gas consumption



Natural gas consumption averaged an estimated 1,194 TJ/day in 2006-07 – seven times the volume used in 1983 prior to deliveries from the North West Shelf.[7] Since 1984, domestic demand for gas has been growing at around 8.5 per cent per year.[8]

It is a multi-billion dollar market in which more than 30 customers purchase directly from two producer groups. Recent WA domestic gas prices would equate to Western Australia spending $3.1 - $3.5 billion on domestic gas annually.

Natural gas fuels 70 per cent of WA's electricity-generation and supplies gas for mineral and chemical processing, industrial applications for 200,000 small businesses, home heating and other household uses for 2 million West Australians.

[5] ABARE, *Energy Update 2009*, Table e 'Australian consumption of natural gas by state'.
[6] ABARE, *Energy Update 2009*, Table e 'Australian consumption of natural gas by state'.
[7] ABARE, *Natural gas consumption by State*, 2008.
[8] ABARE, *Natural gas consumption by State*, 2008.

The size of the WA domestic gas market and the continuing opportunities for major gas producers was demonstrated by Santos entering into a $100 million four year contract to supply gas to Newmont Australia's mining operations in July 2009.[9]

3. Gas production

Western Australia accounts for around 80 per cent of Australia's natural gas resources.[10] The State also accounts for the bulk of Australia's LNG exports through the North West Shelf Project.

Around one-third of WA gas production is supplied to the domestic market, with the remaining two-thirds used as feedstock for LNG production and export.[11]

The North West Shelf Joint Venture, which comprises six participants, supplies almost 70 per cent of the WA domestic gas market. The NWJSV is operated by Woodside (50%), with the other participants being: Shell, Chevron, BP, BHP Billiton, and Mitsui-Mitsubishi.

Apache-led joint ventures supply almost all of the remaining 30 per cent of the WA domestic gas market.

Western Australia currently exports around 16 million tonnes of LNG per year. All LNG is produced by the North West Shelf Joint Venture. The NWSJV operates five LNG processing trains, with Train 5 commissioned in 2008.

In September 2009, Chevron, Shell and ExxonMobil announced final investment approval for the Gorgon Project. The project will construct three LNG processing trains with a total capacity of 15 million tonnes per year, and by 2015 a domestic gas plant.

Woodside is progressing its Pluto LNG Project with first gas expected late 2010. The project involves construction of a 4.3 million tonnes per year LNG train, with Woodside flagging development of a second and third LNG train, and at some state a domestic gas facility.

[9] Santos, "Santos secures $100 million Newmont gas supply extension in Western Australia", ASX / Media Release, 27 July 2009.
[10] ABARE, *Energy in Australia 2009*, available at: http://www.abareconomics.com/interactive/09_auEnergy/
[11] Australian Energy Regulator 2008, *State of the Energy Market 2008*, p.224; Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.45.

4. Natural gas reserves

According to the WA Department of Mines and Petroleum, Western Australia has an estimated 138 trillion cubic feet of natural gas resources.[12]

This estimate however refers to "P50" resources with only a minimum 50% or higher probability of economic recovery.

Furthermore, the bulk of these gas resources are also considered uncommercial. Just 14 per cent of gas resources relate to developed fields.[13]

56 per cent of the State's gas resources are held under retention leases and are currently considered uncommercial for development.

99 per cent of resources held under retention leases were operated by Woodside, Chevron and ExxonMobil.[14]

The 2007 Commonwealth – States Joint Working Group Report on Natural Gas Supply noted there were significant barriers to easily accessing and commercialising a significant proportion of the State's natural gas reserves.[15]

5. A large and mature domestic gas market

The WA domestic gas market is a large and mature market characterised by:

- a large number of downstream customers that purchase directly from gas producers;
- a mix of short and long-term supply contracts;
- significant short and long-term gas trading; and
- substantial transportation and storage capacity

5.1 Downstream market transformation

At the time the North West Shelf Joint Venture (NWSJV) commenced production in 1984, domestic gas supply in WA was characterised by a single monopoly seller (the NWSJV) and a single vertically integrated State monopoly buyer (SECWA) which owned and operated the gas transmission pipeline between Dampier and the South West of the State.

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[12] WA Department of Mines and Petroleum, *Petroleum in Western Australia 2009*, p.35.
[13] WA Department of Mines and Petroleum, *Western Australian Oil and Gas Review 2008*, pp.79-81.
[14] WA Department of Mines and Petroleum, *Western Australian Oil and Gas Review 2008*, pp.80-81.
[15] Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply, Final Report, September 2007, p.7.

Since the 1990s, Western Australia has undertaken extensive reform of the structure and characteristics of the downstream market. This has increased competition between customers and promoted market maturity.

The disaggregation of SECWA and the single domestic gas contract transformed the domestic gas market from one characterised by a vertically-integrated monopoly buyer to one where there are now around 30 individual customers which purchase directly from gas producers.

Downstream reforms gathered momentum with the subsequent deregulation of the gas and electricity markets.

As a result of these reforms, the WA domestic gas market has fundamentally changed – at least with respect to the downstream market. There has been a significant increase in:

- the breadth of the domestic market and the size of domestic demand;
- the number of direct gas customers;
- the number of parties buying through an aggregator, many of whom could also elect to purchase directly from gas producers;
- the entry of brokers providing gas trading services to gas users;
- short and long-term trading in gas transmission capacity and physical gas;
- additional transportation and storage options;
- the flexibility within the Dampier to Bunbury Natural Gas Pipeline system to deal with supply and demand imbalances; and
- connectivity between gas pipelines in Western Australia – gas can now be traded either physically or commercially in any part of the system.

In contrast, the upstream market retains the same high level concentration and lack of competition between suppliers as was the case in the mid-1990s.

The upstream market remains a duopoly. Through joint-selling arrangements, which are not authorised by the ACCC, just two producer groups continue to control almost 100 per cent of the domestic gas market.

Major producers exercise immense market power through these unauthorised joint selling arrangements, and through their common or overlapping ownership of new developments such as Gorgon and Wheatstone. This results in a significant disparity between the market power of producers and that of consumers.

5.2 Around 30 domestic gas customers

In 1995, the original SECWA contract was disaggregated which led to the emergence of six major independent buyers:

- the Electricity Corporation (South West);
- the Electricity Corporation (Pilbara);
- the Gas Corporation;
- Alcoa of Australia Limited;
- Hamersley Iron Pty Limited; and
- Robe River Mining Co. Pty Ltd.

There were also a number of buyers who purchased their gas from one or other of the Apache joint ventures.

Other key reforms implemented after 1995 to increase downstream competition in the market included:

- the separation of the supply and transmission components of the SECWA domestic gas supply contract as part of the disaggregation;
- the introduction of an open access regime for the Dampier to Bunbury Natural Gas Pipeline;
- the establishment of AlintaGas and Western Power as separate corporatised businesses (albeit government owned);
- the sale of the Dampier to Bunbury Natural Gas Pipeline to Epic Energy in 1998;
- the staged removal of barriers to competition downstream in the domestic gas market;
- the privatisation and sale of AlintaGas in 2000; and
- the disaggregation of Western Power to establish four entities (Verve, Synergy, Horizon Power and Western Power) with existing gas supply contracts (the ability to contract with gas suppliers).[16]

[16] Western Power (Networks) was created without the ability to purchase power or gas.

As a result of these reforms, the downstream segment of the market today comprises around 30 customers – who now buy gas directly from producers. This compares to the previous market situation which was characterised by a single vertically-integrated monopoly buyer.

The Apache-led joint ventures supply the majority of these parties, including most of the NWSJV's customers. These contract sizes range from >80 TJ/d (such as with Burrup Fertilisers, Verve, Alinta and Alcoa) down to approximately 1 TJ/d.

Gas customers are dependent on existing gas producers and have no reasonable alternatives for supply. Major gas producers on the other hand can supply to both the domestic and international markets.

5.3 Aggregators

In addition to customers directly buying from producers, a large number of customers purchase through aggregators such as Alinta and Synergy. These customers range from light industrial and commercial customers, as well as small businesses and households.

Many of these customers can purchase directly from a producer and arrange their own transmission. However for reasons of convenience, some customers prefer to purchase a delivered service through an aggregator.

Perth Energy is also building a presence in the domestic market as an aggregator supplying to gas users.

5.4 Short term gas trading and brokers

Trades in gas transmission capacity and physical gas are regularly being conducted on a short and long term basis.

While no formal market has been established, given the relatively small number of major players, large gas consumers and pipeline shippers commonly trade amongst themselves either independently, or with the assistance of brokers.

Smaller industrial gas consumers also trade either independently or with the assistance of brokers.

There is now a high level of sophistication in trading arrangements between gas users.

DBP, the owners of the Dampier to Bunbury Natural Gas Pipeline (DBNGP), posts spot transmission capacity, subject to availability.

A gas trading exchange (gasTrading) already facilitates trades of both gas and pipeline capacity, with trades accounting for up to 10 per cent of the gas delivered into the DBNGP on some days.

Since 2007 – with the completion of the DBNGP / Goldfields Gas Pipeline interconnect - there has been complete interconnectivity between pipelines in Western Australia.

Customers now have the ability either physically or with swaps to trade gas to most of the market. Gas from the North West Shelf can therefore be traded - either physically or commercially - in any part of the system.

There has been a significant increase in the number of independent brokers providing gas trading services to gas users. Gas users engaging brokers range from large industrial to smaller industrial customers.

Extensive work is being undertaken by the State Government and gas market participants to improve transparency and expand short term trading through the establishment of a Gas Bulletin Board.

A Gas Bulletin Board was rapidly developed and deployed by the WA Independent Market Operator in response to the 2008 Varanus Island outage. It operated for over three months between July – October 2008. The Independent Market Operator reported in 2009 that:

> "The GBB was designed and implemented in a short period of time to facilitate the trading in natural gas during the disruption in supplies as a result of the explosion on Varanus Island.
>
> The GBB provide transparent trade data, including pricing information, which allowed Western Australian gas users to evaluate the cost of securing gas supplies. This information was published to the public on the IMO website.
>
> The IMO received a great deal of cooperation from the gas traders, gas pipeline owners and the Office of Energy during the design and implementation of the GBB.
>
> Despite the limited time the GBB operated, with 27 registered traders, 14 active traders, and trading volumes of 47.8 TJs, this initiative could only be viewed as a success.
>
> The GBB demonstrated that a formal regulated gas market could be successfully implemented in Western Australia."[17]

The WA Office of Energy and the State's Gas Supply and Emergency Management Review Committee are currently building on the Varanus Island experience for a permanent Gas Bulletin Board.

[17] Independent Market Operator, 'Gas Bulletin Board Report', presentation to the WA Gas Supply and Emergency Management Review, available at: http://www.energy.wa.gov.au/3/3270/64/presentations.pm

As the Independent Market Operator points out, such arrangements could be successfully implemented in Western Australia and within a short period of time. The proposed six year authorisation period is therefore excessive and likely to be overtaken by gas market developments.

Gas consumers are supportive of efforts to improve transparency and short term trading arrangements. However, the volume of trades during the Varanus Island emergency is tiny compared with the volume of day-to-day direct trades already taking place between market participants.

5.5 Gas storage and balancing options

There are substantial and well-developed gas storage and balancing arrangements operating in the WA domestic gas market.

There have been recent and substantial changes in the role that the duplicated DBNGP can play in load profile management and storage:

- The capacity of the DBNGP is being expanded with expansion expected to be completed in the first half of 2010;
- Following expansion, the pipeline will be approximately 85 per cent looped with approximately 441 km of additional looping installed as part of Stage 5B;
- Firm full haul capacity of the pipeline will be increased to approximately 840 TJ/day;
- The DBNGP provides shippers with an unconditional Accumulated Imbalance Limit of +/- 8 per cent of Contracted Capacity and a conditional limit of +/- 20 per cent – which are among the most generous in the world;
- Given that the current Contracted Capacity across all firm services on the DBNGP exceeds 800 TJ/day, the 20 per cent imbalance limit equates to over 160 TJ/day – which is more than the proposed initial production target for the Gorgon Project;
- In addition, DBP offers Park & Loan Storage services on the DBNGP and has entered into Operational Balancing Limits with the operators of production facilities and interconnected pipelines;
- Producers and gas customers therefore have a high degree of flexibility to balance daily, monthly and even yearly variances between contracted sales and actual gas volumes.[18]

[18] DBP submission to the ACCC, 4 June 2009.

DBP is in active discussions with gas shippers on engineering options to further increase the storage capability of the pipeline. This could significantly expand storage by around 150-200 TJ/d.

In addition, the APA Group already operates a gas storage facility at Mondarra in the Perth Basin, which is used by Western Power. As the Office of Energy's report during the Apache Energy Varanus Island outage noted:

> "[T]he APA Group's Mondarra Storage facility, which is located adjacent to both the Parmelia and DBNGP pipelines south of Dongara, has been running at full production for the entire duration of the outage, presently contributing a useful 12 TJ/d to the overall WA gas market."[19]

It is understood that APA has proposed further expanding this storage capacity through the installation of additional gas compressors.

A recent report commissioned by APPEA does not consider any lack of gas storage options as a significant market barrier:

> "Australia's need for storage facilities is mitigated by the fact that gas production facilities are generally located close to the main demand centres. Gas production matches demand and Australia relies on spare pipeline capacity to deal with the supply / demand mismatch. *This spare capacity acts effectively as gas storage*."
>
> "Unlike other countries, most of Australia is not exposed to strong seasonal swings in demand. However, Victoria, Tasmania and the ACT experience seasonality in winter demand and the storage facilities do not always solve the problem as they have limited capacity. *Whilst it would be ideal to have additional storage facilities in key locations, an option to increase pipeline capacity will also increase flexibility in the markets*."[20]

[19] Office of Energy, 'Information Update', 18 June 2008, available at: http://www.energy.wa.gov.au/cproot/1179/10284/Gas%20Update%20OOE%20Web%2020%20Jun%2008.pdf

[20] Asia-Pacific Partnership and PriceWaterhouseCoopers, *Asia-Pacific Gas Market Growth*, June 2009, p.31.

Table: WA domestic gas market: 1984 and 2010

Downstream market 1984	**Upstream market 1984**
X Single downstream monopoly buyer (SECWA)	X Single upstream monopoly seller (NWSJV)

Downstream market 2010	**Upstream market 2010**
✓ Disaggregation of SECWA monopoly contract ✓ Over 30 gas customers buying directly from producers ✓ Privatisation of Alinta and the DBNGP ✓ Open access regime for the DBNGP ✓ Alinta, Synergy and Perth Energy operating as aggregators ✓ Short and long-term trading in gas transmission capacity and physical gas ✓ Significant expansion in market breadth and size ✓ Connectivity between gas pipelines in WA ✓ Greater flexibility within the DBNGP to manage supply and demand imbalances	X Duopoly sellers X NWSJV participants continue to sell jointly to set prices, terms and conditions

CHALLENGES: SECURITY

Key Points

- Western Australia is experiencing a serious shortage of domestic gas. Current and prospective gas users are unable to secure gas supplies in substantial quantity.
- Major producers are limiting domestic gas contracts to a maximum of 6 years, while continuing to sign 20-25 year contracts with overseas LNG customers. This will not allow the development of any major new gas-based projects.
- Major producers are focusing on LNG exports and appear to be withholding gas from the domestic market.
- Announced new gas field developments will not meet the State's requirement for over 1000 TJ/day in new and replacement gas by 2015-2020.

1. Overview

Western Australia is experiencing serious challenges to security, reliability and affordability of supply, and to delivering cleaner energy.

Gas users are unable to secure gas supplies in substantial quantity or on long-term contracts that could underpin major capital intensive projects.

Despite having Australia's largest natural gas reserves, WA has among the highest domestic gas prices in the country. Domestic gas prices are among the highest of any gas producing and exporting economy in the world.

The lack of gas availability and affordability is impacting investment, employment and development in the State; business and households through rising gas and electricity prices; as well as the State's response to climate change.

2. Western Australia's serious gas shortage

Western Australia has been experiencing a serious domestic gas shortage and escalating prices since at least 2004. Current and prospective gas users are unable to secure gas supplies in substantial quantity and on long contractual terms.

Historically, Western Australia's gas supply market has been characterised by long term contracts. Long term take-or-pay domestic gas contracts underpinned the original development and subsequent expansion of the North West Shelf project.

Long term contracts are necessary to enable capital intensive developments such as resource and minerals processing developments and new power stations. These investments involve significant capital investment with rates of return assessed on a 20-25 year timeframe. Businesses require confidence as to the future availability and affordability of energy to be able to invest.

Long term contracts also underpin ongoing investment in, and operation of, the State's vital gas supply infrastructure. Regulated infrastructure such as the Dampier to Bunbury Natural Gas Pipeline functions in a regulatory environment involving write-off periods of 60 years or more without regard to resource availability.

Major gas producers have been shortening contract terms on a "take it or leave it" basis. The Economic Regulation Authority of Western Australia reported in 2007 that producers were only offering contracts with a maximum term of 5 years with volumes restricted to about 10 terajoules a day.[21]

This is impacting investment as long term contracts are necessary to underpin capital intensive developments such as manufacturing, minerals processing and power generation.

There is no evidence to support suggestions that long term domestic gas contracts have operated to discourage domestic gas development. Prior to 2007, there has in fact been a stable and continuous contracting of supply to the domestic market on competitive prices and on long term contracts.

Long term contracts have also not prevented gas producers from supplying international customers and in expanding the LNG export market. In fact, the North West Shelf Joint Venture has significantly expanded production from the original three LNG processing trains to five LNG trains, with a sixth train foreshadowed by Woodside.

A number of existing domestic contracts are expected to expire within the next 5 years. The 2008 Economics Consulting Services report concluded that around 274 TJ/day of replacement gas will be needed to replace existing gas contracts as they expire. These include large contracts for gas used in electricity generation, industrial processing and manufacturing.

The difficulties being experienced by local industry and power generators to secure long term contracts for existing operations, or to underpin investment in new developments, presents significant challenges to the State's energy security.

[21] Synergies Economic Consulting, *WA Gas Supply & Demand: The Need for Policy Intervention*, July 2007, p.15.

Table: Impact on investment and jobs in Western Australia

Projects impacted

- Alcoa suspended a multi-billion dollar expansion of its Wagerup alumina refinery with lack of certainty around long term gas supply a key factor;
- Burrup Fertilisers reported it was unsuccessful in securing competitively-priced gas from the Gorgon Project for a proposed urea plant;
- Prospective gas-based power generators ERM Power and Griffin have been unable to source gas for new power station developments;
- DBP was required to significantly downsize an expansion of the Dampier to Bunbury Natural Gas Pipeline in 2006 as a number of prospective projects were unable to secure gas supply;
- Coogee Chemicals has publicly stated that at current domestic prices of $8 - $15/GJ, it was now uneconomic for any new onshore downstream processing in Western Australia;
- DBP tenders for additional pipeline gas failed when the prospective supplier withdrew its offer;
- very high gas prices have forced major construction materials producer Adelaide Brighton to switch to coal and lock-in a long term coal supply agreement;
- gas suppliers were unable to meet existing contracted supply obligations, with Tap Oil for issuing a notice of force majeure in relation to its contract with Burrup Fertilisers.

2.2 Focus on LNG exports

At a time when the State is experiencing a serious domestic gas shortage, major producers continue to expand LNG exports and enter into 20-25 year contracts with overseas LNG customers. Some recent contract announcements are listed below.

Table: WA domgas and LNG contracts

Recent domgas contracts	**Recent LNG contracts**
Oct 2008 – Santos 6 year contract to supply Moly Mines Jan 2009 – Santos 7 year contract to supply CITIC Pacific Jul 2009 – Santos 4 year contract to supply Newmont *WA gas users unable to secure long term contracts.* *Significant unfilled demand.*	Dec 2008 – Shell 20 year Gorgon contract to supply China Aug 2009 – ExxonMobil 20 year Gorgon contract to supply India Aug 2009 – ExxonMobil 20 year Gorgon contract to supply China Sept 2009 – Chevron 15 year Gorgon contract to supply Korea Sept 2009 – Chevron two 20 year Gorgon contracts to supply Japan Sept 2009 – Chevron 20 year Gorgon contract to supply Korea Dec 2009 – Chevron 20 year contract to supply half of Wheatstone's initial production to Japan Jan 2010 – Chevron 15 year contract to supply Gorgon and Wheatstone gas to Japan Jan 2010 – Chevron 15 year contract to supply Gorgon gas to Japan

Gas fields that are ideally suited for domestic gas supply are also being diverted to LNG. In October 2009, Apache Energy and KUFPEC announced an agreement to undertake joint development of the Brunello and Julimar fields with Chevron's Wheatstone LNG project.[22]

The Julimar-Brunello fields are expected to produce 200 million cubic feet of gas per day and are well suited for development as a domestic gas project. The decision means a potential source of domestic gas will now be diverted to supplying LNG exports.

In December 2009, Chevron announced a 20 year agreement to supply 4.1 million tonnes a year of LNG from Wheatstone to Japan - equivalent to almost half the project's initial production capacity of 8.6 million tonnes a year. The deal has been reported to be valued as $90 billion.[23]

Australia's largest domestic gas market

So why is Western Australia experiencing a domestic gas shortage at the same time as an unprecedented increase in LNG exports?

A recent report by the ESAA considers that the relatively small size of Western Australia's domestic gas market (compared to international markets) and the economies of scale that can be achieved by supplying LNG to export markets means commercial imperatives tend to favour the development of Western Australia's deep water gas resources for large-scale LNG projects.[24]

The ESAA Report also considers that it could be argued that producers are only interested in securing large contracts on offer in export markets, even in the presence of commercially viable domestic supply options.[25]

It is important not to lose sight of the fact that the WA domestic gas market is a multi-billion dollar market representing 40 per cent of Australia's natural gas demand. The WA market is larger than NSW, ACT and Victoria combined.

Victoria, which has a considerably smaller market than Western Australia, is not experiencing WA's serious gas shortages for example.

[22] Apache Corporation, 'Apache, KUFPEC to join Chevron's Wheatstone LNG Project in Australia', Media Statement, 22 October 2009.
[23] The Australian, 'Tokyo Electric signs $90bn deal to buy west's LNG', 7 December 2009, available at: http://www.theaustralian.com.au/business/mining-energy/tokyo-electric-signs-90bn-deal-to-buy-wests-lng/story-e6frg9df-1225807524628.
[24] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.45.
[25] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.49.

It has been argued that the international market offers higher price returns compared to domestic gas. This does not appear to be supported on the evidence given:

- the significant increase in costs associated with LNG processing;
- the additional risk premium attached to LNG; and
- the upward movement in domestic gas prices.

LNG involves significant additional processing costs on the part of gas producers that do not arise in relation to domestic gas supply. LNG production is moreover energy-intensive with 26 per cent of the energy consumed by the LNG supply chain (liquefaction, shipping and regasification). Energy consumed in the liquefaction and shipping process represents a significant value-loss to the producer.

International LNG sales also present a higher risk than domestic gas which would translate to a higher risk premium. This risk relates to the need for sellers to manage and price:

- sovereign risk;
- exchange rate risk;
- jurisdictional and governing law issues;
- complex negotiations with sovereign government entities or foreign corporations; and
- commodity price risks where LNG contracts are linked to international oil prices.

These risks are minimal in domestic gas contracts.

In any event, prices envisaged by recent domestic gas contracts are well in excess of delivered LNG prices, let alone notional LNG “netback” prices.

The price of LNG supplied by WA to international customers is currently less than $8 per GJ delivered. This equates to a netback price of less than $3 per GJ. The original 2002 North West Shelf gas contract to supply LNG to China has been estimated at around US$ 2.97 per GJ or less than A$1.00 per GJ netback.

Media reports of the recent NWSJV – Alinta price outcome refer to a domestic gas price of over $8 per GJ. This would equate to a price that is *more than double* the price of gas entering the LNG processing train.

It is therefore incorrect to view domestic as a “low priced”, “low return” market compared to LNG. In fact, domestic gas customers are being forced to deliver premium returns to producers for WA gas compared to that obtainable from international customers.

This has been publicly acknowledged by Apache Energy’s Chief Executive, Steve Farris, at an international audience in Houston in 2009 when asked about the WA market:

> “For price, it’s the domestic market, for quantity it’s the LNG market.”[26]

Market structure and government barriers to competition and supply

The focus of major gas producers on very large LNG projects could be explained by a number of related factors:

- the existing WA gas industry is characterised by a small number of very large gas producers (Chevron, Shell, ExxonMobil, Woodside, etc);
- these producers control close to 100 per cent of developed reserves as well as the bulk of undeveloped reserves held under retention leases;
- the commercial preference of these producers is for very large projects that maximise Net Present Value over a very long period of time;
- for such projects, there are economies of scale benefits in supplying gas through a single processing stream (LNG) - i.e. why build separate LNG and domestic gas plants when all of the gas can be sold through a single stream?
- in contrast, smaller gas producers may have an interest in developing smaller fields with a lower NPV but higher rate of return over a shorter period of time;
- their ability to do so however depends on being able to access exploration acreage or gas resources currently locked-up with existing producers under retention leases;
- major gas producers are approaching the WA gas market as a premium market and using the lack of competition and supply to significantly increase prices.

As will be shown, prospective producers face significant barriers in their ability to access resources for domestic gas development. In managing offshore retention leases, government appears to have taken a deliberate approach to divert potential domestic gas fields to possible LNG developments.

[26] Reuters, ‘Apache decision on Australian gas by October’, 4 June 2009, available at: http://www.reuters.com/article/GlobalEnergy09/idUSTRE5535LZ20090604

This has seen potential domestic gas fields like West Tryal Rocks being warehoused for as long as 30 years – despite strong interest by prospective domestic gas producers and customers.

Governments have also intervened to entrench the existing duopoly. Authorisation for joint selling suppresses competition, distorts the market and prevents efficient market outcomes.

3. WA's gas shortage will continue until at least 2020

The Strategic Energy Initiative Issues Paper's considers that "gas supply will remain tight until around 2015 when major new fields, such as the Gorgon gas field are likely to come to market".[27]

This presumption is incorrect. New LNG projects will not resolve the State's serious gas shortage around 2015. The State's gas shortage is instead expected to worsen.

A 2008 study by Economics Consulting Services concluded Western Australia will require over 1100 TJ/day in new and replacement gas by 2014-2015.

The study concluded that 274 TJ/day of gas alone would be needed to meet replacement demand for power generation and minerals processing as existing long term contracts expire. [28]

As an example of demand, Western Australia requires 150 megawatts of additional electricity generation capacity each year in the South West Interconnected System alone.

This is equivalent to building a new 300 MW power station *every two years*. This level of demand does not include demand growth elsewhere in the State, such as the North West and Mid West.

According to North West Shelf Joint Venture producer BHP Billiton, Western Australia will require 1000 TJ/d of *new capacity and reserves backing* by 2020 to replace existing supply and meet forecast growth:

- WA gas supply is currently predominantly sourced via two hubs: NWS (~ 65%) and Varanus Island (~30%).
- These hubs are running at their practical capacity and the fields currently supplying them are mature and are expected to decline.
- Existing natural gas supply capacity is fully utilised.

[27] Office of Energy, *Strategic Energy Initiative: Issues Paper*, December 2009, p.6.
[28] Economics Consulting Services, *Natural Gas Demand Outlook for Western Australia and Economic Impact*, October 2008, p.5.

- Forecast growth and the decline of existing sources means that 1000 Tj/d of capacity and reserves backing must be added by 2020.

- Replacement of existing supply and supply to meet forecast growth must come from new sources.[29]

Prospective domestic gas developments in WA are unlikely to meet this requirement, with a potential gas shortfall of around 500 TJ/d - equivalent to half the size of the existing market.

Table: Prospective domestic gas projects

Project	**Domestic gas supply**	**Start-up**
Reindeer	Up to 120 TJ/d	From 2011
Macedon	Up to 200 TJ/d	From late 2012
Gorgon	Up to 150 TJ/d "if commercial"	From end 2015, rising to 300 TJ/d by 2021
Julimar	Will now be developed as part of Chevron's Wheatstone LNG project	?
Pluto	5 years after LNG "if commercial"	?
Wheatstone	?	?
Total New Gas Needed	1000-1100 TJ/d	
Total New Gas Supply	470 TJ/d	
Potential Shortfall	**500 TJ/d**	

Furthermore, the Gorgon Project will delay meeting the 300 TJ/d domestic gas supply commitment. Under the terms of the Gorgon State Agreement, the Gorgon participants are obliged to supply at least 300 TJ/day of gas to the domestic market.

The Gorgon partners however indicate that this supply volume will not be available until 2021 – some 12 years after the project's final investment decision. The *West Australian* quotes Chevron:

> "Chevron says it does not expect to be delivering its full quota of 300 tj/day until 2021 *because of an expected oversupply in the domestic market* … Chevron said a number of competing projects would come on to the market by 2015 *and it needed to be mindful of oversupply*."[30]

[29] BHP Billiton presentation, *Macedon Domestic Gas Project: Gas Supply (Gas Quality Specification) Bill 2009*, July 2009.
[30] *The West Australian*, 'Barnett opens door to gas reserve changes', 16 June 2009.

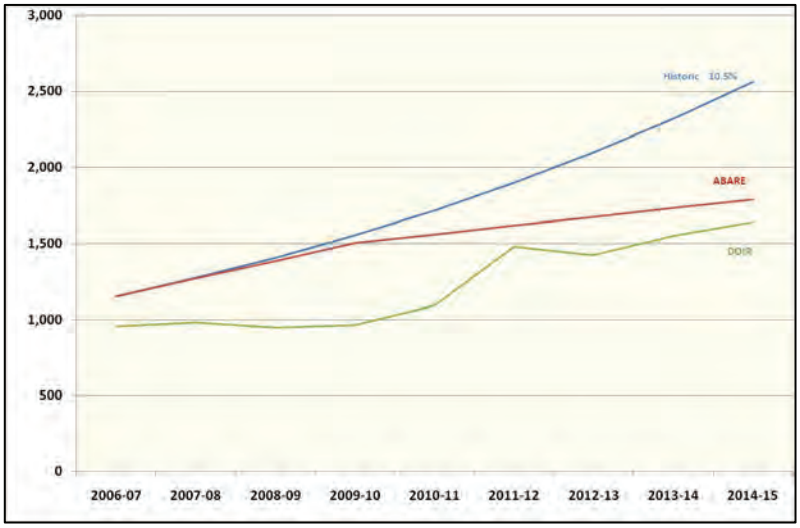
Claims about an "oversupply" in the WA gas market are not supported by the evidence. Rather than an "oversupply" of gas in the WA market, it appears that a deliberate shortfall of gas is more likely.

Chevron's announcements that Wheatstone will supply "up to 200 terajoules of domestic gas a day"[31] does not provide commitment dates. The State has yet to indicate how it will apply the State's 15 per cent reservation policy to the Wheatstone project.

In the absence of binding domestic gas supply obligations on Wheatstone, there is no certainty that domestic supply will be delivered to local gas users. This is particularly given Chevron's approach on the Gorgon project where it indicated it would delay domestic supply because of an "oversupply" in the WA gas market.

The chart below provides forecasts for WA consumption growth to 2014-15.

Chart: WA natural gas consumption forecast (TJ/day) [32]



[31] Chevron website, http://www.chevronaustralia.com/ourbusinesses/wheatstone/downstream.aspx.
[32] Economics Consulting Services, *Natural Gas Demand Outlook for Western Australia and Economic Impact*, October 2008, p.5.

CHALLENGES: COMPETITIVENESS

Key Points

- Western Australia has one of the most uncompetitive gas markets in the country.
- It is a duopoly market in which just two supplier groups control close to 100 per cent of the market because of joint selling arrangements.
- Producers exercise immense market power and can increase prices or withhold supply.
- This concentration in market power extends to prospective new developments such as Gorgon and Wheatstone which are operated by the same NWSJV producer Chevron.
- Western Australia has among the highest gas prices in Australia, despite having the bulk of Australia's natural gas reserves.
- Major producers continue to press for gas prices upwards of $7-8 per gigajoule (before transport costs) – which equate to two to three times the price of gas in Victoria.
- Domestic gas customers are forced to deliver premium returns to gas producers – in excess of that obtainable from overseas LNG customers.
- At recent prices, there are serious challenges to resource processing, infrastructure investment and gas-fired power generation in the State.
- WA businesses and households will continue to face significant increases in gas and electricity costs.
- Government intervention to endorse joint selling arrangements remains the single biggest barrier to competition and market development in WA.
- The Alliance supports Premier Barnett's position that gas should be supplied to the domestic market at a price that gives WA a competitive advantage in energy, and that domestic gas prices should reflect the price of gas exiting the domestic gas processing plant.

1. Western Australia has among the highest gas prices in Australia

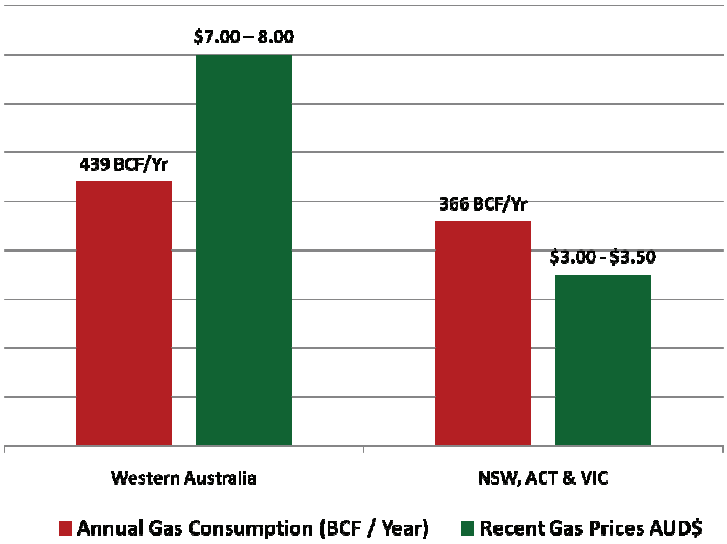
Despite Western Australia holding 80 per cent of Australia's natural gas, WA domestic gas prices are now among the highest in the country. They are also among the highest of any gas producing / exporting economy in the world.

Historically, prices for gas delivered to South West markets (including gas pipeline transmission costs) have been around $3.50 - $4.00 per gigajoule.

Recent years have however seen a sharp rise in gas prices. This has seen wholesale gas priced at up to $14-16 per gigajoule before transport costs.

The recent fall in "international" gas prices over the last 12-18 months has not translated to lower WA gas prices. Major producers continue to press for gas prices upwards of $7 - 8 per gigajoule before transport costs. This equates to gas prices that are two to three times the price for new gas compared to in Victoria.

Chart: Domestic gas prices



WA customers are being forced to deliver premium returns

Domestic gas customers are forced to deliver premium returns to gas producers – in excess of that obtainable from overseas customers.

Recent LNG export shipments by the North West Shelf Joint Venture appear to be at prices – let alone "LNG netback" prices - that are well below the domestic gas prices currently being sought by major gas producers.

The price of LNG supplied by WA to international customers is currently less than $8 per GJ delivered. This equates to a netback price of less than $3 per GJ. The price of LNG supplied under the 2002 North West Shelf gas contract with China has been estimated at around US$ 2.97 per GJ, or less than A$1.00 per GJ netback.

In November 2009, an arbitrator delivered an interim award on the price of gas supplied by the North West Shelf Joint venture to Alinta under an existing long term contract. Alinta is the State's largest retailer of gas and purchases wholesale gas from the North West Shelf to supply to 600,000 homes and businesses in Western Australia.

Media reports have indicated a final agreed price of over $8 per GJ, representing a 300 per cent price rise.[33] This would equate to a price that is *more than double* the price of gas entering the LNG processing train.

It is therefore incorrect to suggest that domestic gas is a "low priced" or "low return" market compared to LNG.

This represents serious market failure that warrants action by government. It is unacceptable if WA industry and households are being asked to subsidise large overseas customers of LNG producers in the prices being paid for domestic gas.

Premier Barnett has emphasised the critical role that competitively priced gas must play in Western Australia's development:

> "I would very strongly suggest to the industry … [that] as an industry, I would make sure that you are supplying the domestic market and that you're doing it at a price that gives us at least a marginal competitive advantage in energy, and therefore develop the potential to add value to other minerals and other natural resource production in this State …
>
> [T]hat's going to be the long-term policy of the West Australian Government, because we're not about a short-term boom, we're about trying to set this State up for 20 years of strong economic growth so that the benefits can go into health, into education, into regional development and wherever else future generations might decide."[34]

At current WA domestic gas prices, there are serious challenges to the long term sustainability to resource processing, infrastructure investment and gas-fired power generation in the State.

2. Impact of rising gas prices on industry

Western Australia's power generation, resource processing and manufacturing industries are highly sensitive to gas prices and depend on affordable energy supply.

While public attention has largely focused on the recent Gorgon Project announcement, less attention has been directed to the impacts of domestic gas shortages and escalating prices on the broader WA economy.

The serious gas shortage and rising gas prices have impacted project investment in Western Australia. This includes a number of prospective projects being suspended or lost to overseas or interstate.

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[33] *WA Business News*, 'Woodside hails new domgas price mark', 24 February 2010.
[34] Premier Colin Barnett, 'Transcript – Speech – Petroleum Club of Western Australia', 8 September 2009.

The DomGas Alliance continues to be approached by major project developers unable to secure world-competitive gas prices to support project developments.

3. Impact of rising gas prices on households

Higher gas prices are also impacting small business and households through higher energy bills. In June 2009, the WA Government approved significant increases in business and residential gas tariffs. These new tariffs came into force on 1 July 2009.

As a result, the annual gas bill of the average Mid West and South West household has increased by $78 or almost 23 per cent. [35]

Table: Impact of Tariff Cap Increases on Median Customers (based on Annual Bills) [36]

	Cost increase	Gas Disruption Costs	Total
Mid-West / South-West Residential	$78 (20%)	$11 (2.4%)	$89 (22.9%)
Mid-West / South-West Non-Residential	$78 (4.9%)	$47 (2.8%)	$126 (7.9%)
Kalgoorlie – Boulder Residential	$86 (20%)	$11 (2.2%)	$98 (22.6%)
Kalgoorlie-Boulder Non-Residential	$109 (20%)	$17 (2.6%)	$127 (23.2%)
Albany Residential and Non-Residential	$78 (20%)	-	$78 (20%)

A key driver for the gas tariff increases was significantly higher wholesale gas prices. As the WA Office of Energy report notes:

> "Natural gas commodity costs in the Western Australian domestic market have increased dramatically in recent periods, moving sharply away from historical prices in the $2.50 per GJ range earlier this decade." [37]

[35] WA Office of Energy, *Gas Tariffs Review: Interim Report to the Minister for Energy*, June 2009, p.3.
[36] WA Office of Energy, *Gas Tariffs Review: Interim Report to the Minister for Energy*, June 2009, p.3.
[37] WA Office of Energy, *Gas Tariffs Review: Interim Report to the Minister for Energy*, June 2009, pp.14-15.

These gas tariff increases came into force *before* the recent Alinta price outcome, and the reported 300 per cent in the price of gas supplied by the NWSJV to Alinta. Escalating wholesale gas prices can only lead to higher gas and electricity prices for WA business and households.

In March 2010, the State Government announced new increases in gas tariffs for residential and small business customers in the Mid-West / South-West, Kalgoorlie-Boulder and Albany regions.[38]

The new increases will be 7 per cent for residential customers and 6.5 per cent for small business, with the exception of Albany where increases will be 10 per cent.

4. Impact of rising gas prices on competitive fuel mix

Rising natural gas prices impact on the competitive fuel mix in Western Australia.

Removing gas from a competitive fuel mix will lead to overall energy costs as coal prices traditionally shadow gas prices. This will result in higher fuel costs for power generation, and electricity costs for WA business and households.

5. WA has one of the most uncompetitive gas markets in Australia

Western Australia has one of the most anti-competitive gas markets in the country. It is a duopoly market in which just two producer groups control close to 100 per cent of the market.

Through joint selling arrangements, the six North West Shelf Joint Venture producers combine together to set prices and contract terms that cover almost 70 per cent of the market.

There is now increased alignment between the North West Shelf/Gorgon entities and the other major supplier into the WA domestic market, Apache.

Joint ownership of Macedon, and recent agreement to undertake joint development of Apache's Brunello and Julimar fields with Chevron's Wheatstone LNG project, demonstrates the extent of this alignment and the focus on the export market rather than the domestic market.

[38] Premier Colin Barnett and Minister for Energy Peter Collier, *State Government announces increases in tariff arrangements*, Media statement, 8 March 2010.

Table: WA gas projects and participants

Project	Participants
NWSJV	Woodside, Chevron, Shell, BP, BHP Billiton, Mitsui-Mitsubishi
Pluto	Woodside
Macedon	BHP Billiton and Apache
Wheatstone	Chevron and Apache
Gorgon	Chevron, Shell and Exxon Mobil
Reindeer	Apache, Santos

The WA gas market is therefore characterised by a small grouping of producers which have immense market power through joint selling arrangements and ownership concentration. This allows producers to increase domestic gas prices and/or withhold supply.

This situation will continue with prospective gas developments also controlled by those same producers. Any competitive pressure that new projects might otherwise assert have been minimised by authorisation by cross-ownership across different projects.

Table: Major WA domestic gas suppliers

	Woodside	Shell	Chevron	BHP	BP	MIMI	ExxonM	Apache	Santos	Tap	Kufpec
Woodside											
Shell											
Chevron											
BHP											
BP											
MIMI											
ExxonM											
Apache											
Santos											
Tap											
Kufpec											

Denotes producers in a direct JV or project arrangement

Denotes producers linked by a common partner. E.g. Woodside (NWSJV) and ExxonMobil (Gorgon) both share Chevron as a common partner.

It has also been minimised in the case of Gorgon by ACCC authorisation permitting producers to combine together to set prices and contract terms for WA customers.

It is telling that gas producers already appear to be coordinating gas marketing across projects by ensuring that any marketing from a given project occurs *sequentially*. This can only serve to further limit competition between different projects.

The ESAA Report considers the lack of competition in Western Australia's wholesale gas market a cause of "market failure which could explain the occurrence of a domestic gas shortage.[39] The report identifies authorisation for joint selling and marketing as a key factor potentially inhibiting the development of further competition in the WA wholesale gas market.[40]

The report concludes that until these impediments to competition are addressed by the Western Australian and Commonwealth Governments, a domestic gas reservation policy may be a necessary policy tool to secure domestic supply.[41]

Accordingly, government intervention – by the ACCC - has created the market failure responsible for the current domestic gas situation. Authorisation for joint selling has suppressed competition, protected the ongoing producer duopoly, increased prices and limited the effectiveness of State Government market reforms. It remains the single biggest barrier to competition and the development of a more mature gas market.

7. Gas should be supplied at a price that gives the State a competitive advantage in energy

The Alliance supports Premier Barnett's position that gas should be supplied to the domestic market at a price that gives the State a competitive advantage in energy. Domestic gas prices should reflect the price of gas exiting the domestic gas processing plant.

Premier Barnett has stated:

> "[I]t is a reasonable thing that the price of domestic gas should not exceed the price at which gas is fed into an LNG project …
>
> I would very strongly suggest to the industry … [that] as an industry, I would make sure that you are supplying the domestic market and that you're doing it at a price that gives us at least a marginal competitive

[39] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.49.
[40] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.49.
[41] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.9.

> advantage in energy, and therefore develop the potential to add value to other minerals and other natural resource production in this State …
>
> [T]hat's going to be the long-term policy of the West Australian Government, because we're not about a short-term boom, we're about trying to set this State up for 20 years of strong economic growth so that the benefits can go into health, into education, into regional development and wherever else future generations might decide."[42]

It should be remembered that natural gas resources belong to all West Australians, not to private enterprises that might seek to exploit them. There is a public expectation that the State's gas resources are developed in a manner that delivers public benefits in downstream investment, development, employment and living standards.

[42] Premier Colin Barnett, 'Transcript – Speech – Petroleum Club of Western Australia', 8 September 2009.

CHALLENGES: RELIABLE ENERGY

Key Points

- The 2008 North West Shelf Joint Venture and Apache Energy Varanus Island incidents highlight the State's dependence on reliable domestic gas supply.
- Given the dependence on just two supply sources, any outage at one or both domestic gas plants will have profound impacts on the State.
- Reliability of supply depends on having reliable infrastructure assets, as well as diversity of supply and a significant expansion in the number of domestic supply sources.

1. Reliability of upstream supply

The State's dependence on reliable domestic gas supply was highlighted by the January 2008 North West Shelf Joint Venture and the June 2008 Apache Energy Varanus Island incidents.

In January 2008, an electrical fault at the North West Shelf gas processing plant at Karratha resulted in domestic gas supply being suspended for more than two days. The North West Shelf Joint Venture supplies around 70 per cent of the State's domestic gas requirements.

The June 2008 Apache Energy Varanus Island incident shut off 30 per cent of the State's total gas supply and resulted in significant economic damage to gas users. The loss of supply resulted in severe disruption to operations as well as higher costs as companies were forced – to the extent they were able – to switch to alternative gas supplies or energy fuels.

While some gas users were able to switch to diesel, this was at a significant economic cost and unsustainable for the longer term. Other gas users were forced to curtail or shut down operations through inability to secure alternative non-gas supply, or alternative supply at a commercially sustainable cost.

The Apache Energy Varanus Island outage had a compounding impact on industry by disrupting the local production and supply of other essential inputs, such as fertilizers for local agriculture, reagents for the mineral processing industry and industrial gases such as carbon dioxide. The incident had far-reaching economic, employment and investment impacts and also resulted in significant inconvenience to households.

Factors relevant to reliability of supply include:

- the ability of emergency response arrangements to quickly restore production in the event of supply outages or to provide alternative fuel supplies;

- the extent of redundancy built into the gas supply and delivery systems; and

- the effectiveness of the technical regulation which oversees the design and ongoing operation of domestic gas processing and supply facilities.

These matters have been the subject of detailed inquiry by the State Government in relation to the Varanus Island incident. They are also relevant to the 2008 North West Shelf Joint Venture outage. They will not be examined in this report.

2. Reliability also depends on diversity of supply

The incidents demonstrate that reliability of supply depends on having reliable infrastructure assets, as well as *diversity of supply*.

Given that local gas users are dependent on just two supply sources (North West Shelf and Varanus Island) for almost 100 per cent of its supply, any outage at one or both plants will have significant impacts on the State.

As the Apache Energy Varanus Island outage demonstrated, there are also significant practical and economic constraints on the ability of existing users to switch from gas to alternative fuels such as coal. This underlines the importance expanding the number of domestic gas supply sources.

CHALLENGES: CLEANER ENERGY

Key Points

- Natural gas is the only conventional energy source that can underpin the State's transition to a low carbon economy during the next 20 years.
- Using natural gas to fuel WA industry and households is by far the most greenhouse- and energy-efficient use of the State's natural gas resources.
- The serious gas shortage and escalating prices have resulted in resource and energy projects resorting to coal-fired energy.
- At current domestic gas prices, natural gas is no longer competitive with coal for baseload power generation and major manufacturing and resource processing.
- This is unlikely to change under an emissions trading scheme. At a $7 per gigajoule (before transport) wholesale gas price, natural gas would only be competitive with $2 per gigajoule coal at a $90 per tonne carbon cost.
- Australia's current policy framework does not encourage the use of natural gas as the most effective and efficient means of reducing greenhouse emissions.
- The domestic gas shortage could be the single biggest factor contributing to emissions growth in Western Australia over the next decade.

1. Natural gas' vital role in meeting the greenhouse challenge

Energy security and climate change are inseparably linked with efforts to reduce greenhouse emissions dependent on access to clean energy.

Natural gas has a vital role in meeting Western Australia's greenhouse challenge. It is the only conventional energy source that can underpin the State's transition to a low carbon economy during the next 20 years.

Natural gas produces less than half the greenhouse emissions compared to coal and uses proven, readily available technology. Combined cycle gas-fired plants and gas-fired cogeneration plants constitute by far the most greenhouse efficient forms of non-renewable power generation.

Over its life, a new 350 megawatt per hour natural gas combined cycle plant will produce 30 million tonnes of carbon dioxide emissions, compared to 70 million tonnes for an equivalent coal power plant.[43] In terms of

[43] Simshauser, P. and Wild, P. (2007) 'The WA Power Dilemma', p.23; available at www.bbpower.com/media/299790/25907%20wa%20energy%20summit.pdf.

annual greenhouse gas emissions avoided, the difference is equivalent to removing 325,000 cars off the road.

Natural gas underpins the development of greenhouse-friendly gas fired cogeneration plants. Cogeneration plants at alumina refineries in Western Australia for example generate steam which is used in the alumina refining process, as well as electricity for supply into the grid. Cogeneration plants can achieve at least 75 per cent energy efficiency, compared with 30-50 per cent for comparable coal fired generation.

Natural gas supply is also critical to underpin future expansion of renewable energy. Only natural gas plants can provide the peaking power capacity necessary to support renewable power such as wind and solar, and which makes renewable energy a feasible source of energy for the local market.

2. Domestic gas supply is by far the most greenhouse- and energy-efficient use of the State's gas resources

From a global greenhouse perspective, using natural gas to fuel local industry, power generation, small businesses and households is by far the most greenhouse and energy efficient use of the State's natural gas resources.

Unlike LNG, domestic gas does not need to be liquefied, shipped long distances in tankers and then regasified before it can be used as a fuel – an energy-intensive process.

Domestic gas supply is over 92 per cent energy-efficient, with less than 8 per cent of energy lost in the supply chain. Transport through the Dampier to Bunbury Natural Gas Pipeline, the longest gas transmission system in Australia, only uses less than 3 per cent of the energy transported.[44]

In contrast, LNG is only 74 per cent energy efficient, with 26 per cent of the energy consumed by the LNG supply chain.[45]

In terms of lifecycle emissions, LNG produces 20 per cent more greenhouse emissions on a per gigajoule basis compared to domestic pipeline gas.[46]

[44] 2009 DomGas Alliance study.
[45] 2009 DomGas Alliance study.
[46] 2009 DomGas Alliance study.

Table: DomGas Alliance Study (2008)

For every 100 GJ of energy in the supply chain:

	Energy Delivered	Energy Consumed	Total	Energy efficiency
Dom Gas	92.3 GJ	7.4 GJ	100 GJ	92.3 %
LNG	73.7 GJ	26.3 GJ	100 GJ	73.7 %

Lifecycle greenhouse emissions for:

1 GJ LNG: 67 kg $CO_{2\text{-eq}}$

1 GJ domestic gas: 56 kg $CO_{2\text{-eq}}$

1 GJ of LNG generates almost 20% more greenhouse emissions than domestic pipeline gas.

The Alliance's analysis is consistent with other international studies. A Carnegie Mellon University study found LNG generated almost 25% more greenhouse emissions over its lifecycle compared to domestic natural gas. The study also found that the upper band of emissions associated with LNG approached that of coal.[47]

Table: Carnegie Mellon Study (2007)

Lifecycle emissions (lb $CO_{2\text{-e}}$ per megawatt hour)

	Dom Gas	LNG	Coal
Midpoint	1250	1600	2100
Upper Band	1600	2400	2550

A study by Climate Mitigation Services also found that liquefying and transporting natural gas in LNG tankers accounted for around 21 per cent of the total lifecycle emissions of LNG.

Western Australian industry and electricity generators are in the main extremely energy efficient compared to their international counterparts. This reinforces the global greenhouse benefits of using the State's gas resources to fuel industry and power generation in the State.

[47] Jaramillo, Griffin and Matthews, 'Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG and SNG for Electricity Generation', *Environ. Sci. Technol*. 2007, 41, 6290-6296.

3. Serious threat to WA's climate change response

With the 80 per cent of Australia's natural gas reserves, Western Australia should be well-placed to lead the transition to a lower carbon economy.

Escalating prices and domestic gas shortages however present significant risks to the State's response on climate change.

The ESAA Report warned that sustained higher domestic gas prices may have implications for a low-emissions transformation of the State's stationary energy sector.[48]

The Department of Mines and Petroleum also considered that transitioning the stationary energy sector has proved difficult to achieve because the demand for gas resources for export has increased and domestic gas prices have risen in response.[49]

As a result of the gas shortage and escalating prices, a number of resource and energy development projects have had to resort to coal-fired energy. The State's two recent baseload power generator tenders have been coal-fired as opposed to gas-fired (Griffin Bluewaters 1 and 2).

At current prices in Western Australia, natural gas is no longer competitive with coal for baseload power generation and major manufacturing and resource processing.

This is unlikely to change under an emissions trading scheme.

At a wholesale gas price as low as $7 per gigajoule (before transport costs), natural gas would only be competitive with $2 per gigajoule coal at the following carbon costs:

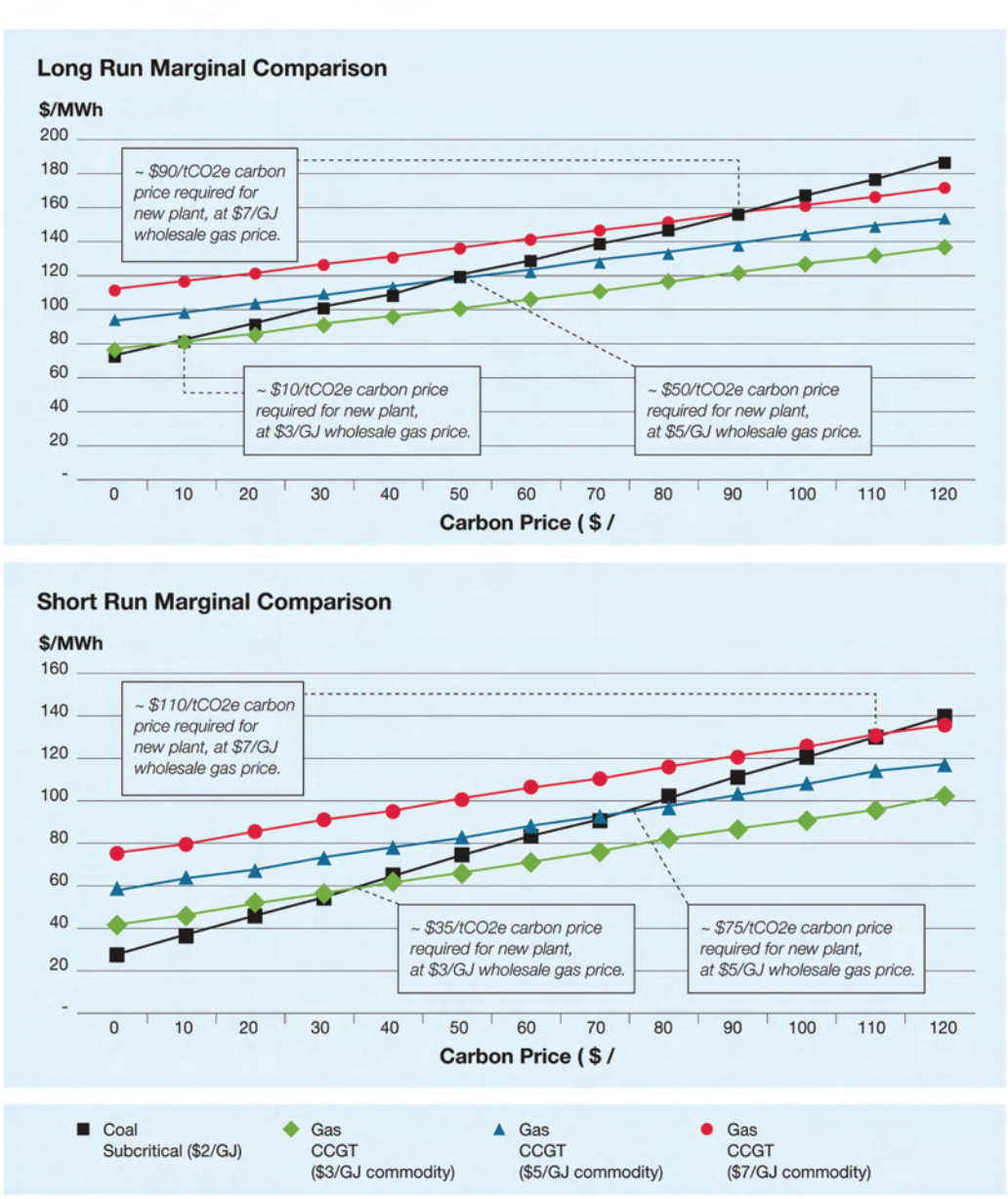
- $90 per tonne carbon cost - on a long run marginal cost (LRMC) basis, that is, for new baseload power plant construction;

- $110 per tonne – on a short run marginal cost (SRMC) basis, that is, for plant already built.

Recent wholesale domestic gas prices have been as high as $14-16 per gigajoule before transport costs.

[48] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.48.
[49] Department of Mines and Petroleum, *Western Australia Oil and Gas Review 2008*, p.10.

Chart: Competitiveness of $7 / GJ gas vs. $2 / GJ coal



Abbreviations: • CCGT: combined cycle gas turbine • tCO2e: tonne of CO2 equivalent • MWh – megawatt hours • kW: kilowatt • WACC: weighted average cost of capital

As discussed above, Western Australia requires 150 megawatts of additional electricity generation capacity each year in the South West Interconnected System alone. This is equivalent to building a new 300 MW power station *every two years*. This level of demand does not include demand growth elsewhere in the State, such as the North West and Mid West.

At current gas prices, all of this generation will be fuelled by coal power plants. It is incongruous that despite Australia's largest natural gas resources and exports, the shortage of gas is leading to WA constructing new coal-fired power stations - at a time when the rest of the country is shifting to cleaner energy sources.

The domestic gas shortage could well be the single biggest factor contributing to emissions growth in Western Australia over the next decade.

4. Australia's current policy framework does not encourage domestic gas

Natural gas must play a critical role in Australia's transition to a lower carbon economy. The current policy framework does not encourage the use of natural gas as the most effective and efficient means of reducing Australia's greenhouse emissions.

In particular, the Federal Government's proposed Carbon Pollution Reduction Scheme provides a financial incentive for gas producers to export and discriminates against domestic gas.

Under the CPRS, the LNG industry is treated as an Emission Intense Trade Exposed (EITE) industry and will qualify for 60 per cent assistance towards any emissions it produces from LNG production.

The production of domestic gas on the other hand qualifies for no assistance meaning that the full cost of a carbon tax will be borne by domestic gas.

To the extent that the gas producer is not able to pass the carbon costs onto its customers, this provides a significant disincentive to invest in domestic gas supply. This could distort investment decisions in favour of LNG and divert gas reserves to exports instead of the already tight domestic gas market.

Where gas producers are able to pass on carbon costs to the domestic market, this will further increase the cost of natural gas for downstream industry.

The competitiveness and uptake of natural gas could be further undermined by compensation provided to coal-fired energy for carbon costs and the support to renewable energy through a Mandatory Renewable Energy Target.

The CPRS could have serious unintended consequences and distort investment, discourage domestic gas supply, increase gas and electricity prices and undermine energy security. It could also increase greenhouse emissions and shift investment and energy use from gas to coal.

ACTION: OFFSHORE EXPLORATION MANAGEMENT

Key Points

- The current offshore exploration release process is inefficient and discourages gas exploration and development.
- While companies have nominated areas for exploration work, these have not been released on the basis that the Federal Government must first undertake work to demonstrate that the areas are attractive for prospective explorers.
- An improved exploration licence regime should be implemented whereby explorers can reasonably obtain approval to explore any area not already under licence.
- Under an improved regime, access to exploration acreage should no longer be limited to resourcing availability within government. Geoscience Australia resources could then be focused on expanding knowledge of frontier basins such as the Great Australian Bight.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Overview

Australia operates a gazettal system whereby offshore exploration areas are "closed" to prospective explorers until gazetted by the Department of Resources, Energy and Tourism. The Department's website states:

> "Each year, following consultation with stakeholders, the Department releases offshore petroleum exploration acreage for competitive bidding by prospective explorers.
>
> The Offshore Petroleum Exploration Acreage Release remains the key mechanism for the government to encourage offshore petroleum exploration in Australia. The annual release of acreage for petroleum exploration enables long term planning for the industry, access to comprehensive geological and geophysical data on CD-ROM and through the website, and provides high-quality information about issues that may need to be taken into consideration by applicants."[50]

The current gazettal policy is inefficient and impedes exploration. It operates as a significant barrier to the entry of new players and potentially delays the development of domestic gas supply.

[50] Department of Resources, Energy and Tourism, available at: http://www.ret.gov.au/resources/upstream_petroleum/offshore_petroleum_exploration_in_australia/Pages/OffshorePetroleumExplorationinAustralia.aspx

2. Current administrative arrangements

The Department of Resources Energy and Tourism (DRET) administers offshore oil and gas policies and procedures, including the Exploration Licence Round Gazettal.

Geoscience Australia is the technical advisor to DRET. Within Geoscience Australia, the Petroleum and Marine Division (PMD) provides technical advice for offshore Commonwealth licences, including Exploration License Round Gazettals. Within PMD, the Petroleum Prospectivity and Promotion Group (PPPG) is responsible for the basin evaluation, which determine which licenses go into each annual Exploration Licence Gazettal Round.

All oil and gas companies are required by Geoscience Australia to provide data from any well (exploration, appraisal or development well) within 24 months after the drilling rig has moved off location. Companies are also required to provide all proprietary seismic data 24 months after the data has been processed.

Data is classified “open file” as soon as Geoscience Australia receives the data. Any company may purchase any open file data from Geoscience Australia for minimal cost.

Service companies, such as WesternGeco, CGGVeritas and Fugro also acquire speculative geo-technical surveys (seismic, gravity, magnetic, etc.) in offshore basins. Speculative data is actively marketed to oil and gas companies at a higher cost than open file data.

The service companies work closely with industry to identify areas, which may require additional data for basin evaluations. If a service company does not work closely with industry, then the service company will not recoup the cost for the speculative survey. Geoscience Australia requires that speculative geo-technical surveys become open file after fifteen years.

Australia’s open file oil and gas data policy is one of the most progressive in the world. Open file oil and gas data allows any company to access data in any basin across Australia.

In practice this means hundreds of industry technical professionals are able to evaluate offshore Australian basins and develop new exploration concepts and ideas. New exploration concepts and ideas can lead to the discovery of significant new oil and gas resources, which in turn will generate significant revenue for government.

New exploration ideas and concepts will only lead to the discovery of new oil and gas resources, if new exploration acreage is available to industry. The current “as is” Exploration License Round Gazettal process is an impediment to exploration drilling and an inefficient use of Geoscience Australia’s technical professional resources.

3. The Exploration License Round Gazettal Process

The is a lack of transparency over DRET's process for determining which areas and how many licenses will be gazetted for an annual Exploration License Round.

While DRET have publicly stated that there is close collaboration with the oil and gas industry on the Exploration License Round process, there have been limited if any open forums for industry collaboration.

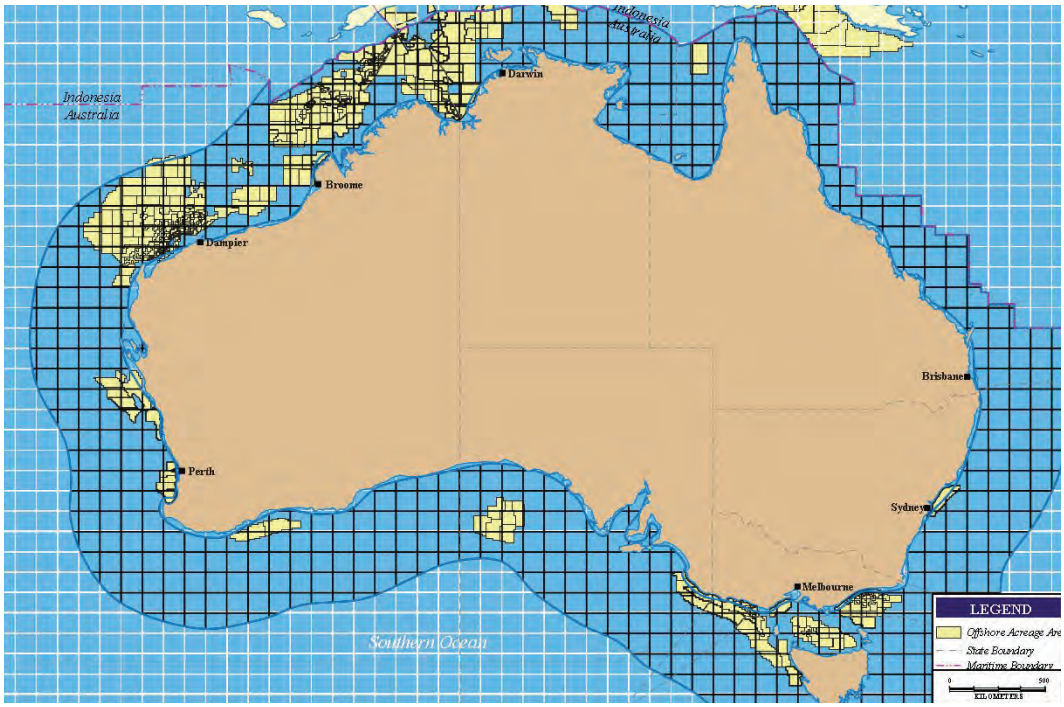
Companies are invited to nominate areas for consideration. However, the areas nominated by companies will only be considered for exploration release if DRET has *already* determined the area is worthy of a basin study and prospective for industry.

Geoscience Australia's Petroleum Prospectivity and Promotion Group has responsibility for evaluating basins and identifying new exploration concepts and ideas, which will result in the industry bidding, exploring and finding new oil and gas resources.

The PPPG consists of 25 to 30 technical professionals and support staff. A basin evaluation study will take six to ten months for provinces with existing production, such as the Carnarvon, Gippsland or Perth basins.

Frontier provinces, such as the Great Australian Bight or Gulf of Carpentaria, may require Geoscience Australia to acquire new data to conduct a basin evaluation. Evaluations of frontier provinces may take three to four years, if new data is acquired.

Chart: Annual exploration licence round



4. The current process is inefficient and discourages exploration

It is ineffective

DRET presumes to know which areas the oil and gas industry will find prospective. A significant number of the open licenses at the 2009 Exploration License Round Gazettal however received zero industry bids.

This clearly shows that DRET's assumptions on prospectivity are incorrect. DRET's process does not take advantage of the new exploration concepts and ideas, innovation or new technology that resides in the oil and gas industry.

It wastes government resources

Geoscience Australia has a small, but highly educated and talented technical team. Those resources are best used in the evaluation of frontier basins, not on provinces with proven production.

Provinces with proven production have significant open file data, which industry can and does access to develop new exploration concepts and ideas. Government resources are also depleted promoting the annual Exploration License Round Gazettal.

It delays exploration programs

The current process adds one to three years to the exploration process. Successful oil and gas companies are actively recruited to explore and invest by international governments.

Ineffective or opaque exploration license round processes will result in successful oil and gas companies withdrawing from Australia.

5. Solutions

Eliminate the current exploration licence round process

As outlined above, the current process is ineffective, wastes valuable government resources and delays oil and gas exploration. It also lacks transparency. The current process will result in lost exploration investment and delays the discovery of new oil and gas resources.

Institute an annual exploration licence round

An annual exploration license could be held on a fixed date, which will allow industry to prepare and plan for the exploration evaluations. This process would also improve the transparency.

Open all areas not under licence to be available for bidding

The oil and gas industry should be permitted to determine what is or is not prospective. This would effectively unleash the hundreds of technical professionals in the oil and gas companies to develop new exploration ideas and concepts.

Under an improved exploration licence regime, access to exploration acreage would no longer be limited to staff resourcing availability within government. Geoscience Australia's technical resources can then be focused on evaluating frontier basins, such as the Great Australian Bight.

Any concerns that the Commonwealth might have on a small number of companies nominating entire areas could be managed by attaching and enforcing appropriate licence conditions, such as on appropriate work programs.

ACTION: RETENTION LEASE MANAGEMENT

Key Points

- The bulk of WA's identified gas resources are held under retention leases. Developing resources for the domestic market will help meet the State's serious gas shortage.
- Retention leases must not be used to indefinitely park gas reserves for possible LNG development then those resources could economically supply the domestic market.
- The Joint Authority seems determined to give LNG projects precedence over domestic supply in approving the warehousing of reserves under retention leases. This approach threatens WA's energy security and will lead to higher energy prices.
- Retention leases should, in the first instance, be assessed on whether fields can supply the domestic market on a commercial basis.
- This expectation should be expressly reinforced in the relevant legislation and administrative guidelines.
- Information should be made available that would allow meaningful engagement by third parties. Opportunity for participation should be provided throughout the process.
- Clear timeframes should be established, including for Ministerial decisions. This will ensure that decisions over lease applications, reviews and renewals.
- The Government's Joint Technical Report should be subject to independent peer review to test assumptions and conclusions.
- In the longer term, Australia should eliminate retention leases. Companies to should be required to develop fields within 8 years or to drop the field.
- Government processes to review the retention lease process have been ongoing since 2006 with no outcomes.
- Overseas experience demonstrates that stringent retention lease enforcement and greater transparency / third party participation will encourage exploration, development and domestic supply.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Targeting stranded resources will help meet the State's serious gas shortage

Currently, 56 per cent of the State's natural gas resources are held under retention leases on the basis that they are currently considered uncommercial for development. 99 per cent of resources held under retention leases were operated by Woodside, Chevron and ExxonMobil.[51]

Given the bulk of WA's identified gas reserves are held under retention leases, targeting development of stranded resources for the domestic market will help meet the State's gas shortage.

The Alliance has, for instance, identified some 22 stranded gas fields in the Carnarvon, Bonaparte and Browse Basins. Together, these fields hold over 84 TCF of gas and 1.4 billion barrels of condensate.

Many of these fields are too small for LNG development, are amenable for domestic gas development, but have been warehoused by existing leaseholders – for as many as 30 years.

Table: Discovered stranded fields

Field Name	Year Discovered	Water Depth metres	Gross Reserves Tcf	Gross Reserves MMbblC
Carnarvon Basin:				
Jansz	2000	1321	**12.9**	**0.0**
Scarborough	1979	923	**4.8**	**0.0**
Io	2001	1352	**3.4**	**522.7**
West Tryal Rocks	1973	138	**2.4**	**38.0**
Geryon	1999	1231	**2.2**	**8.8**
Chandon	2006	1201	**2.0**	**11.0**
Chrysaor	1994	806	**1.7**	**16.0**
Dionysus	1996	1092	**1.4**	**11.6**
Iago	2000	118	**1.0**	**10.9**
Orthrus	1999	1200	**0.8**	**2.2**
Persephone	2006	126	**0.7**	**17.4**
subtotal			**33.3**	**638.7**

[51] WA Department of Mines and Petroleum, *Western Australian Oil and Gas Review 2008*, pp.80-81.

Field Name	Year Discovered	Water Depth metres	GA Resource Assessment Tcf	GA Resource Assessment MMbblC
Bonaparte Basin:				
Evans Shoal	1988	110	**8.3**	**0.0**
Sunrise/Troubador	1975	159	**7.7**	**299.0**
Caldita/Barossa	2006	150	**5.6**	**0.0**
Petrel	1969	100	**1.0**	**5.9**
Tern	1971	92	**0.4**	**5.7**
Prometheus/Rubicon	2000	69	**0.2**	**0.0**
Subtotal			**23.2**	**310.6**
Browse Basin:				
Torosa	1971	50	**10.6**	**121.0**
Crux	2000	168	**5.1**	**175.0**
Brecknock	1979	543	**4.9**	**109.4**
Calliance	2005	575	**3.7**	**86.8**
Argus	2000	572	**3.6**	**0.0**
Subtotal			**27.9**	**492.3**

Source: Geoscience Australia

2. Major producers are warehousing resources that could supply the domestic market

Under the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006*, a retention lease must be converted to a production licence when a reserve is commercial.

The Act does not provide an exception for reserves – that might otherwise supply the domestic market – to be set aside for the purpose that they might at some time in the future contribute to an LNG development.

Retention leases must not be used to indefinitely park gas resources for possible LNG development when those resources could economically supply the domestic market.

As a consequence, offshore gas developments in Australia are taking significantly longer to progress from discovery to first gas compared to other countries. This is impacting project development costs and domestic gas supply. Major producers appear to be using Australia's retention lease arrangements as an international safe haven to warehouse resources.

The ESAA Report considers that on strategic reasoning, it could be argued that producers are parking commercially viable gas resources in anticipation of future large-scale LNG developments or holding supply to leverage domestic gas prices above competitive levels.[52]

While LNG producers initially claimed that resources were uneconomic for domgas development, such arguments appear no longer valid given the significant rise in domestic gas prices.

That the commerciality of resources has changed significantly was recognised as early as 2007 by the Commonwealth – States Joint Working Group on Natural Gas Supply.

The Joint Working Group was established in 2006 in response to Western Australia's serious domestic gas shortage. Following extensive work and input by gas producers and consumers, the Joint Working Group released its Final Report in 2007. Significantly, the Joint Working Group concluded:

> "[T]he marked environment has changed significantly in recent years. As a result, there is an expectation that the prospects for commercialising many known gas resources have improved substantially."[53]

The Joint Working Group recommended:

> "In these circumstances it would appear appropriate for the Joint Authority to review existing gas retention leases, implement a more transparent application of existing gas retention leases, implement a more transparent application of existing guidelines, and where considered appropriate, to request a re-evaluation of commercial viability in accordance with s38H of the Petroleum (Submerged Lands) Act."[54]
>
> "The JWG supports further investigation into improving the current acreage management process, in particular the granting and renewal of retention leases to ensure that processes are transparent and that tests of commerciality are rigorously applied and enforced."[55]

Given continuing high domestic gas prices, producers have now sought to shift their arguments from resources not being commercial for development, to resources being necessary to underpin potential LNG projects through sequential field development.

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[52] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.48-49.
[53] Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply, Final Report, September 2007, p.32.
[54] Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply, Final Report, September 2007, p.32.
[55] Ministerial Council on Mineral and Petroleum Resources / Ministerial Council on Energy Joint Working Group on Natural Gas Supply, Final Report, September 2007, p.32.

The Alliance considers that retention leases should, in the first instance, be assessed on whether fields can supply the domestic market on a commercial basis. This expectation should be expressly reinforced in the relevant legislation or administrative guidelines.

3. The Joint Authority seems determined to give LNG projects precedence over domestic supply

The Federal Government has repeatedly affirmed a stringent approach to retention lease management to promote domestic gas supply. There is however a significant disparity between rhetoric and actual outcomes for WA gas consumers.

The Alliance is not aware of any retention leases that have been revoked in recent years by the Joint Commonwealth – State Authority, on the basis that resources could be developed for the domestic market. This is despite the Joint Working Group acknowledging as early as 2007 the substantial improvement in commerciality as the result of significant domestic gas price increases.

On the other hand, the Joint Authority has acted to indefinitely set aside gas resources for possible LNG development when those resources could economically supply the domestic market.

West Tryal Rocks is an example of a potential domestic gas field that continues to be warehoused as a result of the Joint Authority's decisions. The field was discovered in 1973 and is located in shallow water and close to existing domestic gas infrastructure.

The field has attracted repeated interest from prospective producers on the basis that resources can be developed for the WA market. WA gas customers have also approached operator Chevron with offers to help underwrite development of the field through long term supply contracts.

Despite strong interest from prospective producers and WA gas customers, the significant rise in domestic gas prices, and WA's serious domestic gas shortage, the Joint Authority has agreed to the lease being warehoused for another 5 years.

Case Study: West Tryal Rocks

- 1973 – West Tryal Rocks field discovered by WAPET
- 2002 – Multiplex proposes to develop the field for domestic supply and offers to buy it from Chevron, Shell and ExxonMobil for $70 million

- 2003 – Multiplex's challenge is rejected by government and the lease rolled-over
- 2007 – Joint Working Group acknowledges significant rise in domestic gas prices and substantial improvement in prospects for developing stranded gas reserves
- May 2008 – retention lease scheduled to expire. No announcement is made by the Federal Government for the next 16 months
- Chevron publicly reported to be targeting West Tryal Rocks for domestic gas development by discussing with potential customers and pursuing contracts for FEED studies
- Oswal Group proposes to buy all of the gas for proposed $1.5 billion Burrup ammonia urea plant
- Feb 2009 – Crystal Exploration challenges Chevron's right to the lease on the basis that it is commercial for domestic gas development
- Sept 2009 – Federal Government announces it will renew West Tryal Rocks, along with six other gas fields, to be "developed sequentially to maintain production and extend the economic life of the [Gorgon] project

The decision has been publicly explained on the basis that the field can be "developed sequentially to maintain production and extend the economic life of the [Gorgon] project".[56] No timetable has been provided as to when the field might be developed. Indeed, a retention lease can only be renewed on the basis on the basis it is not currently considered economic for development.

The decision appears in conflict with the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006*. As discussed above, the Act requires a retention lease to be converted to a production licence when a reserve is commercial.

The Act does not provide an exception that would permit reserves – that might otherwise supply the domestic market – to be set aside for the purpose that they might at some time in the future contribute to an LNG development.

[56] Minister for Resources, Energy and Tourism; 'Government Clears Final Hurdle for $50 Billion Gorgon Go-Ahead', Media Statement, 1 September 2009.

The Joint Authority's decision to give LNG projects precedence over the local economy represents a fundamental policy change. This policy change was foreshadowed in a retention lease Options Paper released by the Department of Resources, Energy and Tourism in June 2009.

The Options Paper flags that resources - which might otherwise supply the domestic market – may be warehoused for future LNG development so long as they are considered "essential to meeting contractual commitments and the overall viability of the greater project".[57]

The approach is especially disappointing for WA gas users given the policy is the outcome of a process initiated over 3 years ago *to promote domestic gas security* and domestic gas supply. The Options Paper in fact purports to respond to the Joint Working Group's Final Report which that retention lease arrangements should be tightened and rigorously enforced to promote domestic gas supply.

Given the original intent of the Joint Working Group process and the recommendations of the Final Report, WA gas users are alarmed and dismayed by the new approach to give LNG exports precedence over domestic energy security.

The issue underlines the importance of effective domestic supply obligations to ensure some gas is delivered to the WA market, from domestic gas fields now diverted to LNG exports.

4. There is no transparency in retention lease decisions

As the West Tryal Rocks lease renewal demonstrates, there is little transparency in the current retention lease process and little opportunity for third parties to participate.

There is currently no gazetting system which would make public the substance of a retention lease application, nor is there a formal procedure for third parties to participate.

The current process provides for an asymmetry of information that exclusively benefits the small number of existing lease holders. Prospective gas producers continue to express frustration at the current arrangements and their difficulties in being able to access information and engage in the process.

This contrasts with existing State and Commonwealth environmental approval processes for development projects. These processes provide for transparency and significant opportunity for stakeholder input.

[57] Department of Resources, Energy and Tourism; *Review of Policy Relating to the Grant and Renewal of Retention Leases – Options Paper*; June 2009; Draft Recommendation 5.8.

Greater transparency and third party participation will:

- improve the underlying basis of retention lease decisions;
- encourage third party participation;
- subject applicant claims and assumptions to greater scrutiny and contestability;
- strengthen the application of the commerciality test; and
- promote new field development.

Information should be made available that would allow meaningful engagement by third parties. Opportunity for participation should be provided throughout the process. Measures could include:

- A public, on-line registry of State and Commonwealth Retention Leases should be established.
- The registry should provide clear indication on the current status of individual lease applications or review process, and identify leases coming up for review.
- The Designated Authority should make a public announcement when it begins the process of reviewing an individual retention lease.
- The factors and assumptions used by the Designated Authority to test "commerciality" should be publicly disclosed.
- Publishing an assumptions or data book identifying key factors such as prices, local demand, rate of return, expectations on CAPEX / OPEX.
- Expert reports commissioned by the Designated Authority into matters such as market conditions, construction costs, etc, should be published.
- The Government's Joint Technical Report should be published.
- There should be a review period allowing third parties to submit information in relation to the assessment parameters used by the Designated Authority, the assumptions and development concepts being advanced by the proponent, or to reinforce or challenge the Designated Authority's draft decision.
- Opportunity should be provided to third parties to have input into the establishment of conditions for the grant or renewal of retention leases.

- The reasons and substance of the Designated Authority's decision should be published.

- There should be an independent peer review or third party assessment to review and validate the Joint Technical Report, and to test the assumptions and conclusions made.

The 16 month delay between expiry of the West Tryal retention lease (May 2008) and the Federal Government's announcement that it was renewing the lease (September 2009) underlines the need for clear decision-making timeframes.

Timeframes should be established, including for Ministerial decisions. This will ensure that decisions over lease applications, reviews and renewals are made in a timely manner.

5. Reviews have been ongoing for almost 4 years with no outcome

Government processes to review the retention lease process have been ongoing since 2006. Despite recommendations by the Joint Working Group in 2007, there have been no outcomes on stringent enforcement of retention leases to promote domestic supply, or to improve transparency and third party participation.

In September 2006, a Commonwealth, States and Territories Joint Working Group on Natural Gas Supply was established in response to concerns over domestic gas supply.

In July 2007, a consultants' report recommended retention leases be stringently reviewed to ensure the commerciality test was being met and that producers were not using leases to withhold gas from the domestic market.

In September 2007, the Joint Working Group released its Final Report recommending that existing Retention Leases be stringently reviewed and that "tests of commerciality test are rigorously applied and enforced.

The Joint Working Group also recommended further investigation to improve the retention lease process to ensure transparency. The Joint Working Group tasked the Upstream Petroleum and Geothermal Subcommittee to conduct this investigation and to report by March 2008.

In April 2008, the Federal Department of Resources, Energy and Tourism wrote to stakeholders announcing a policy review of the retention lease process. Domestic gas users provided a detailed submission to the process in the same month.

In May 2008, the Department of Resources, Energy and Tourism advised it was preparing an options paper on the retention lease process "to encourage discussion and opinion so as to identify and refine possible changes to the

Retention Lease system". The Department indicated the options paper will be provided to stakeholders for comment.

In December 2008, the Productivity Commission released a Draft Report on the *Review of Regulatory Burden on the Upstream Petroleum (Oil and Gas) Sector*. The Draft Report recommended that retention leases be subject to even "lighter handed regulation" and that lease periods be extended from the current 5 years to 15 years. The recommendations, if adopted, would have further weakened the Retention Lease system and discourage timely development of gas resources.

In April 2008, the Productivity Commission issued its Final Report calling for greater transparency and certainty in the retention lease process. The Final Report overturned the Draft Report recommendations that had called for "lighter handed regulation" and an extension in lease periods.

In June 2009, the Department of Resources, Energy and Tourism finally release a retention lease Options Paper in response to the 2007 Joint Working Group recommendations. Alarmingly, the Options Paper appears to turn the recommendations on their head by proposing that LNG projects be given precedence over domestic supply.

While the Options Paper identifies the need for greater transparency and third party participation, it also sought to emphasise perceived concerns over investor risks, commercial confidentiality and investor perceptions

Figure: Timeline of reviews to improve the Retention Lease process

Sept 2006	Federal / State Joint Working Group on Natural Gas Supply established in response to domestic supply shortage
July 2007	Consultants' report recommends major reforms
Aug 2007	***Stakeholders provide detailed submission***
Sept 2007	Joint Working Group releases Final Report recommending stringent enforcement of retention leases to promote domestic supply, and greater transparency and third party participation
Nov 2007	***Stakeholders provide detailed submission***
April 2008	Federal Government announces policy review of Retention Lease process
April 2008	***Stakeholders provide detailed submission***
April 2008	Federal Government requests Productivity Commission to undertake review into regulatory Burden on upstream oil and gas sector
May 2008	Federal Government advises it was preparing an options paper
July 2008	***Stakeholders provide detailed submission***
Dec 2008	Productivity Commission releases Draft Report which includes recommendations on Retention Lease process
Jan 2009	***Stakeholders provide detailed submission***
Apr 2009	Productivity Commission issues Final Report recommending major changes to Retention Lease process
Jun 2009	Federal Government publishes Retention Lease Options Paper which proposes giving LNG projects precedence over domestic supply
Aug 2009	***Stakeholders provide detailed submission strongly opposing LNG projects being given precedence over domestic supply***

6. Longer term solutions

Current Commonwealth policies for offshore license policies are a result of the significant downturn in the oil and gas industry due to the dramatic drop in oil price from 1981 to 1987. These policies were developed to encourage companies to continue to invest in exploration.

However, these policies have allowed some companies to warehouse or sequence gas discoveries, which could have been rapidly developed by experienced, cost effective and innovative operators.

As an example, the Gorgon Field was only developed after significant pressure was applied by government. License policies should be established to encourage innovative, cost effective and safe operators to expeditiously develop discovered oil and gas resources.

The following longer term solutions would provide a strong incentive to operators to expedite development of oil and gas resources.

6.1 Do not change current licence terms

Changing the terms of an existing license could raise investment concerns with the oil and gas industry.

6.2 Continue work program bid system

Cash bonus bids do not encourage exploration. DRET should continue to award licenses based on the most effective work programs.

6.3 Modify exploration licence term

The exploration license term should comprise two three lease terms. The first three year term is the commitment period for the initial work program.

The company has the opportunity to commit to the second three year term, subject to fulfillment of the contingent work program bid.

The license would be relinquished after a maximum of six years, if the company has not found commercial hydrocarbons and is prepared to move forward into a development program.

This approach will encourage companies to either test their exploration ideas and concepts or relinquish the lease and allow another company to come forward with their ideas and concepts. Companies can no longer warehouse exploration licenses for decades.

6.4 Eliminate retention lease status

The retention lease policy allows companies to indefinitely delay or sequence oil and gas developments.

However, companies that are technical competent and financially strong will ordinarily be in a position to determine after the initial six year exploration whether or not an exploration discovery is commercial.

The current retention lease system no longer benefits the Commonwealth or the State and should be eliminated.

6.5 Modify production license term

Instead of the current arrangements, a company should be given eight years to bring a new field on stream. Woodside has for example demonstrated that a major gas field, such as Pluto can be developed and achieve first production from a new build LNG Plant in just six years. Project delays increase the development cost, which in turn reduces government revenues.

Where the company has failed to develop the field within eight years, it should "drop the field", which could then be released to a company willing and able to develop it.

7. Stringent approach has increased exploration and development in the United Kingdom

Any tightening of the retention lease process would not discourage exploration and development in Australia. Experience in the United Kingdom in fact demonstrates the opposite.

Previously, the UK did not have a process to force activity when oil and gas licences were granted. Licences granted between 1964 and 1972 were "multi-block" - if the initial term obligation was fulfilled with a Development somewhere on the licence, companies could retain acreage into the second term for up to 46 years without any further activity.

The UK Government implemented an initiative to facilitate development of fields that were Fallow Discoveries or on Fallow Blocks. Under the new system, both blocks and discoveries are considered Fallow after three years and are classed "Fallow B".

These "Fallow B" Discoveries and Blocks are released on the UK government website if the current licensees were unable to progress activity due to misalignment within the partnership, a failure to meet economic criteria, or other commercial barriers.

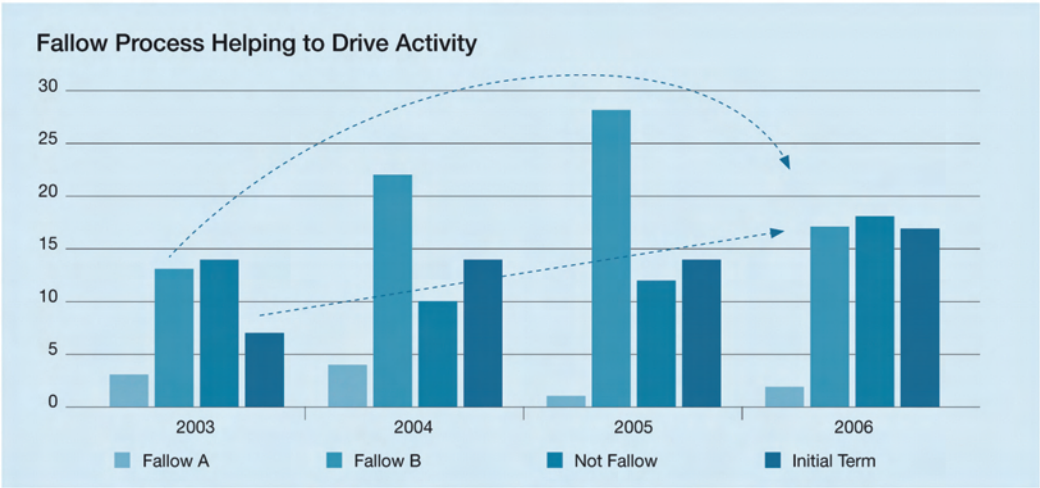
Fallow B Discoveries that have been listed on the website for two years or Fallow B Blocks that have been listed on the website for one year will be relinquished if there are no agreed plans for significant activity.

Far from discouraging investment, the UK's efforts to tighten the country's Fallow Field process have in fact significantly increased exploration and production activity by oil and gas companies.

A similar outcome could be expected in Western Australia. A number of prospective oil and gas producers continue to express interest in developing fields that have been held by major producers for many years. The current retention lease process and the lack of transparency and opportunities for third party participation however present significant barriers to prospective producers and domestic gas development.

Chart: Impact of UK Fallow Fields reforms

Figure: UK Department of Trade and Industry presentation



UK fields which are now under development or in production that were Fallow Discoveries or on Fallow Blocks

Duart	Maria	Gadwell	Pict	Chiswick	Grove
Wenlock	Thurne	Arthur	Horne	Davy East	Seymour
Saturn Area	Wren	Brechin	Cutter	Farragon	Munro
Broom	Nuggets N4	Goldeneye	Braemar	Sycamore	Caledonia
Madoes	Mirren	Scoter	Carrack	Playfair	

ACTION: ELIMINATE JOINT SELLING

Key Points

- Joint selling by gas producers significantly limits competition, leads to higher gas prices for WA business and households, and frustrate the effectiveness of State Government market reforms.
- This was demonstrated by the reported 300 per cent price rise secured by the North West Shelf Joint Venture sellers from Alinta.
- ACCC market intervention to endorse joint selling remains the single biggest barrier to greater competition and market development in WA.
- Removing joint selling arrangements will increase competition by increasing the number of independent sellers. These same producers compete with each other in separately selling to overseas customers.
- An assessment should be undertaken by the Government, such as the Economic Regulation Authority, on:
  - the transformation of the downstream gas market as the result of State Government reforms since the 1990s;
  - how this downstream market transformation compares to the upstream market which remains a duopoly;
  - the impact of joint selling arrangements and ACCC authorisation on WA gas prices, competition and market development;
  - whether separate selling is practical and feasible in the WA domestic gas market; and
  - what arrangements need to be implemented by the Commonwealth and the State to enforce competition and remove joint selling.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Joint selling has suppressed competition and led to higher prices

While joint selling arrangements might have been appropriate in a market characterised by a single monopoly seller, it is no longer justified in the current market.

Over the last decade, continued joint selling by the NWSJV has had significant and adverse impacts on the WA gas market. Joint selling arrangements:

- suppress competition and reduce the number of independent sellers in the WA market;
- reduce customer choice over terms and conditions on offer;
- increase domestic gas prices;
- entrench the already dominant market power exercised by major producers;
- enable the coordinated exercise of market power within the NWSJV;
- extend that market power to new projects such as Gorgon, Macedon and Wheatstone;
- entrench an effective minimum price for domestic gas;
- constrain market development; and
- limit the effectiveness of State Government market reforms.

In the absence of joint selling:

- major producers would compete against each other for WA domestic gas customers;
- there would be greater competition between projects in the sale of domestic gas;
- consumers would have greater choice over the terms and conditions on offer;
- major producers would not be able to co-ordinate market power in setting price or non-price terms; and
- there would be competitive pressure asserted on existing and prospective suppliers.

Additional background on joint selling is provided in Appendix 1.

2. Joint selling results in higher prices for WA consumers

Joint selling results in higher prices for WA consumers. A report by the Allen Consulting Group, commissioned by the ACCC, for example concludes that joint selling will lead to higher prices for consumers. Separate selling would instead force gas producers such as Shell, Chevron and ExxonMobil to compete with each other, resulting in lower prices for consumers.

The report concluded that while joint selling might reduce costs for Shell, Chevron and ExxonMobil, gas prices to WA consumers will "most likely" rise "due to monopolisation effects".[58]

If, on the other hand, Shell, Chevron and ExxonMobil were compelled to sell separately and compete, this would reduce their bargaining power with the likelihood of lower prices.[59]

Higher gas and electricity prices impact every West Australian business and household. This public detriment will far outweigh any public "benefit" that might be gained from any reduced costs on the part of major gas producers.

3. Market features do not prevent separate selling

The Allen Consulting Group report dismissed as "misleading" claims that joint selling was necessary to manage risk or to underpin project investment. The report considered it "difficult to accept the argument put forward by the [Gorgon] Applicants that joint marketing is required as a risk mitigation tool". This was because:

- Domestic gas represents less than 5 per cent of the Gorgon gas resources;
- Domestic gas would account for less than 5 per cent of total Gorgon revenue;
- Shell, Chevron and ExxonMobil are three of the largest companies in the world with combined 2008 income of over $US 120 billion;
- Chevron and Shell are equity partners in the largest domestic gas seller in Western Australia;
- The domestic phase post-dates LNG export start-up by three or more years;
- Domestic gas prices will almost certainly have lower price volatility than LNG exports;
- Domestic sales will be subject to take-or-pay contract provisions;
- Chevron and Shell management are familiar with the WA gas market through their investment in the NWS project; and
- ExxonMobil is the world's largest and most profitable oil and gas company with over 40 years experience in the Australian gas market.[60]

[58] ACG Report, p.26.
[59] ACG Report, p.28.

The report warned that if joint selling arrangements enable the Gorgon supply to be locked away, the Project cannot contribute to "competitive tension" in the market place with respect to other gas developments.[61]

The report concluded that the applicants had failed to demonstrate why joint marketing for domestic should be required following a Final Investment Decision on the Gorgon Project:

> "[I]t could be argued that when the FID is made, the Applicants should then be required to substantiate why joint marketing should occur. This may be particularly relevant because sales contracts may not be negotiated for some time."[62]

The Allen Consulting Group report's findings are pertinent. Separate selling is practical and feasible in the WA gas market, and should be pursued by major gas producers.

Domestic gas contracts	**LNG contracts**
✓ Over 30 gas customers buying directly from producers	X Small number of very large customers
✓ Short and long term contracts	X 20-25 year LNG contracts, very little gas sold on spot market
✓ Minimal or no sovereign, exchange rate and currency risks	X Significant sovereign, exchange rate and currency risks
✓ Lower price volatility	X Higher price volatility
✓ WA based businesses	X Sovereign government entities or very large foreign corporations
X No upstream competition	✓ Globally competitive LNG market
X Producers combine together to set prices and contract terms	✓ Producers compete with each other in separately selling to international customers

[60] Allen Consulting Group, 'Gorgon Gas Project Joint Venture Application for Authorisation of Joint Marketing', Final Report to the Australian Competition and Consumer Commission, July 2009.
[61] ACG Report, p.30.
[62] ACG Report, p.30.

4. WA gas users have been unsuccessfully pressing the ACCC to enforce competition

WA gas users have been pressing the ACCC since 2007 to enforce competition, remove the NWSJV joint selling arrangements and end the State's gas supply duopoly. There has been no response by the ACCC.

The ACCC has now been "investigating" the NWSJV joint selling arrangements for three years. No reports have been issued and no conclusions reached. No action has been taken against producers.

Yet when Chevron, Shell and ExxonMobil applied for authorisation to sell Gorgon gas jointly, gas users were given just 10 working days to respond. Chevron, Shell and ExxonMobil received interim authorisation from the ACCC within just 5 weeks, and final authorisation within 6 months.

5. Recommendation

The Strategic Energy Initiative Issues Paper considers:

> "When there is market failure, governments must be able to intervene to either support market outcomes or minimise any efficiency losses that may arise.
>
> Ensuring that competitive markets do not disadvantage vulnerable customers and take into account potential consequences for our natural environment are an important aspect of market design and regulation for the State Government."[63]

The paradox is that it is government intervention to endorse joint selling that has created the market failure responsible for the current domestic gas situation.

This intervention has suppressed competition, protected the ongoing producer duopoly, increased prices and limited the effectiveness of State Government market reforms. It remains the single biggest barrier to competition and the development of a more mature gas market.

Given the significant impact on investment, development and costs of living in Western Australia, the State Government should undertake an independent assessment on joint selling. This could be undertaken by the Economic Regulation Authority and should assess:

- the transformation of the downstream gas market as the result of State Government reforms since the 1990s;
- how this downstream market transformation compares to the upstream market;

[63] Office of Energy, *Strategic Energy Initiative: Issues Paper*, December 2009, p.13.

- the impact of joint selling arrangements and ACCC authorisation on WA gas prices, competition and market development; and

- whether separate selling is feasible and practical in the WA domestic gas market.

The State Government remains best placed to conduct such an assessment given its understanding of the WA gas market structure and conditions, and its sensitivity to the impact of gas market competition and pricing for WA business and households.

ACTION: DOMESTIC GAS RESERVATION

Key Points

- Domestic gas reservation has delivered immense social, economic and environmental benefits to Western Australia for over 25 years.
- It underpinned the original North West Shelf project and subsequent LNG export industry, and delivered secure and affordable energy.
- Subsequent gas commitments have however failed to keep pace with the State's growing energy needs, or the significant growth in LNG exports.
- The Gorgon partners have indicated they would not meet their 300 TJ/d domestic supply commitment until 2021 – some 12 years after the project's final investment decision – because of an "oversupply" of domestic gas.
- The current reservation policy needs teeth and must ensure:
    - Certainty – domestic obligations should be made *unconditional* and not subject to a "commerciality" escape clause;
    - Flexibility – LNG producers should be given sufficient flexibility in how they can meet their domestic supply obligations;
    - Growth – the domestic supply commitment should expand with any future growth in project gas reserves, production or LNG exports; and
    - Timeliness – the reservation commitment should be applied to both reserves and production; domestic gas should be supplied no later than LNG start-up and not unduly delayed.
- Domestic supply obligations should be implemented by the Commonwealth in offshore WA waters to support and complement the State's reservation policy.
- Such obligations are especially necessary given that gas fields ideally suited for domestic use are now being warehoused for possible LNG development through retention leases.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Key elements of an effective gas reservation policy

The WA gas reservation policy has been effective in establishing expectations with LNG producers on the importance of domestic supply. Background on the history of domestic gas obligations in WA is provided in Appendix 2.

Recent experience however highlights serious flaws in the policy's application. In particular, the Gorgon partners' intention to delay meeting the 300 TJ/d domestic supply commitment until 2021, on the grounds of an "oversupply" in the WA gas market, underlines the need for the State to apply a more stringent reservation policy.

The reservation policy needs teeth to meet the State's worsening gas shortage, and to ensure domestic supply commitments are not able to be avoided by major LNG producers.

Domestic supply obligations are even more important given potential domestic gas fields are now being diverted to LNG development. The Joint Authority is giving potential LNG projects precedence over domestic supply in managing retention leases.

For a reservation policy to be effective, it must provide for:

- *Certainty* – domestic gas obligations should be made *unconditional* and not subject to "commerciality" escape clause;

- *Flexibility* – LNG producers should be given flexibility in how they can meet their domestic supply obligations;

- *Growth* – domestic supply should increase with any future expansion in gas reserves or LNG exports; and

- *Timeliness* – the reservation commitment should be applied to both reserves and production; domestic gas should be supplied no later than LNG start-up and not unduly delayed.

2. Certainty

Given the purpose of a domestic reservation policy is to ensure domestic supply of gas, this is undermined where the commitment is subject to a commerciality "escape clause". As experience demonstrates, such a clause provides too much scope for producers to delay or avoid meeting domestic supply obligations.

In 2006, the WA Government assessed that 2 trillion cubic feet of gas will be needed from existing and proposed gas projects to meet WA's gas

requirements to 2020. Of this, it was assessed that the Gorgon Project would need to supply 1.85 Tcf.[64]

It was therefore assumed by the State that *almost all of the entire 2000 petajoule Gorgon reservation volume would be delivered by 2020*.

The Gorgon partners however indicate that the 300 TJ/d supply volume will not be available until 2021 – some 12 years after the project's final investment decision. This demonstrates the need for any reservation commitment to be *unconditional*.

Experience has shown a willingness by LNG producers to claim supply arrangements are not "commercially viable", "economic" or "feasible".

LNG producers have for a number of years sought to justify warehousing gas reserves under Retention Leases on the basis that it was not economic to develop these reserves for the domestic market.

Case Study: Pluto Project

Under the Pluto domestic gas arrangement, Woodside is only required to market and sell as domestic gas the equivalent of 15 per cent of the Pluto Project's LNG production provided it is "commercially viable".

Woodside is prioritising construction of the LNG project. There is no certainty what if any volume of domestic gas supply would be delivered.

***Action**: The 15% reservation commitment on Pluto should be made unconditional and not subject to a commerciality escape clause. Domestic gas supply should be given priority over LNG export in the event of any reserves shortfall.*

More recently, LNG producers have claimed reserves as necessary for sequential development as part of potential LNG projects.

The obligation should be unconditional

For a reservation policy to be effective, it should therefore provide *certainty* both to gas producers and to gas consumers. An *unconditional* obligation would:

- provide certainty to downstream users on future gas availability that would enable investment in mining, minerals processing and power generation;
- provide certainty to gas project developers that the policy would be stringently and consistently applied, which enables them to factor-in the commitment in evaluating and developing projects; and
- align with the policies being adopted in other countries to ensure security of supply.

[64] WA Department of Industry and Resources, *WA Government Policy on Securing Domestic Gas Supplies: Consultation Paper*, February 2006, p.7.

An unconditional reservation policy would reduce the opportunity for project proponents seeking preferential treatment or special exemptions. The Gorgon participants have for example been highly effective in using perceived "threats" to the $50 billion project as a means of securing desired regulatory outcomes – even where such outcomes adversely impact local gas consumers.

As the ESAA Report considers, uncertainty over the application of the gas reservation policy increases investment risks for LNG producers subject to domestic gas obligations, as well as for domestic gas producers trying to anticipate alternative sources of supply.[65]

Commerciality issues can, in any event, be adequately managed by giving producers sufficient flexibility in how they would meet reservation obligations as outlined below.

Obligation to "supply" as opposed to "market"

The obligation should be to supply domestic gas, as opposed to "market", "offer for sale" or "make available" gas to potential customers. This would provide a strong commercial incentive for producers to supply in order to monetise resources as the alternative would be to simply leave resources in the ground.

This would minimise the prospect of LNG producers offering gas at terms that are unrealistic or unfeasible - for example by only offering 3 year contracts to major project developers.

Priority to domgas supply over LNG exports

The commitment should ensure priority of domestic gas supply over LNG export in the event of any reserves shortfall. LNG producers should not be able to avoid meeting domestic gas commitments on the grounds that reserves were needed to meet LNG export contractual obligations or to optimise the LNG project.

This recognises the vital importance of domestic gas supply to the WA economy, in which local industry and households have no reasonable alternatives to domestic supply. By comparison, LNG customers have alternative sources of supply across a number of international suppliers.

Made an express condition in permits, leases and licences

A reservation commitment should be made an express condition in the granting and renewal of all gas exploration permits, retention leases and production licences.

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[65] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.47.

This reinforces a clear expectation with prospective gas developers that the domestic gas reservation policy will be applied.

Fields should be set aside for exclusive domgas development

The drive towards increasingly ambitious LNG export developments is placing significant pressure on fields otherwise suitable for domestic gas development. This was demonstrated by Apache's announcement that it will now jointly develop the Julimar-Brunello fields with Chevron's Wheatstone LNG project.

Specific leases or tenements should be set aside and granted only on the condition of exclusive domgas development.

For example acreage tenements located in shallow water are currently being released for prospective explorers and producers. These fields are suitable for domgas supply and should be designated as such to provide certainty and clear expectation to prospective developers. They should not be diverted to support increasingly ambitious LNG projects, even if subject to a 15 per cent reservation commitment.

Certainty – Key Recommendations

- Domestic gas obligations should be made *unconditional* and not subject to a "commerciality" escape clause.
- The policy should be consistently applied to discourage individual projects from claiming "special exemptions" and treatment.
- The obligation should be to "supply" domestic gas, as opposed to "market", "make available" or "offer to sell" domestic gas.
- In the event of any resources shortfall in a project or field, domestic gas supply should be accorded priority over LNG export.
- The reservation policy should be made an express condition in the granting and renewal of all gas exploration permits, retention leases and production licences.
- Specific leases or tenements should be set aside and granted only on the condition of exclusive domgas development.

3. Flexibility

To balance an unconditional commitment, producers should be given sufficient flexibility in how they would meet domestic supply obligations. This could be by permitting producers to:

- trade obligations between different fields – for example by supplying less domgas from Field A and more domgas from Field B;

- trade obligations with other producers;

- meet their obligations by supporting domgas developments in other fields – e.g. where a medium sized field could only support LNG, the producer could seek to bring on a smaller field for the domestic market that could be credited; and

- meet obligations by supporting third party domestic gas developments - e.g. by supporting a smaller producer to develop a domestic gas field that might otherwise not be developed for the domestic market.

This flexibility would encourage producers to adopt the most efficient way of meeting their domgas obligations for a given field – whether by supplying domgas from that field or, where it is not commercially viable to do so, by meeting this commitment from production outside the field.

Flexibility would support application of the State's 15 per cent reservation policy to the prospective Browse Basin development. The Browse participants should be given flexibility in how they meet domestic supply obligations – whether by supplying domestic gas directly from Browse, or if it is not commercially viable to do so, by securing domestic gas supply from other fields.

This means that a domestic gas commitment with respect to Browse Basin gas could involve supplying new processing and power generation activity in the Kimberley, or it could involve a swap arrangement with existing or prospective Carnarvon Basin producers.

It is important that in providing producers flexibility, the objective should remain the delivery of additional domgas supply than might otherwise be the case.

Flexibility – Key Recommendations

- Producers should be given sufficient flexibility on how they would meet domestic supply obligations.
- Producers should be encouraged to adopt the most efficient means of meeting domestic supply obligations - whether by supplying domgas from the relevant field or, where it is not commercially viable to do so, by supplying domgas from other fields.
- The 15 per cent reservation policy should be applied to the Browse Project and producers given flexibility in how they meet domestic supply obligations.

4. Growth

The original North West Shelf reservation has failed to keep pace with Western Australia's expanding energy needs or the Project's LNG exports.

LNG exports from the Project have increased by over 150 per cent from the originally envisaged 6.5 million tonnes per annum, with further expansions foreshadowed.

In contrast, supply to the domestic market by the NWSGJV has increased only marginally.

In October 2009, Chevron announced a significant gas discovery in the Carnarvon Basis which could help support Chevron's ambition for a further two LNG processing trains in the Gorgon Project.

Given the Gorgon Project State Agreement provides for a domestic reservation commitment of 2000 petajoule (2 Tcf) and 300 TJ/d, it is unclear whether this commitment expands with any increase in project reserves or LNG exports.

Case Study: Julimar – Brunello Fields

Apache Energy and KUFPEC have agreed to undertake joint development of the Brunello and Julimar fields with Chevron's Wheatstone LNG project.

The Julimar-Brunello fields are expected to produce 200 million cubic feet of gas per day and are otherwise well suited for development as a domestic gas project.

The decision means a potential source of domestic gas will now be diverted to supplying LNG exports.

***Action**: An unconditional 15% reservation commitment should be applied to production from the Julimar-Brunello Fields to ensure domestic gas supply.*

As the North West Shelf and Gorgon experience demonstrate, it is vital that any reservation commitment grow with any future expansion in gas reserves and production.

This can be achieved by attaching the commitment as a *percentage* of reserves and production.

If, on the other hand, the commitment is set as a fixed volume as is the case with the North West Shelf and Gorgon Projects, domestic supply would be limited in absolute terms notwithstanding any future expansion in the project or LNG exports.

Growth: Key Recommendation

- The domestic supply commitment should expand with any future growth in project gas reserves, production or LNG exports.

5. Timeliness

Any reservation commitment should be tied to both *reserves* and *production*. Where a reservation commitment is tied only to the reserves of a project or field, there is no certainty that domestic gas would ever be supplied over the life of the project. This could result in long delays with domestic supply being relegated to the tail-end of LNG projects or field life.

Where domestic supply is tied to declining fields and increasingly expensive production, resources may no longer be economic to supply, or supply might only be made available at prices higher than would otherwise have been the case.

This could result in producers monetising the most economic gas as LNG, while leaving the most expensive (and potentially uneconomic) resources for the domestic market.

The Gorgon Project highlights the need for reservation obligations to be stringently tied to LNG production to avoid undue delays in domestic supply.

Domestic gas comprises a very small component of the Gorgon Project which remains overwhelmingly LNG-focused.

Case Study: Gorgon Project

The Gorgon State Agreement commits the Gorgon participants to establish a domestic gas plant by end 2012 to progressively deliver at least 300 TJ/d of gas to the WA market.

The Gorgon partners however indicate that this supply volume will not be available until 2021 – some 12 years after the project's final investment decision.

***Action**: The Gorgon producers should be required to supply 300 TJ/d of domgas prior to or no later than LNG start-up.*

Domestic gas is expected to account for just 5 per cent of Gorgon gas production and 5 per cent of expected revenues.

It is expected to account for less than 5 per cent of project investment and operating costs given the relatively low cost of processing gas to pipeline specification compared to the high capital and operating costs of producing LNG.

Given domestic gas supply will account for just 5 per cent of expected Gorgon production and less than 5 per cent of development costs, there is also no justification for the delay in the supply of Gorgon gas.

Similarly, the Pluto domestic gas commitment only requires domestic supply five years after the date LNG is first exported from Pluto. Even then, Woodside could seek to avoid this obligation by claiming it is not "commercially viable" to supply domestic gas or that resources need to be allocated to underpin LNG contracts.

Timeliness – Key Recommendations

- The obligation should be applied as a *percentage* of reserves and production, as opposed to a fixed volume.
- Producers should be required to supply domestic gas prior to or at least no later than start-up of LNG production.

4.5 The need for Commonwealth domestic supply obligations

The 2006 WA Reservation Policy highlighted the importance of Commonwealth policies to promote gas security and support State policies:

> "Most of the gas resources off the coast of Western Australia fall under Commonwealth jurisdiction. The Australian Government therefore has a strong and legitimate interest in the development of these resources."
>
> The State Government is of the view that the issues facing Western Australia regarding the long term security of domestic gas supply are ones that will soon also be facing the eastern states. Given that the majority of the nation's gas resources are located offshore from Western Australia, decisions made concerning the development of these resources have major implications for Australia's energy mix, the international competitiveness of gas consuming energy intensive domestic industries, and the achievement of national greenhouse gas abatement targets."[66]

Domestic supply obligations should be implemented by the Commonwealth in offshore WA areas to support and complement the State's reservation policy.

[66] WA Department of Premier and Cabinet, *WA Government Policy on Securing Domestic Gas Supplies*, October 2006, p.7.

The need for Commonwealth obligations is underlined by Shell's announcement that it will develop its Prelude and Concerto gas fields in the Browse Basin off the WA coast using Floating LNG technology.[67] A floating LNG plant allows producers to develop fields in Commonwealth waters, thereby limiting the ability of State governments to apply a reservation commitment.

Domestic supply obligations are especially necessary given tht gas fields ideally suited for domestic use are now being warehoused for possible LNG development through retention leases.

Commonwealth obligations would also avoid potential conflict of laws while sending a consistent message to prospective gas developers. This would minimise the opportunity for LNG producers to play-off one level of government against another – as they sought to do with introduction of the State's 15 per cent reservation policy in 2006. It would also ensure that any potential new offshore gas discoveries are subject to a domestic reservation policy.

In the absence of Commonwealth domestic supply obligations, there is a risk of unintended consequences from potential conflict of laws. The Federal Government has for example been contemplating treaty commitments, as part of Free Trade Agreement negotiations, which would underpin Japan and China's energy security requirements. These include provisions that could commit the Commonwealth and States not to apply export restrictions or reservations on energy resources.

Commonwealth domestic supply obligations

- Domestic supply obligations should be implemented by the Commonwealth in offshore WA areas to support and complement the State's reservation policy.
- Commonwealth obligations would ensure producers do not avoid domestic supply commitments when developing projects in offshore Commonwealth waters.
- It would also avoid potential conflicts of laws, and send a consistent message to LNG producers on the importance of energy security.

[67] Shell, 'Prelude LNG Development to Deploy Shell's Floating LNG Technology', Media release, 8 October 2009.

ACTION: NORTH WEST SHELF STATE AGREEMENT

Key Points

- An original intent of the North West Shelf State Agreement was to place priority on the availability of gas to the WA domestic market. This intent should be maintained in the ongoing administration of the Agreement.
- Since the State Agreement was concluded, LNG exports have increased significantly with further expansions flagged. In contrast, supply to the domestic market has increased only marginally.
- In 1998, the NWSJV advised, as part of its justification for seeking ACCC authorisation for joint selling, that it intended to increase domestic gas supply capacity to 1,100 TJ/d by building an additional domestic gas processing train.
- This commitment was never met despite the NWSJV participants continuing to combine together to set prices and contract terms for WA customers.
- The State Agreement provides a mechanism for the State to secure additional domestic supply commitments with respect to:
    - the renewal or rolling-over of existing long term LNG export contracts;
    - new LNG contracts entered into by the NWSJV; and
    - new LNG developments such as the flagged LNG Train 6.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Historical background

The North West Shelf Gas Project is governed by the North West Shelf State Agreement. The Agreement establishes the framework of rights and obligations between the project participants and the State Government. The State Agreement was concluded and ratified by State Parliament in 1979 and scheduled in the North West Shelf Gas Development (Woodside) Act 1979.

An intent of the North West Shelf State Agreement was to ensure sufficient priority was placed on meeting the requirements of the WA domestic gas market. The Agreement was originally due to expire in 2010, but was extended in 1984 to 2025.

When the State Agreement was concluded, the North West Shelf Gas project was envisaged to have three phases:

- Phase 1: The domestic gas development, which involved construction of the DomGas processing plant and the Dampier to Bunbury Natural Gas Pipeline (DBNGP). This was underpinned by the 20 year take-or-pay contract entered into with the State Energy Commission of WA (SECWA), which was in turn backed up by a major commitment from Alcoa.

- Phase 2: The initial LNG export phase, involving the construction of LNG Trains 1 and 2.

- Phase 3: The expansion of capacity to process and export LNG, resulting in the construction of LNG Train 3.

2. LNG exports have expanded significantly

Since the original State Agreement and the 1994 amendments, the North West Shelf Joint Venture has committed to a significant expansion in LNG exports.

LNG Train 4 was completed in 2005 and LNG Train 5 commissioned in 2008. Completion of LNG Train 5 will bring LNG exports to a level of 16.3 million tones per year.

This represents a 250 per cent increase compared to the originally envisaged 6.5 million tonnes per annum of LNG exports. The operator of the North West Shelf Joint Venture, Woodside, has flagged further expansions through a potential sixth LNG train.

In contrast, supply to the domestic market by the Joint Venture has increased only marginally.

In 1998, the Shelf Joint Venture advised, as part of its justification for seeking ACCC authorisation for joint selling, that it intended to increase the capacity of the domestic gas processing plant to 1,100 TJ/d through the construction of an additional domestic gas processing train. This commitment was never met despite the Joint Venture participants continuing to combine together to set prices and contract terms for local customers.

3. The State Agreement provides a mechanism for the State to ensure additional domestic supply

Given the State depends on the North West Shelf Joint Venture for almost 70 per cent of its domestic gas, increased commitment of gas reserves to LNG exports should be matched by additional commitments to the domestic market.

The Joint Venture has in recent times also been committing to the extension of supply contracts from LNG Trains 1 and 2. It is understood that the original 20 year terms for these contracts began to expire from 2009 with long-term extensions being negotiated.

It is important that the original intent of the Agreement – that of placing priority on the availability of gas to the WA domestic market – be maintained in the ongoing administration of the Agreement.

The State Agreement provides a mechanism for the State to secure additional domestic supply commitments with respect to:

- the renewal or rolling-over of existing long term LNG export contracts as they expire;

- new LNG contracts entered into by the North West Shelf Joint Venture; and

- new LNG developments such as the flagged LNG Train 6.

Clause 46(1a) of the Agreement requires the Joint Venture participants and the State to:

> "*…consult and reach agreement on the requirements in the State and the manner on which they will be met…*" before entering into arrangements for the sale, use, supply or export of gas during 2010 to 2025.

The North West Shelf Gas website previously stated that:

> "*… production licences, retention leases and permits held by the NWSV for [the NWSV fields] expire between 2001 and 2018 …*
>
> *The NWSV expects permits that expire to be renewed in the ordinary course of business*".

The importance of permit renewals to the North West Shelf Joint Venture provides the State Government with a mechanism to ensure additional supply to the domestic market.

The need for LNG contract extensions, new developments such as LNG Train 6 and permit renewals provides the State Government the opportunity to pursue further domestic gas supply commitments.

ACTION: COMMON-USE INFRASTRUCTURE

Key Points

- Third party investment in and common-use gas gathering and processing infrastructure should be encouraged and facilitated.
- Shared-use infrastructure could cut project costs by as much as half. This can facilitate development, reduce costs and promote domestic gas supply.
- Concessions under the Commonwealth Petroleum Resource Rent Tax (PRRT) may however act as a disincentive for investment in shared use infrastructure.
- Under these concessions, companies may obtain a larger financial benefit from building and operating stand-alone infrastructure. The issue merits further examination by the State.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Overview

Currently, gas gathering and processing facilities are scaled and built to support individual projects. This has the potential to lead to sub-optimal development with little integration. The likely end result is to increase project costs and make development of some gas fields uneconomic.

A significant component of the total costs of a new offshore development is the cost of gas gathering pipelines – which rise the further gas fields are located from shore - and the associated gas processing facilities.

Multiple or common-use gas supply and processing infrastructure has the potential to facilitate new domestic gas developments by lowering investment barriers and costs. Third party participation in infrastructure investment could also promote development. For example, infrastructure operators may have lower hurdle rates of return than upstream producers which could facilitate investment.

2. Shared-use infrastructure could cut project costs by almost half

A study by international energy consulting firm Wood MacKenzie examined opportunities for common use gas gathering and processing facilities.

The Wood MacKenzie study concluded that there were significant benefits including lower barriers to entry, a more economically efficient use of capital leading to lower gas supply chain costs and increased transparency in the costs of supply.

The study examined two development scenarios relating to the development of gas fields in the Carnarvon Basin with a typical distance of 150 km to shore:

- Scenario One: three independent 100 terrajoules / day (TJ/d) developments, each with separate pipelines and processing facilities;

- Scenario Two: one integrated development utilising one common gathering trunkline and a processing plant of 300 TJ/d capacity

The study found potential capital costs could be cut by almost half by consolidating developments into an integrated development with common-use facilities. This could deliver potential savings as high as $1 billion.

3. Government can promote common-use infrastructure

By lowering investment barriers and costs, third party participation and common-use infrastructure can help promote new domestic gas field developments.

Government can facilitate discussions between relevant stakeholders, and by improving transparency and disclosure in the retention lease system. An effective gas reservation policy would also ensure that any consolidation between domestic gas and LNG projects still delivers domestic gas supply.

There is also a need for government to review existing taxation arrangements to ensure that such arrangements promote, or at least not discourage, shared use infrastructure.

The Alliance understands that concessions under the Commonwealth Petroleum Resource Rent Tax (PRRT) system may act as a disincentive for investment in shared use infrastructure.

PRRT taxes the profits of petroleum production in Commonwealth areas. PRRT is assessed at a rate of 40 per cent of taxable profits of a petroleum project, after allowing for deductions including exploration expenditure, and project development and operating expenses.

Companies can carry forward un-deducted expenses to offset against future PRRT assessable receipts. Additionally, a concession allows for un-deducted exploration expenditure to be transferred to another company under common ownership with a PRRT paying project (or between projects of the same taxpayer) where certain conditions are satisfied.

Under these concessions, companies may obtain a larger financial benefit from building and operating stand-alone infrastructure, as opposed to participating in common-use infrastructure. The issue merits further examination by the State.

Table: Benefits of common-use infrastructure

	Scenerio One **Integrated System Capex ($m) 300 TJ/d**	**Scenario Two** **Stand Alone Capex ($m) 100 TJ/d x 3 fields**	**Timing**
Pipeline to Shore Costs Field A – Initial 100 TJ/d Field B – Subsequent 100 TJ/d Field C – Subsequent 100 TJ/d	 $555 (150 km x 20”) $111 (50 km x 12”) $111 (50 km x 12”)	 $445 (150 km x 16”) $445 (150 km x 16”) $445 (150 km x 16”)	 Year 1 Year 3 Year 5
Gas Processing Costs 300 TJ/d Plant 100 TJ/d Plant	$400	$250 x 3	Year 1 Years 1, 3, 5
Total Capex	**$1, 177**	**$2,085**	

ACTION: TAX, ROYALTY AND INVESTMENT INCENTIVES

Key Points

- To overcome WA's domestic gas shortages, Commonwealth and State tax, royalty and investment incentives should be provided to promote domestic gas exploration and development.
- Key incentives include
  - State royalty concessions such as royalty holidays, royalty rate reductions or rebasing the commodity value for royalty assessment;
  - increased deductibility for pre-wellhead expenses from Commonwealth taxation;
  - Flow Through Share scheme;
  - Commonwealth and State grants to promote domestic gas exploration and development.
- The Alliance does not support the Commonwealth assuming control over State royalties. Such an outcome would limit the State's ability to provide targeted incentives for domestic gas development.
- Targeted benefits: **security, reliability, competitiveness and cleaner energy**

1. Fiscal incentives needed to promote domestic gas

Given the strategic importance of natural gas, it is vital that State and Commonwealth taxation arrangements promote domestic gas supply.

Initiatives could in particular encourage the exploration and development of gas reserves located close to existing infrastructure either onshore or in coastal waters. Reasons why these reserves may not have already been developed may include:

- the size of the known reserves and potential size of unknown reserves;
- the inability of smaller companies to raise capital to explore and develop marginal fields;
- the difficulties associated with extracting the gas (i.e. tight gas reserves); and

- the economics of exploring and developing the smaller fields under the current royalty regime.

By targeting these factors, tax and royalty incentives can promote development, entice new entrants into the upstream gas market, and lead to a diversification of supply among different competitors and reserves.

Such incentives could promote smaller domestic gas developments, or LNG projects with a domestic gas component. This will help balance the oil and gas industry's current focus on LNG exports, and the incentive under existing tax and royalty arrangements to develop Australia's natural gas resources as large scale LNG projects.

Incentives could also encourage new frontier technical challenges such as onshore "tight gas" fields. Tight gas developments involve additional technology and significant pre-wellhead expenses compared to conventional fields. Increased deductibility of pre-wellhead expenses could for example promote field development.

The Alliance commends the State Government's royalty initiatives for tight gas projects. Reduced royalty rates for tight gas projects will help unlock a new source of domestic gas for Western Australia.

In the recent economic downturn, inshore and onshore exploration activities – which are the most likely sources of competitive domestic gas supply - are impacted to a far greater extent than deepwater offshore exploration. This is because the companies involved are reliant on regular injections of risk capital from the local market.

The consequences for future domestic gas supply of inadequate support for domestic exploration are therefore potentially extensive and further underline the need for tax, royalty and investment incentives.

2. Appropriate incentives

Appropriate tax and royalty incentives include:

- State royalty incentives – such as royalty holidays, and rebasing the commodity value of royalty assessment;

- Commonwealth tax incentives – such as reducing the statutory cap on the effective life of upstream gas assets, and targeted incentives for "tight gas" development; and

- Flow Through Share Scheme for domestic gas exploration and development.

In addition, investment incentives such as Commonwealth and State grants can encourage and support companies to explore for and develop gas fields for domestic supply.

A quantitative assessment is provided in the Appendix. This demonstrates that tax and royalty incentives can have a significant impact on the net present value of after-tax cash flows of domestic gas field projects that promotes the commerciality of such projects.

In some instances, it could facilitate the development of projects that might otherwise not be commercial under the existing tax and royalty regime. Where fiscal incentives enable the development of gas fields, the impact on government budgetary arrangements could be neutral or even positive. This is where incentives deliver tax and royalty streams from gas fields that might otherwise not be developed.

2.1 State royalty concessions

State royalty concessions could provide important encouragement for domestic gas developments. These include royalty holidays, reducing the royalty rate or rebasing the commodity value for royalty assessment. Such concessions can promote the development of domestic gas fields by improving the upfront economics of a project, particularly for tight gas projects.

Any impact on State revenue could be limited, particularly where the concessions allow the development of a field that might otherwise be uneconomic to develop in its initial stages, which would subsequently generate significant royalties for the State over the long term life of the field.

The Alliance welcomes the State Government's recent royalty incentives for tight gas. It is recommended that royalty incentives be extended to all domgas development inshore and onshore.

The royalty rate for domestic gas developments could be reduced to 5 per cent to promote development. Alternatively, royalty holidays for the first 6 years of a domestic gas project should be provided.

Where gas fields involve LNG projects with a potential domestic gas leg, royalty concessions can be provided for the domestic gas component to promote domestic supply.

2.2 Increased Commonwealth deductibility for pre-wellhead expenses

Increased deductibility for pre-wellhead expenses could be provided for domestic gas developments under federal taxation arrangements.

A 175 per cent uplift on expenditure incurred in exploring and developing domestic gas reserves should be provided, particularly for tight gas where development involves significant pre-wellhead expenses.

The uplifted tax deduction would be available to companies once the expenditure is incurred, and the companies would not have to develop gas

before they received the tax incentive. The impact of this incentive would be to reduce companies' taxable income and may provide an incentive to companies with an existing tax liability.

2.3 Commonwealth Flow Through Share Scheme

A Flow Through Share scheme would provide significant assistance for smaller petroleum companies engaging in domestic gas exploration and development, and who are reliant on the market for risk capital.

Such a scheme would promote frontier and start-up developments where companies might not otherwise generate a taxable income in the initial project years that would make tax deductions an appropriate incentive.

By implementing an FTS scheme, these companies would be able to pass these losses through to investors who could use the tax deductions, which could in turn create interest and equity funding by investors.

It is disappointing that while the Federal Government had committed to introducing an FTS scheme as a 2007 election policy, it has yet to do so. It has instead delayed consideration of the scheme to the ongoing Henry Tax Review.

2.4 Investment incentives

Commonwealth and State grants can encourage and support companies to explore for and develop gas fields for domestic supply. Such grants are administratively straight forward to implement, and would support long term energy security by promoting competition and diversity of domestic gas supply.

Grants could also be used to promote new "frontier" developments and technology, such as greenfield tight gas developments. Grants have in the past been provided to support new technology development in the petroleum industry, such as coal seam methane and carbon sequestration.

3. Commonwealth take-over of State royalty arrangements not supported

The Alliance does not support the Commonwealth assuming control of State royalty arrangements, such as through a Commonwealth Resource Rent Tax. That proposal has been flagged in the context of the ongoing Henry Taxation Review.

Such an outcome would impact the State's ability to address domestic gas security, by limiting its ability to provide targeted incentives for domestic gas development.

As the State has demonstrated in the case of tight gas, such incentives can provide significant benefits in encouraging and promoting domestic gas development.

GOVERNMENT RESPONSES TO DATE

Key Points

- The State Government should be commended for its leadership on domestic gas security.
- Initiatives taken by the State in 2009 include broadening pipeline gas specification, royalty incentives for tight gas projects and the Exploration Incentive Program.
- The Barnett Government has endorsed the previous Carpenter Government's 15 per cent domestic gas reservation policy.
- Fundamental changes are however needed to remove barriers created by government to greater competition and upstream supply.
- These barriers include government intervention to endorse joint selling and to endorse producers warehousing domestic gas fields for possible LNG development.
- There appears to be a presumption that simply promoting LNG projects will alone resolve the State's worsening gas shortage. This presumption has resulted in some domestic gas policy responses actually going backwards in recent years.
- It is vital that the State assume a far greater role in building awareness of WA gas market conditions, and in pressing for national policy outcomes that meet the State's critical energy needs.
- The consequences of policy failure – major job losses, lost investment, reduced economic growth, and rising energy prices – will be borne by the State.

1. The State's leadership on gas security should be commended

The Alliance commends the State Government for its leadership on some aspects of domestic gas security. Initiatives taken by the State in 2009 include broadening pipeline gas specification, royalty incentives for tight gas projects and the Exploration Incentive Program.

These initiatives promote domestic gas supply and build on the measures taken by the previous State Government such as the 15 per cent domestic reservation policy.

However as the recent NWSJV – Alinta price rise demonstrates, fundamental changes are needed to address upstream market structure, the absence of competition and barriers to resource access. Any response must address the

barriers that have been created by government to competition and domestic supply.

2. National policy framework is focused on maximising LNG exports

There appears to be a limited understanding at the national level of WA gas market conditions.

The 2009 National Energy Security Assessment on Gas prepared by the Department of Resources, Energy and Tourism for the Energy White Paper for example contained numerous conclusions that did not reflect actual WA gas market reality. These conclusions included:

> "Small domestic demand in WA limit development of reserves for WA domestic supply"
>
> "High production capital costs … in WA limit development of reserves for WA domestic supply"
>
> "Market infrastructure and institutions still underdeveloped"
>
> "Immature market arrangements limit investment signals and competitive outcomes in some markets and submarket regions"
>
> "Domestic prices still low internationally despite being high historically"

Federal Government policy responses appear to reflect an upstream producers' perspective of the WA gas market, despite considerable effort by downstream gas consumers.

The draft Energy Green Paper for example considers that a "small" WA domestic market is an impediment to domestic supply. This is despite the WA gas market representing 40 per cent of Australia's natural gas consumption, and being bigger than New South Wales, Victoria and the ACT combined.

The draft Green Paper also repeats LNG industry claims that long term contracts discourage domestic supply, and that domestic reservation obligations discourage exploration and investment, and increase investor risk. These claims have long been disproved in the WA gas market.

The national policy framework also appears focused on LNG, with a presumption that maximising LNG exports will alone resolve the State's worsening gas shortage.

It is incorrect to assume that future LNG projects such as Gorgon and Wheatstone will address the State's worsening gas shortage. Despite being State's biggest gas development in generations, the Gorgon Project's expected contribution to domestic gas security will be modest.

The Gorgon Project will only provide:

- a very modest volume of domestic gas supply;
- subject to long delays in ramp-up; and
- marketed under conditions that provide for no competition between sellers.

The assumption that maximising LNG exports will resolve the State's domestic gas crisis has however resulted in a number of important domestic gas policy responses actually going backwards – to the detriment of domestic gas supply.

For example, the Commonwealth-States Joint Working Group on Natural Gas Supply was established in 2006 in response to Western Australia's serious domestic gas shortage.

In 2007, the Joint Working Group issued its Final Report recommending stringent enforcement of the retention lease commerciality test. This was to ensure that major producers do not warehouse gas resources that could supply the domestic market.

The Joint Authority now seems determined to give LNG precedence over domestic gas supply in approving the warehousing of gas resources under retention leases. This is disappointing given the approach is the outcome of a process initiated over 3 years ago *to promote domestic gas supply*.

It is vital that the State assume a far greater role in building awareness of WA gas market conditions, and in pressing for national policy outcomes that meet the State's critical gas needs.

The consequences of policy failure – significant job losses, lost investment, reduced economic growth, and rising gas and electricity prices – will be borne by the State.

Table: Policy response scoreboard

RESPONSE NEEDED	RESPONSE TO DATE
Stringently enforce retention leases Improve transparency and third party participation	✓ 2007 Joint Working Group recommends stringent enforcement of commerciality test to promote domestic supply; and greater transparency and third party participation X Federal Government takes two years to publish an Options Paper for further discussion X Joint Authority now giving LNG projects now **precedence** over domestic supply in managing retention leases X No action taken to improve transparency and third party participation
Promote more domestic gas exploration by open access	X Delays in releasing exploration areas to prospective domestic gas producers
Remove joint selling and enforce competition	X ACCC has been "investigating" the North West Shelf producers for over three years with no outcome X ACCC takes just 5 weeks to authorise Shell, Chevron and ExxonMobil jointly selling Gorgon gas X ACCC intervention in the market to endorse joint remains the biggest barrier to competition and market development in WA
Domestic supply obligations	X LNG producers delaying or avoiding domestic supply obligations X Chevron indicates it would not meet 300 TJ/d Gorgon domestic supply target until 2021 to avoid an "oversupply" in the domestic market X Domestic supply not being pursued in ongoing administration of the North West Shelf State Agreement

Promote domestic gas use to reduce greenhouse emissions	X Current policy framework ignores and in fact discourages natural gas use X CPRS penalises domestic gas supply by providing free permits to export LNG
Provide tax and royalty incentives	✓ State Government royalty incentives for tight gas projects X Flow Through Shares Scheme yet to be implemented by the Federal Government
National energy security strategy	✓ Federal Government proposes Energy Security White Paper in Jan 2008 to address gas security X Energy White Paper now focused on maximising Australia's energy exports X Energy exporters made up 10 of 12 industry members of original White Paper committee X Draft Energy Green Paper highly critical of State's domestic gas reservation policy
Other initiatives to promote domestic gas exploration and development	✓ State Government broadens gas specification ✓ State Government Exploration Incentive Program ✓ State Government launches Strategic Energy Initiative

CONSEQUENCES OF ACTION VS INACTION

Key Points

- Domestic gas security is the most critical challenge facing Western Australia today.
- The consequences of inaction are profound:
  - loss of clean, secure and affordable energy supply for the State;
  - sharply rising energy costs for industry, small business and households;
  - loss of industry competitiveness and downstream, value-adding industries;
  - lost investment, development opportunities and jobs;
  - significantly higher greenhouse emissions and damage to the environment.
- Policy responses should be guided by assessments of facts and evidence, as opposed to rhetoric.
- Concerns expressed by LNG producers in the past have proven to be unfounded.

1. Consequences of inaction

> "This is a huge new revenue exposure for North West Shelf and Woodside and my expectation is that when other new or existing contracts come up for review, there will now be a new price foundation to work from."
>
> - Woodside CEO Don Voelte, commenting on reported 300 per cent increase in the price of gas supplied to Alinta [68]

Domestic gas security is the most critical challenge facing Western Australia today. Secure and affordable gas supply is vital to the State's ability to grow, attract investment and create employment.

It supports ongoing investment and employment in the State's key-value adding industries such as alumina, chemicals, fertiliser, manufacturing and other resource-processing industries. It is vital for new industry development such as the Oakajee Port and magnetite industry.

[68] *WA Business News*, 'Woodside hails new domgas price mark', 24 February 2010.

Domestic gas supply underpins living standards through heating and cooking, and in the price of gas and electricity paid by business and households.

In the Western Australian context, the consequences of inaction include:

- loss of clean, secure and affordable energy supply for the State;
- sharply rising energy costs for industry, small business and households;
- loss of WA industry competitiveness and downstream, value-adding processing;
- lost investment, development opportunities and jobs;
- significantly higher greenhouse emissions and damage to the environment.

2. Possible barriers to action

Meeting the gas security challenge will require a strong leadership position on the part of government. This involves policy choices between the commercial interests of LNG producers, and the economic, social and environmental needs of the WA community.

Government should be guided by assessments of facts and evidence as opposed to rhetoric. Government responses on gas security have, in the past, attracted strong opposition from LNG producers. Concerns raised included that measures would threaten investment, drive away exploration, increase the State's sovereign risk or constitute unwarranted market intervention by government.

Experience has shown these concerns to be unfounded. Taking strong action to meet the State's gas security challenge:

- Will not discourage investment and development in Western Australia;
- Will not discourage gas exploration;
- Will not increase the State's sovereign risk or reduce its attractiveness as a place to invest; and
- Will not constitute unwarranted market intervention by government.

2.1 Western Australia's gas resources remain highly sought after by international oil companies

According to a report by Curtin University, 92 per cent of world natural gas reserves are controlled by national governments or national oil companies. Only 8 per cent of world reserves are available to international oil companies on an open access basis.[69]

Australia with under 2 per cent of world reserves therefore represents *a quarter of the total global opportunity* available to international oil companies on an open access basis.

According to the WA Department of Mines and Petroleum:

> "Australia is one of the few nations in the world to have an expanding hydrocarbon resource, predominantly in natural gas, without a national oil and gas company controlling its exploitation."[70]

Premier Barnett has also stated:

> "I think the industry is probably going to accept that … [there] is going to be a domestic reservation … I can remember in a previous life in the 1990s when some representative in [the gas] industry came along and complained about issues like that, and said how much easier it was to do projects elsewhere in the world. So I offered them the choice where the State would take 95 per cent of production or 80 per cent whatever the norm is and that was the end of that conversation."
>
> "[T]he industry gets a good deal in Australia, it's a fantastic deal compared to production sharing arrangement in developing countries ... I don't think the [15 per cent reservation] is a great burden on industry."[71]

[69] Leonard, Manuhutu and West, *Domestic Energy Reservation Policies: An International Comparison*, Curtin University, June 2008.
[70] Department of Mines and Petroleum, *Western Australia Oil and Gas Review 2008*, p.12.
[71] Premier Colin Barnett, 'Transcript – Speech – Petroleum Club of Western Australia', 8 September 2009.

Top 20 World Natural Gas Reserves

Source: BP Statistical Review 2009, Oil & Gas Journal, PFC Energy "Full IOC Access" countries; Santos, Melbourne Mining Club presentation, February 2010. Excludes unconventional gas reserves.

Top 20 Natural Gas Reserves with Full International Oil Company Access

Source: BP Statistical Review 2009, Oil & Gas Journal, PFC Energy "Full IOC Access" countries; Santos, Melbourne Mining Club presentation, February 2010. Excludes unconventional gas reserves.

2.2 Governments around the world are acting to secure vital energy resources

As the State Government noted in 2006, governments around the world are acting to secure vital energy resources:

> "Domestic market obligations, where a proportion of a project's production entitlements are reserved for local energy markets (and/or state owned energy utilities), are a common feature in many other oil and gas exporting nations."[72]

A 15 per cent State reservation policy is in fact modest by world standards. Egypt for example has a national reservation policy that reserves one-third of natural gas for exports, one-third for domestic use and one-third "to save for our children" – a 68 per cent reservation policy.

That policy has not prevented Egypt from accounting for Apache Energy's largest acreage position and 22 per cent of production revenue. Apache continues to have an active drilling program, completing 215 of 238 wells and conducting 701 work overs and recompletions.[73]

Malaysia has a national depletion policy which applies domestic production limits for oil and gas.[74]

A 1974 Act also placed custody of Malaysia's petroleum resources with the national petroleum corporation Petronas.

These policies do not appear to have prevented Shell from expanding petroleum exploration and production in Malaysia, including natural gas in offshore Sabah and Sarawak, and by operating through production sharing agreements.

Case Study: Qatar

Qatar is currently the world's largest LNG exporter. In 2006, Qatar imposed a moratorium on further expansion of LNG exports until 2013 in response to uncertainty over gas reserves.

Qatar has around *eight times* Australia's natural gas reserves, despite having one-twentieth Australia's population.

Australia continues to hold ambitions of overtaking Qatar as the world's largest LNG exporter.

Qatar has placed a moratorium on further expansion of LNG exports until 2013 in response to uncertainty over gas reserves.[75] Qatar's actions are significant given Australia's ambitions to overtake Qatar as the world's largest

[72] WA Department of Premier and Cabinet, *WA Government Policy on Securing Domestic Gas Supplies*, October 2006.
[73] Apache Energy website, http://www.apachecorp.com/Operations/Egypt/index.aspx.
[74] Leonard, Manuhutu and West, *Domestic Energy Reservation Policies: An International Comparison*, Curtin University, June 2008.
[75] Australian Financial Review, 'LNG export debate ought to be revisited', 27 October 2009.

LNG exporter – despite having 20 times Qatar's population but one-eighth the gas reserves.

Other countries have sought to secure energy supply through the use of export taxes or duties to manage energy exports. China for example has used export taxes to manage the export of coal and natural gas.

2.3 Australia has one of the lowest investor / sovereign risk ratings in the world

In terms of investor and sovereign risk, Australia ranks well other major gas producers. In fact, Australia has one of the lowest investor / sovereign risk ratings in the world.

International risk management group Coface ranks Australia fourth in the world in terms of lowest country risk, after Luxembourg, Sweden and Switzerland.[76] This is well above other major LNG producers Malaysia, Qatar, Saudi Arabia, Egypt, Indonesia and Russia.

Table: Country risk rankings [77]

Country	Lowest to highest risk
Australia	***4***
Malaysia	18
Qatar	23
Saudi Arabia	61
Egypt	67
Indonesia	71
Russia	116

Given national government control of 92 per cent of global natural gas resources, and Western Australia's political and fiscal stability, measures to ensure domestic gas supply will have marginal if any impact on the ongoing attractiveness of the State's natural gas resources to international oil companies.

In fact, domestic gas supply would enhance Western Australia's attractiveness as a place to invest by promoting energy security. It would provide certainty over long term availability and affordability of energy, and

[76] Coface Group, *Country rankings by risk rating*, available at: http://www.trading-safely.com/sitecwp/ceen.nsf/vwCRO/EDDC0F81926049ADC12569D0003A6548
[77] Coface Group, *Country rankings by risk rating*, available at: http://www.trading-safely.com/sitecwp/ceen.nsf/vwCRO/EDDC0F81926049ADC12569D0003A6548

encourage capital intensive investment in the State's mining, minerals processing and manufacturing industries.

2.4 Domestic gas security measures have not discouraged investment and development in Western Australia

Contrary to LNG industry concerns, the State's domestic reservation policy has had little if any impact on gas investment and development in Western Australia.

The policy has not prevented Woodside from developing its Pluto Project. In fact, Woodside has outlined its ambitions to expand the Project from one to five LNG processing trains, to increase production from which will increase production from 4 million tonnes per annum to 21.5 million tonnes per annum.[78] This was despite Woodside CEO Don Voelte previously claiming the reservation policy "crazy" which would make the Pluto Project uneconomic,

Nor has the policy prevented Woodside from flagging an extra six LNG processing trains and a potential 77 million tonnes of additional LNG capacity within the next 15 years in Western Australia.[79]

In a recent speech, Woodside CEO Don Voelte highlighted the significant gas developments underway as well as Australia's advantages as an investment destination over international competitors. No mention was made of the WA gas reservation policy:

> "In addition to world class gas reserves, Australia has existing LNG infrastructure, experience in LNG production, established and diversified LNG marketing experience, political and fiscal stability and an open economy that allows private enterprise to pursue commercial LNG negotiations."
>
> "With first gas for Pluto next year as well as the Gorgon, Browse and Sunrise opportunities in the years ahead, there is no doubt the timing for Australian LNG is now."[80]

Similarly, the WA gas reservation policy has not prevented Chevron from flagging growth plans in Western Australia to make it one of its "biggest businesses", with equity production from Gorgon and Wheatstone approaching that in the United States. Chevron Chairman and Chief Executive David O'Reilly has stated:

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[78] The West Australian, 'Woodside says Pluto will dwarf $50b Gorgon', 19 August 2009, available at: http://au.news.yahoo.com/thewest/a/-/newshome/5840299/woodside-says-pluto-will-dwarf-50b-gorgon/

[79] Woodside CEO address to Annual General Meeting, 1 May 2009, reported by Fairfax Media, 'Woodside's Voelte outlines big vision for LNG', 1 May 2009, available at: http://www.tradingroom.com.au/apps/view_breaking_news_article.ac?page=/data/news_research/published/2009/5/121/catf_090501_164100_1191.html

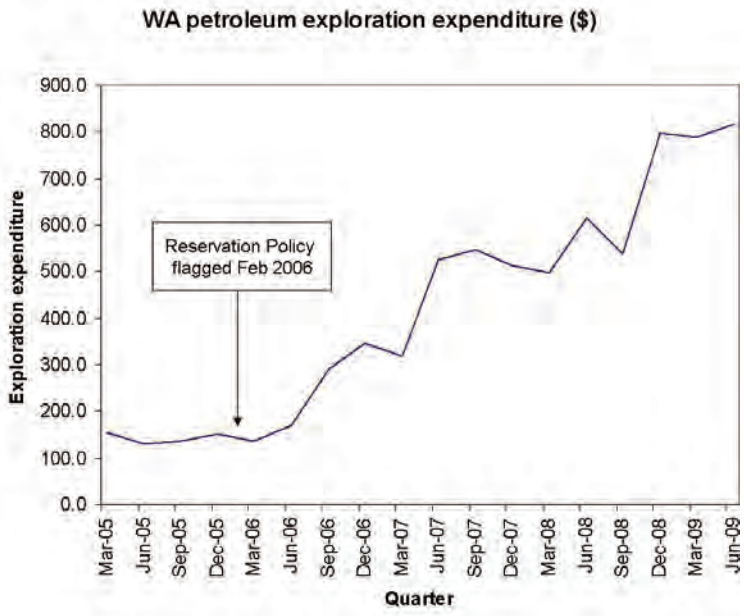
[80] Woodside CEO Don Voelte, Presentation to APPEA Conference, 2 June 2009.

"When Gorgon and Wheatstone are up and running our equity production in Australia by the end of the coming decade should be very close to what we're producing in the United States, which would make Australia one of our biggest businesses."[81]

The Dow Jones news article reports that Australia's stable political environment, substantial gas reserves and proximity to fast-growing Asian economies make it an attractive place to invest in, particularly with US gas prices low due to a flood of domestic gas supply into the US market.

2.5 Domestic gas security measures have not discouraged exploration in Western Australia

Contrary to claims that the domestic reservation policy would discourage exploration,[82] exploration activity in WA has in fact *significantly increased* since the introduction of the policy in 2006. This is confirmed by public data available from the Australian Bureau of Statistics:



Data source: ABS

The 2006 reservation policy did not prevent Alcoa and ARC Energy from entering into an agreement to expand ARC's Canning Basin exploration program.

In October 2009, the Federal Government awarded ten offshore exploration permits in Western Australia and the Northern Territory for new investment

[81] Dow Jones Newswires, 'Chevron CEO Flags Australia LNG Deals, Growth Plans', 18 October 2009.

[82] APPEA, *Submission on WA Government Policy on Securing Domestic Gas Supplies*, April 2006, available at: http://www.appea.com.au/content/pdfs_docs_xls/PolicyIndustryIssues/policysubmissions/WAGasReservationSubmission.pdf

worth $158 million. Of the ten offshore permits awarded, *eight relate to Western Australia*.[83] As the Federal Minister for Resources and Energy commented:

> "Despite the global economic downturn, the awarding of these ten new exploration permits indicates that *Australia remains a highly attractive and secure destination for offshore petroleum exploration*."[84]

Concerns that any tightening of the gas reservation policy would discourage exploration should therefore be dismissed. This has not been the experience in Western Australia.

2.6 Domestic gas security measures do not constitute unwarranted market intervention by government

In opposing measures to ensure domestic supply, LNG producers have raised concerns about unwarranted government intervention in the market. This ignores the fact that elected governments intervene in the market place where there is clear public interest to do so.

To that end, government is acting no differently to when it legislates on occupational health and safety, greenhouse emissions, renewable energy targets, or provides tax concessions to major oil and gas producers.

Despite the vital importance of energy security, the Commonwealth has to date displayed a certain complacency towards Australia's scarce natural gas resources with a focus instead on maximising LNG exports.

This has to some extent been driven by LNG industry rhetoric about "hundreds of years of gas" and ambitions of "billion dollar LNG exports". As a result, there has been a tendency to approach Australia gas resources as simply another export commodity, rather than a vital strategic resource requiring attention like water.

The strategic vision shown by successive WA State Governments on gas security is therefore commendable. The State Government has demonstrated that governments not only can, but *should,* act to ensure a balance is struck between the commercial interests of LNG producers, and the needs of the local community.

This is important given international oil and gas companies act on the basis of global commercial drivers, with decisions taken at a global and not just a national or regional level. As the current WA gas market demonstrates, it cannot be assumed that these commercial interests necessarily coincide with that of the broader community.

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[83] Minister for Resources and Energy, '$158 million investment in offshore exploration', 2 October 2009.
[84] Minister for Resources and Energy, '$158 million investment in offshore exploration', 2 October 2009.

It is noteworthy that LNG producers have not, to date, shown restraint in pressing for government intervention in the market place where it is in their commercial interest to do so.

Major oil and gas producers continue to press for and obtain authorisations from the ACCC to engage in anti-competitive joint selling to Australian consumers. This market intervention to protect major producers from efficient, open market competition has delivered producers significant commercial benefits – in the form of higher domestic gas prices.

Table: 2006 APPEA submission on WA Gas Reservation Policy [85]

We'll all be ruined, APPEA claims …

"A Domestic Gas Reservation policy would, if adopted:

- reduce the international competitiveness (for sales and for capital) of one of Australia's largest and most rapidly growing export sectors;
- potentially render some LNG projects uneconomic and unable to be developed for the domestic market without very large increases in gas prices;
- be economically inefficient and divert gas from its highest value use;
- treat LNG projects inequitably and disadvantage dedicated domestic gas producers;
- impact on the viability of WA's existing domestic gas suppliers;
- act as a form of taxation or appropriation of property without just compensation, thereby increasing sovereign risk and reducing Western Australia's attractiveness for petroleum investment;
- distort the WA gas market by creating a large gas overhang which could result in large increments in gas supply being introduced into the WA market at subsidised prices;
- maintain an uncompetitive and unsustainable price cap on domestic gas prices thereby leading to sub-optimal exploration for domestic gas and investment in new domestic gas production infrastructure;
- increase (not reduce) the long term risk of rapidly rising prices and gas shortages as the maintenance of uncompetitive prices leads to reduced investment and less diversity of supply;
- distort field development decisions potentially resulting in reduced resource recovery and reduced returns to governments and the community from the depletion of their gas resources;
- add a significant new risk to WA petroleum investment which does not arise in eastern Australia or in parts of the world which have attractive, vibrant and expanding petroleum industries;
- harm Australia's reputation for security of title and be inconsistent with the rights to petroleum embedded in Australian and West Australian petroleum legislation and the benefits and entitlements that those rights convey;
- be inconsistent with Australian Government policy that petroleum prices be determined by world markets with no consequential price relief or subsidy for domestic industry and consumers affected by increasing international prices; andbe inconsistent with National Competition Policy Agreements made by the Australian and State Governments (including WA) and inconsistentwith Australia's free trade agreement commitments (including its WTO commitments)."

[85] APPEA, *Submission on WA Government Policy on Securing Domestic Gas Supplies*, April 2006, available at: http://www.appea.com.au/content/pdfs_docs_xls/PolicyIndustryIssues/policysubmissions/WAGasReservationSubmission.pdf

Table: The rhetoric vs. the reality

The Rhetoric	The Reality
"[The WA Government] is threatening these national projects in two different ways which will ultimately cost West Australians the most – in lost jobs, exports and income."[86]	Woodside flags the potential for an extra six LNG processing trains and 77 million tonnes of additional LNG capacity within the next few years.
"Firstly, tying up large parcels of gas from major projects would severely damage or destroy the many smaller gas producers that are willing and able to supply gas into the domestic state system. Secondly, this sovereign risk threat is severely damaging Australia's reputation as an investment destination."	Woodside outlines ambition to expand Pluto from one to five LNG trains to increase production from 4 million tonnes per annum to 21.5 mtpa. Woodside announces front-end engineering and design (FEED) for Pluto Project.
"At least three major project proposals are at serious risk of abandonment because of Carpenter's plans. No one wins if proponents walk away from their plans and the gas stays in the seabed."	Gas exploration expenditure significantly increases since introduction of the 15 per cent reservation policy in 2006.
"The economics of Pluto … are so fine that an LNG development would not be viable if 15 per cent of field reserves were unavailable for LNG production."[87]	Chevron outlines ambitions to develop Wheatstone LNG project.
"The Pluto project would not go ahead if the gas reservation policy was applied." [88]	Apache Energy and KUFPEC enter into agreement with Chevron to undertake joint development of the Brunello and Julimar fields with Chevron's Wheatstone LNG project.
"[W]e think it's counter productive in the long-term and will not help to promote investments in the long-term large LNG projects." (ExxonMobil)[89]	Up to 12 new LNG projects at various stages of development with the potential to increase LNG exports to 80 million tonnes per annum.
"Two companies who are considering and in fact well into the development of LNG options in Western Australia told me in the last 24 hours that those projects would not go ahead if a reservation scheme of the type being proposed was enforced on them."[90]	
"Our reputation as one of the world's best LNG exporters and our ability to guarantee no sovereign risk is under real threat." [91]	

[86] Petroleum Exploration Society of Australia, 'WA gas plans threatens projects and won't protect domestic supplies', PESA News, Oct/Nov 2006, available at: http://www.pesa.com.au/publications/pesa_news/oct_06/pesanews_8423.html

[87] The Australian, 'Woodside, WA sort out deal on Pluto', 9 October 2006, reporting comments by Woodside CEO Don Voelte.

[88] The Australian, 'Woodside, WA sort out deal on Pluto', 9 October 2006, reporting comments by Woodside CEO Don Voelte.

APPENDIX 1: JOINT SELLING BACKGROUND

1. The NWSJV joint selling arrangements are unauthorised

Domestic gas from the North West Shelf Joint Venture is supplied through two joint ventures: (1) the original Domgas Venture, which was established to produce 5064 PJ of sales gas for supply in WA; and (2) the Incremental Venture, which was subsequently established to produce and supply domestic gas in excess of the scope of the Domgas Venture.

At the time the Domgas Venture was established, the participants were: Woodside Energy Limited (50%); Shell Development (Australia) Pty Ltd (8 1/3%); BHP Billiton Petroleum (North West Shelf) Pty Ltd (8 1/3%); BP Developments Australia Pty Ltd (16 2/3%); and Chevron Australia Pty Ltd (16 2/3%).[92]

In 1977, the participants to the Domgas Venture received authorisation from the Trade Practices Commission for joint marketing arrangements.[93] The 1977 authorisation had no end-date and remained in force until revoked by the ACCC in March 2008.

Authorisation for joint selling was justified on the basis of the existing market structure – in which the downstream market comprised a single State purchasing monopoly (SECWA).

The 1977 authorisation did not cover the marketing activities of the parties to the Incremental Venture owing to the inclusion of an additional party, Japan Australia LNG (MIMI) Pty Ltd, which was not a party to the 1977 authorisation.[94] The Incremental Joint Venture comprised the six parties with equal one-sixth interests.

In 1997, the NWSJV participants sought authorisation for the Incremental Venture to enter into joint marketing arrangements. The applicants were at the time considering significant new investment and sought the authorisation in order to underpin that investment.

An important component of the new investment program was a proposal to double the domestic production capacity of the NWS Project from 550 TJ/d to 1100 TJ/d.

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[89] ABC News Online, 'ExxonMobil complements Carpenter over gas policy handling', 12 October 2006, quoting ExxonMobil.
[90] The West Australian, 'Opponents go head-to-head in very public stoush', 1 September 2006, quoting former Federal Minister Ian Macfarlane.
[91] The West Australian, 'Opponents go head-to-head in very public stoush', 1 September 2006, quoting former Federal Minister Ian Macfarlane.
[92] ACCC Determination, Revocation of Authorisation A18492 – North West Shelf Gas Pty Ltd, 5 March 2008, Public Register no. C2008/55.
[93] Authorisation A18492, 15 February 1977.
[94] Authorisation A18492, 15 February 1977, para. 27.

In 1998, the ACCC granted authorisation (A90624) to the participants. The 1998 authorisation was granted for a period of seven years from the date of the ACCC's final determination.[95] This authorisation lapsed in 2005 and the NWSJV Participants never sought to have it renewed.

In December 2007, North West Shelf Gas Pty Ltd requested that the ACCC revoke the 1977 authorisation A18492. In March 2008, the ACCC revoked the 1977 authorisation.[96]

No other authorisations remain in force with respect to the NWSJV joint selling arrangement.

2. The production and joint selling arrangements

Each NWSJV participant has the right and obligation to own, take and separately dispose of its production entitlement.[97]

In the case of domestic gas, the representatives from each of the JV participants form a small group to conduct marketing and sale negotiations on behalf of the participants.[98] These representatives are seconded to North West Shelf Gas Pty Ltd and act in accordance with instructions given by the participants.[99]

The North West Shelf Gas Pty Ltd website states:

> "North West Shelf Gas Pty Ltd (NWSG) is the domestic gas marketing representative established by the North West Shelf Venture to market gas and administer contracts with domestic customers in Western Australia."
>
> "Within that function, NWSG continues to market domestic gas to new and existing customers on behalf of the Incremental Pipeline Gas Joint Venture (IPGJV) participants."[100]

It is understood that North West Shelf Gas Pty Ltd markets gas on behalf of the NWSJV participants with respect to both the original Domgas Venture and the Incremental Venture.

Sales contracts are entered into in the name of each NWSJV Participant and North West Shelf Gas Pty Ltd acts as its representative for administrative purposes only under these sales contracts.[101]

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95 *Ibid*., p.ix.
96 ACCC Determination, Revocation of Authorisation A18492 – North West Shelf Gas Pty Ltd, 5 March 2008, Public Register no. C2008/55.
97 ACCC 1998 Authorisation Determination, *supra.,* p.8.
98 ACCC 1998 Authorisation Determination, *supra.,* p.8.
99 ACCC 1998 Authorisation Determination, *supra.,* p.8.
100 North West Shelf Gas, http://www.nwsg.com.au/sp-frameset.html?products/domestic-gas.html, accessed 26 August 2008.
101 *Ibid.*

All contracts for supply of gas to domestic customers involve all six (for the Incremental JV) counterparties contracting severally.

While North West Shelf Gas Pty Ltd negotiates with a purchaser on behalf of the JV participants, in practice, it has to communicate and seek approval with all six JV participants on contract terms and price.

As such, North West Shelf Gas Pty Ltd has no authority to agree terms – it is a clearing house or postbox by which all six parties come together to set contract prices and terms.

All of the participants retain substantial marketing capability within their respective organisations to support the marketing of the Domgas Venture and Incremental Venture domestic gas production.

In the event of an emergency which has any bearing on contractual obligations of the Joint Ventures, North West Shelf Gas Pty Ltd refers every action to all Participants for responses.

3. The downstream market has undergone fundamental transformation since the 1990s

As outlined previously, there has been fundamental transformation in the market since the mid-1990s. The downstream level of the market has undergone significant reforms by the State Government to increase competition between customers. This has led to a significant increase in:

- the breadth of the domestic market and the size of domestic demand;
- the number of direct gas customers;
- the number of parties buying through an aggregator, many of whom could also elect to purchase directly from gas producers;
- the entry of brokers providing gas trading services to gas users;
- short and long-term trading in gas transmission capacity and physical gas;
- additional transportation and storage options;
- the flexibility within the Dampier to Bunbury Natural Gas Pipeline system to deal with supply and demand imbalances; and
- connectivity between gas pipelines in Western Australia – gas can now be traded either physically or commercially in any part of the system extending to Port Hedland and Telfer, to the Pilbara,

> Kalgoorlie and Esperance, to Onslow, and to the Midwest, Perth and the South West of the State.

In contrast, the upstream market however remains practically unchanged. It remains highly concentrated and an effective duopoly. Two supply groups control almost 100 per cent of the domestic gas market.

Major gas producers continue to exercise significant market power through the unauthorised NWSJV joint selling arrangements, which have been extended to new developments particularly Gorgon.

4. Joint selling reduces the number of independent sellers

Each of the NWSJV participants would have the right and obligation to own, take and separately dispose of their production entitlements. With six participants, this would equate to six individual sellers each owning a significant share of production that could be sold to local consumers.

Joint selling reduces the number of independent sellers competing with each other from six to one. Customers are forced to negotiate with a combined entity as opposed to dealing separately with individual sellers.

The effect is to suppress "rivalrous market behaviour" and the "independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers".[102]

As the recent Alinta price outcome demonstrates, the impact is immense market power on the part of major gas producers and a reported 300 per cent increase in domestic gas prices.

5. Joint selling reduces customer choice

By setting a common price and conditions, joint selling arrangements limit customer choice over terms and conditions. This was acknowledged by the ACCC as early as 1998:

> "[S]eparate marketing of gas by joint venture producers, where feasible, will be more competitive than coordinated marketing and likely to provide a wider variety of supplier options that would better meet market demands."[103]

More recently in the 2006 PNG Determination, the ACCC acknowledged:

> "[S]eparate marketing can add value and lead to enhanced dynamic efficiency … users could negotiate more flexible terms and conditions with individual producers. This in turn would allow users to tailor their supply contracts to match the needs of their own customers."[104]

[102] *Re QCMA*(1976) 25 FLR 169, at 188-189.
[103] ACCC, North West Shelf Project, Determination, 29 July 1998, pp.32 and 47.
[104] ACCC, PNG Gas Project, Determination, 3 May 2006, p.36.

As demonstrated by the current domestic gas market, joint selling limits the ability of customers to secure competitive terms, including on price and supply. This lack of choice is impacting on customers, and on investment and development in the State. Gas users are dependent on competitively priced gas and diversity over contract terms to underpin capital intensive developments in resource and minerals processing developments, new power stations and gas transmission facilities.

Joint selling arrangements have operated to limit consumer choice and supply. The NWSJV participants appear to have taken an approach of not typically supplying customers of less than around 15 TJ/d demand. Smaller customers are effectively forced to purchase from Apache; the 'effective' monopoly seller for that section of the market.

The NWJSV has also not offered any significant new volumes of gas into the domestic market for many years, notwithstanding the severe gas market shortfall.

Since at least 2006, there has been a dramatic increase in domestic gas prices – with a reported 300 per cent price increase in the recent Alinta price outcome. On a delivered basis, WA gas prices are now three times the price of gas in the Eastern States – where the market is characterised by greater competition.

Suppliers have shortened terms on a “take it or leave it basis”. Given that investment decisions are frequently based on 15-20 year time-frames, the inability of consumers to secure long term energy contracts adversely impacts major project developments.

By contrast, overseas gas customers continue to benefit from greater competition and long term contracts for LNG sales. Overseas customers can negotiate with a diversity of potential suppliers and are not subject to a “captive market”. This forces WA gas producers to compete with other intentional suppliers to provide diversity on price and contract terms. At current domestic gas prices, local consumers are effectively being required to subsidise major producers in their sales to overseas customers.

Separate selling would promote competition, choice and diversity of contract terms for gas users:

- Natural competition between six independent sellers would be allowed to occur. Each of the NWSJV participants would actively compete against each other and third parties.

- Customers would have the opportunity to deal with a wider range of suppliers, which would allow competition on price and other contract terms.

- There would be greater diversity of contract terms offered to consumers including on: price, volume, length of contract, take-or-pay provisions, reliability of supply, peaking provisions, options for renewal and reserve back-up.

- Any one of the NWSJV participants could provide a delivered service to end consumers, in competition with existing aggregators.

- Separate selling would encourage supply to a greater number of customers, and opportunities to supply smaller consumers – in the same way that the entry of a new supplier Apache has promoted competition and supply in recent years.

- Decisions on supply and contract terms would be made on the basis of the individual NWSJV participants with greater flexibility. Under joint selling, decisions are made on the "lowest common denominator" which means any one of the six NWSJV participants can act to block supply or contract terms.

- Substitution between individual customers would be easier. Customers would have greater opportunity to deal with different sellers and maintain a portfolio of suppliers to meet a required quantity. This provides greater flexibility, competition and risk management than would have been the case if customers were forced to source their requirements from a single supplier.

- Greater diversity of supplier risk-preferences would ensure a greater range of options for consumers. Each of the NWSJV participants would have their own supplier risk-return preferences which could then be translated to individual negotiations with potential customers. This was demonstrated by Apache and Santos separately marketing production from the John Brookes field when they were unable to agree on resource availability.

- Individual NWSJV participants would not be limited to dealing with gas reserves held within the joint venture. Separate selling would allow participants to draw on reserves outside the joint venture to back larger and longer term contracts – in the same way that Apache Energy has done with its various joint venture operations.

- Deals could be done between individual NWSJV participants between themselves to trade reserves, production capacity and processing capacity. This might allow one or more of the participants to take a more favourable position in supplying the domestic gas market and on the terms and conditions of such supply.

6. Joint selling entrenches the already dominant market power of major producers

Major producers exercise immense market power in the WA domestic gas market:

- there are significant barriers to the entry of *competitive* new suppliers to the domestic gas market;
- producers include the world's largest oil companies with immense commercial and negotiating power;
- local consumers have no reasonable alternatives to gas supply other than existing suppliers;
- the current market is experiencing a serious shortage in gas supply;
- WA gas prices have risen dramatically to three prices in the Eastern States; and
- despite a so-called "abundance" of gas reserves, WA gas prices are now among the highest of any gas producing and exporting economy in the world.

Joint selling entrenches the already dominant market power of major gas producers, giving them immense power to increase prices or withhold supply.

7. Joint selling entrenches an effective minimum floor price for domestic gas

Through joint selling arrangements, each of the NWSJV participants have access to detailed knowledge of the commercial terms and timing of all domestic gas sales arrangements entered into or being negotiated by the NWSJV including on:

- price;
- supply volumes;
- contract term and expiry; and
- the identity and supply demand of potential customers seeking gas.

This sharing of what would otherwise be confidential commercial and market sensitive information confers major gas producers significant advantage in negotiations with individual consumers. This advantage extends to other domestic gas projects which they are participants in.

The sharing of information between gas sellers and projects can only serve to eliminate any competitive pressure that new projects like Gorgon, Wheatstone or Macedon might otherwise assert on the domestic market.

This was acknowledged by the ACCC in PNG Gas Project Determination:

> "Under joint marketing arrangements each of the participants in the Process would have access to commercially sensitive information about the Project's customers, such as pricing, volumes and delivery points. The potential exists for such information to be inappropriately disclosed and used in an anti-competitive manner by parties who have other gas interests in eastern Australia … a Project participant could use this information as leverage in negotiations in respect of its other interests in gas basins in Australia."[105]
>
> "This issue would not be of such concern under separate marketing arrangements, as potential customers would have a choice of suppliers within the joint venture with whom to negotiate. Under separate marketing arrangements commercially sensitive information would not be shared in the same manner as under joint marketing arrangements."[106]
>
> "The exercise of market power in an anti-competitive manner is another potential detriment associated with joint marketing arrangements … The extent of cross-ownership may heighten market power concerns. If a firm in other gas interests … had the ability to influence the decisions of the Project, it could use this ability in an anti-competitive manner and restrict competition between gas basins."[107]

In contrast, domestic gas customers have no access to commercial information on other gas contract sales or negotiations, including what other consumers have paid in recent contracts. This severely limits their ability to bargain on a level playing field with major producers.

In the absence of separate selling and *effective* ring-fencing commitments, the risk of collusion and price co-ordination by different joint venture projects is high. In the case of the NWSJV and Gorgon Projects for example;

- Shell, Chevron and ExxonMobil are unlikely to sell Gorgon gas at prices lower than those agreed to by Shell and Chevron in the sale of NWSJV gas;

- Shell and Chevron are unlikely to agree to sales of NWSJV gas at prices lower than that attained by Shell, Chevron and ExxonMobil in regard to Gorgon gas; and

[105] ACCC, PNG Gas Project, Determination, 3 May 2006, pp.36 and 63.
[106] ACCC, PNG Gas Project, Determination, 3 May 2006, p.63.
[107] ACCC, PNG Gas Project, Determination, 3 May 2006, p.63.

- the NWSJV participants are unlikely to sell gas in their other developments at prices lower than NWSJV and Gorgon gas.

Joint selling therefore entrenches and extends an effective minimum price for domestic gas.

8. Joint selling enables the coordinated abuse of market power

Joint selling enables major gas producers to act in a united way in the market and thereby to co-ordinate the exercise of their market power.

In 2008, the NWSJV participants publicly threatened to force domestic consumers to pay higher gas prices as a result of the Federal condensate excise removal. This was despite there being no justification for doing so. The excise was applied on the production of condensate, not natural gas.

It was telling that the NWSJV participants did not threaten to pass on the cost of the removal of the condensate excise exemption to overseas LNG customers, or to local or overseas condensate customers. Passing on the cost to domestic customers would effectively force WA gas users to subsidise the international customers of the NWSJV participants.

The coordinated abuse of market power was highlighted in the recent Alinta pricing outcome. Major producers have publicly indicated that they will seek to establish the reported 300 per cent increase in price as the new benchmark for all new domestic gas contracts.

WA Business News reports comments by Woodside CEO Don Voelte:

> "The exact settlement is to remain confidential, but I can say we are pleased that ... it compares favourably with recent WA gas sales agreements."
>
> "This is a huge new revenue exposure for North West Shelf and Woodside and my expectation is that when other new or existing contracts come up for review, there will now be a new price foundation to work from."[108]

If the NWSJV participants are required to sell separately and compete with each other, outcomes like the reported 300 per cent Alinta price increase would not occur.

It would also limit the ability of these same producers to combine together to impose any price outcome as a new “benchmark” price for the WA gas market.

[108] *WA Business News*, ‘Woodside hails new domgas price mark’, 24 February 2010.

9. Joint selling has not delivered additional gas supply to WA consumers

In 1998, the NWSJV participants - as part of their justification for seeking authorisation for joint selling – that they intended to increase the capacity of the domestic gas processing plant to 1,100 TJ/d through the construction of an additional domestic gas processing train. They claimed:

> "[T]he Joint Venture Participants are contemplating expanding the capacity of the Project. *The proposed expansion will increase the production of gas for sale in Western Australia.* This will result in the current capacity of the Domestic Gas Joint Venture (the Domgas Venture) being exceeded. The Joint Venture Participants, for reasons of certainty, have decided to seek additional authorisation to that issued on 15 February 1977 (the 1977 Authorisation) by the Trade Practices Commission (the TPC) to the then participants of the Project."[109]

> "To be able to compete for the supply to industrial projects forecast to be undertaken in the short to medium term, and in some cases to render a project, the Joint Venture Participants are contemplating an *expansion of capacity of 550 TJ/day to enable them to accept obligations for the supply on a firm basis of approximately 1,100 TJ/day.* Sellers are currently negotiating with existing and prospective customers for supply to various new and expanded facilities and projects. The industrial tranches of gas necessary to meet these customers' demand is in excess of what any individual participants would be able to meet from their respective shares. *Therefore these discussions must involve all the Joint Venture Participants*." [110]

> "The proposed expansion by the Joint Venture Participants therefore extends to creating additional capacity for existing customers, as well as capacity for new customers and projects. The national importance of these developments in terms of increased exports and import replacement, as well as the direct benefits enjoyed by the businesses and communities concerned, are likely to be significant. However, such an expansion decision must necessarily involve all the Joint Venture Participants, including MIMI, because it will result in supply of natural gas by the Incremental Venture … *It must also be predicated on the ability of the Joint Venture Participants to co-ordinate the marketing of any expanded capacity*." [111]

> "The proposed expansion which also includes potential investment in LNG expansion entails the construction of:

[109] North West Shelf Project, *Submission to the ACCC in Support of an Application for Authorisation*, 5 September 1997, para. 1.2.
[110] North West Shelf Project, *Submission to the ACCC in Support of an Application for Authorisation*, 5 September 1997, para. 9.7.
[111] North West Shelf Project, *Submission to the ACCC in Support of an Application for Authorisation*, 5 September 1997, para. 9.8.

(a) a second pipeline from North Rankin A platform to the onshore processing facilities on the Burrup Peninsula; and

(b) a third pipeline gas processing train and additional fractionation and stabiliser facilities (which would be installed alongside the existing processing facilities on the Burrup Peninsula)." [112]

This commitment to expand domestic gas capacity, construct a third domgas processing train and increase domestic gas supply *was never met* despite:

- clear demand for domestic gas; and
- the NWSJV partners continuing to sell jointly.

Since the granting of the 1998 authorisation, there has however been a significant expansion in LNG exports. LNG Train 4 was completed in 2005 and LNG Train 5 completed in 2008. LNG Train 5 is producing 4.4 million tonnes of LNG annually, bringing total LNG export production to 16.3 million tonnes per year.[113]

Woodside has flagged construction of a further six LNG Trains, with the ambition of an additional 77 million tones of LNG capacity within the next 15 years.[114]

In contrast, supply to the domestic market by the NWSJV has increased only marginally from the 1980s. The NWJSV has not contracted any significant new volumes of gas into the domestic market since the mid-1990s.

This was notwithstanding the severe gas market shortfall, and their earlier commitment to double the size of the domestic gas processing plant as part of their justification for seeking the 1998 authorisation for joint selling.

The NWSJV participants also appear to have taken a deliberate view to not typically supply customers of less than around 15 TJ/d demand. Smaller customers are effectively forced to purchase from Apache - the 'effective' monopoly seller for that section of the market or from an aggregator such as Alinta or Synergy.

[112] North West Shelf Project, *Submission to the ACCC in Support of an Application for Authorisation*, 5 September 1997, para. 9.9.
[113] Woodside Petroleum, 'North West Shelf Venture Produces First LNG From Train 5 Production Facility', ASX Announcement, 1 September 2008.
[114] ABC News online, 'Outlook remains strong: Woodside', 1 May 2009, http://www.abc.net.au/news/stories/2009/05/01/2558367.htm

10. Separate selling is commercially and practically feasible and should be required of major producers

Separate selling of domestic gas is commercially and practically feasible, and should be required in the WA gas market:

- the WA domestic gas market has undergone significant transformation over the past 10 years;
- separate selling of domestic gas took place in the major Pohokura gas field in New Zealand, despite Shell and its partners originally claiming it impossible to do so because of supposed market features;
- long term contracts have not prevented major producers from supplying international customers and expanding LNG supply;
- the same gas producers sell separately and compete with each other in marketing gas to international customers;
- major producers already enjoy complete transparency over domestic demand and contract pricing, whereas domestic consumers have no access to this information;
- there is no commercial imperative for joint selling to offset any market power of customers – the downstream market has transformed from a single monopoly buyer to some 30 gas customers;
- the operational measures necessary to enable separate selling are well-known and practical;
- marketing decisions for domestic gas are already being made separately by the individual participants of the NWSJV;
- gas balancing and nomination arrangements are already in place in the WA market;
- producers in other joint venture gas developments sell separately into the WA domestic gas market; and
- the same major producers have been compelled by governments to sell separately in other countries including Norway, Denmark and New Zealand.

11. Producers in other joint venture gas developments already sell separately in WA and the Eastern States

That separate selling is practical and feasible is demonstrated by the fact it is already taking place in practice – both in WA and in the Eastern States.

Separate selling by joint venture participants is taking place in WA, mainly by participants in the Apache-led joint ventures through the Varanus Island domestic gas processing facility. This facility supplies 30 per cent of the WA domestic gas market.

Separate selling is taking place by Apache and Santos from the John Brookes field joint venture. While Apache (operator, 55 per cent share) and Santos (45 per cent) initially sold their gas jointly, during later marketing efforts, the JV participants could not agree on remaining available reserves. Santos took a more aggressive view in respect of available reserves than Apache and decided to market additional gas from John Brookes separately, with Apache not marketing any further John Brookes gas.

Separate selling of natural gas is also happening in the Otway Basin in Eastern Australia. Santos has separately marketed gas from its interest in the Casino field. Woodside has separately marketed gas from its interest in the Geographe/Thylacine field.

12. The same producers have been compelled to sell separately in other countries

The same major gas producers have been compelled by governments to sell separately in other countries. They do so successfully. It is illogical that Shell, Chevron and ExxonMobil continue to engage in conduct in WA that they are prohibited from engaging in elsewhere in the world.

12.1 Denmark

In 2003, the Danish and European Commission competition authorities settled an antitrust investigation in Denmark involving the Danish gas supplier DONG and the country's main gas producers Shell, Chevron Texaco and A.P Moller.

The investigation related to the joint selling of North Sea gas by the parties to the Danish Underground Consortium (DUC). DUC, which accounted for 90 per cent of Danish gas production, was composed of Shell, Chevron and A.P Moller.

As a result of the settlement, the gas producers committed to market their production individually.[115] Producers also undertook to offer an additional 7 billion cubic metres of gas for sale to new customers over a period of 5 years

[115] European Commission, 'Commission and Danish competition authorities jointly open up Danish gas market', 24 April 2003, available at http://europa.eu/rapid/pressReleasesAction.do?reference=IP/03/566&format=HTML&aged=0&language=EN&guiLanguage=en

when new gas volumes are available. This corresponded to around 17 per cent of the total production of the DUC parties.

In accepting this commitment, the European Commission noted that a significant number of customers inside and outside Denmark had actively looked at alternative sources of supply in the past and had continued to do so at the time of the investigation.

This commitment clearly recognised that the effect of joint selling in Denmark had been to limit gas supply and competition.

12.2 Norway

In 2001, the European Commission issued a formal warning to Norwegian gas producers – including Shell and ExxonMobil - about the joint sale of gas by the Gas Negotiation Committee (GFU).

The case concerned joint sales of natural gas through a single seller, the GFU, from Norway to the European Union. The GFU negotiated natural gas sales contracts with buyers on behalf of all the other natural gas producers in Norway and thus fixed the selling price, volumes and all other trading conditions:

> "The European Commission has warned Norwegian gas producers that the joint sale of Norwegian gas carried out through the Gas Negotiation Committee (GFU) is in breach of the European Union competition rules as it fixes, among other things, the price and the quantities sold."
>
> "As the European gas market is progressively being liberalized, it is of paramount importance that producers sell their gas individually so that those customers that can already choose their supplier benefit from real choice and competitive prices."[116]

The case was settled in 2002 with Norwegian gas producers confirming that they will market their gas individually.[117] These included six groups of gas companies which were sellers to Norwegian gas negotiated under the GFU scheme – Shell, ExxonMobil, TotalFinaElf, Conoco, Fortum and Agip. The companies provided written commitments to discontinue all joint marketing and sales activities.

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[116] European Commission, 'Commission objects to GFU joint gas sales in Norway', IP/01/830, Brussels, 13 June 2001; available at http://europa.eu/rapid/pressReleasesAction.do?reference=IP/01/830&format=HTML&aged=0&language=EN&guiLanguage=en

[117] European Commission, 'Commission successfully settles GFU case with Norwegian gas producers', IP/02/1084, Brussels, 17 July 2002; available at http://europa.eu/rapid/pressReleasesAction.do?reference=IP/02/1084&format=HTML&aged=0&language=EN&guiLanguage=en

7.3 New Zealand

Shell and its partners sell domestic gas separately from the Pohokura gas field in New Zealand – a major Greenfield gas development. They have been successfully doing so since 2004. The New Zealand experience is highly pertinent to the WA gas market.

In the Pohokura case, Shell and its partners applied for authorisation by the New Zealand Commerce Commission to jointly sell domestic gas from the field.

Shell and its partners claimed joint selling was necessary to underpin a major new gas field investment and that separate selling was not feasible or practical because of the "immature" New Zealand market. According to Shell and its partners, separate selling would lead to significant if not indefinite delay in domestic gas development and supply:

- "The immaturity of the New Zealand market means that the practical problems the Pohokura JV parties would face in separately marketing gas would be *difficult if not impossible to overcome*."

- "*Substantial welfare losses* will occur if joint marketing is not authorised."

- "Absent joint marketing, a *substantial delay* in the development of the field is expected, at a time of scarcity of resource."

- "In addition, separate marketing would result in *significant extra transaction and production costs, and sub-optimal field depletion*. This would impact significantly on the value of the field, and that effect would have the potential of significantly reducing exploration in New Zealand." [118]

In making these claims, Shell and its partners relied heavily on the ACCC's reasoning in the 1998 North West Shelf authorisation determination.

On the basis of these claims, the New Zealand Commerce Commission granted authorisation for joint selling in 2003. This was despite concluding that:

- Separate selling would offer different dynamics to negotiations between the buyer and the seller. Within limits, buyers would have choices not available to them under joint selling.[119]

- Joint selling would, on the balance of probabilities, result in gas prices being higher on average than they would be under separate

[118] Applicants' submission in the Pohokura case, para.16.
[119] New Zealand Commerce Commission Determination, Decision 505, September 2003, para.372.

selling. This would result because joint selling would shift the relative bargaining strength of buyers and sellers in favour of the seller and because it would facilitate price discrimination.[120]

- The range of terms and conditions on offer would be more limited with joint selling.[121]

- Joint selling could have a material impact on development of a competitive market in the future. This was because a future competitive environment depended on having a number of sellers in the market, including a number selling from each field.[122]

Shell and its partners' claims were subsequently disproved when they began separately selling domestic gas – with no delay to production or supply – *when they were unable to agree to joint selling arrangements* between themselves.

Accordingly, separate selling had marginal if any impact on either viability of the Pohokura project or fist supply of domestic gas. As the New Zealand Commerce Commission acknowledged, separate selling alone is not likely to make an otherwise viable field non-viable:

> "While it is axiomatic that any additional cost faced by new entrants act as a disincentive to entry, the Commission considers that the scale of these additional costs, in comparison with the potential rewards, would not be likely to be sufficient to make a viable field non-viable."[123]

Far from being a necessary enabler for domestic gas supply, joint selling arrangements in New Zealand in fact operated as a potential barrier to timely domestic gas supply.

In 2006, the New Zealand Commerce Commission unilaterally revoked authorisation against strong opposition by Shell and its partners.

The New Zealand experience is highly pertinent to WA

The New Zealand experience is highly pertinent to the WA gas market because of Shell and its partners' reliance on the very same market features identified by the ACCC in the 1998 North West Shelf Determination to justify joint selling; and by the strong comparisons made by Shell and its partners between the New Zealand and WA gas markets:

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[120] New Zealand Commerce Commission Determination, Decision 505, September 2003, para.377.

[121] New Zealand Commerce Commission Determination, Decision 505, September 2003, para.383.

[122] New Zealand Commerce Commission Determination, Decision 505, September 2003, para.392.

[123] New Zealand Commerce Commission Determination, Decision 505, September 2003, para.391.

- "The Australian gas markets are described in contrast as 'contract' or 'project' markets where gas is only produced to meet specific contractual obligations. *Like Australia, gas in New Zealand is only produced to meet specific contractual obligations*."[124]

- "Our conclusion is implied by the peculiar nature of the industry and the state of the New Zealand gas market. It is also the position on the joint marketing of gas in Australia, *where the market characteristics are similar to those in New Zealand*."[125]

- "… The New Zealand market is dominated in gas volume terms by industrial and power generation buyers, *similar in this respect to the West Australian State market* …"[126]

Significantly, Shell and its partners acknowledged that the Australian (and WA) market – in 2003 - was considerably more mature and developed than the New Zealand market:

- "There remains a major question whether Australian markets in 2003 are the appropriate comparison point for the New Zealand market. *The Australians have evolved a lot further down the path towards a mature gas market than we have*. Critically, the Australian market is many times larger than is the case in New Zealand …"

- *"Australian experience from the 1990s provides a close parallel for the New Zealand market in 2003, which is much further back on that evolutionary path*."[127]

- "The New Zealand gas industry differs from its Australian counterpart in a number of important ways … *But perhaps the most important difference is one of size. Whilst the New Zealand gas industry production is now in the order of 180 PJ per annum, its Australian equivalent annual production is approximately 1350 PJ*. Even if comparison is made with the Australian Eastern States interconnected market as a discrete entity, separate from Western Australia, the market is still many times larger than New Zealand at 600 PJ per annum."[128]

[124] Applicants' original submission in the Pohokura case, para.20.
[125] CRA report, December 2002, p.3.
[126] 'A Critique of the Commerce Commission's Draft Determination', report by M.D. Agostini, 9 June 2003, p.15.
[127] Applicants' submission to the New Zealand Commerce Commission's Draft Determination in the Pohokura case, 9 June 2003, para.43.
[128] 'A Critique of the Commerce Commission's Draft Determination', report by M.D. Agostini, 9 June 2003, pp.2-3.

- "It is my opinion that *the New Zealand gas market is even less mature than the Australian equivalent. It is considerably smaller and has less depth in terms of market participants* …"[129]

According to Shell and its partners, the WA gas market in 2003 was:

- considerably more mature and developed than the New Zealand market;
- many times larger than the New Zealand market; and
- possessed more depth in terms of market participants than the New Zealand market.

The fact that Shell and its partners subsequently sold separately in New Zealand is therefore compelling. Logically, separate selling is even more practical and feasible in Western Australia today given it is far bigger and more mature market than New Zealand today – let alone the New Zealand market in 2003.

13. Government endorsement of joint selling

13.1 Authorisation has been the single biggest barrier to competition and market development in WA

The Issues Paper raises the question about the impact of ACCC authorisation for joint selling. In the DomGas Alliance's view, ACCC intervention in the gas market to endorse joint selling has been the single biggest barrier to competition and market development in WA

The ACCC granted authorisation for joint selling to the NWSJV participants in 1998 (this authorisation has since lapsed) and to the Gorgon participants in 2009. In permitting gas producers to combine together to set prices and other contract terms, the ACCC considered that separate selling was not practical or feasible. This was because of what it considered to be certain features of the WA gas market:

- "lumpy" demand profile and a small number of large customers with long term contracts;
- the lack of liquidity and short term trading; and
- very limited gas storage options in the WA gas market.

The ACCC's approach – adopted in 1998 and repeated in 2009 – is fundamentally flawed. In justifying continued joint selling on the basis of a

[129] 'A Critique of the Commerce Commission's Draft Determination', report by M.D. Agostini, 9 June 2003, p.17.

perceived lack of market maturity, the ACCC fails to consider the impact of joint selling on market development.

This flawed approach was recognised as early as 2002 by the COAG Energy Market Review. The Parer Report rejected the notion that separate marketing could only arise after a mature market characterised by certain market elements has been established:

> "The Panel has concluded that not all the features of a mature market need to be present for separate marketing from joint facilities to be feasible. If they were, separate marketing itself would probably only be of academic interest, as a high degree of competition would already be achieved. The existence of secondary markets with associated financial products are outcomes of a mature market, rather than prerequisites for separate marketing. For each gas producing joint venture, some market features will be more important than others in considering the feasibility of separate marketing."

Importantly, the Report concluded that ongoing authorisation for joint selling could *itself* be preventing the emergence of a more mature and competitive market.

> "Moving toward separate marketing would be considered as part of the overall package to improve the competitive nature of the natural gas market. *Separate marketing itself should be regarded as one of the ingredients that in the appropriate circumstances helps create competition and thereby a more mature market*."[130]

The ACCC's approach flips cause and effect on the head. Authorisation for joint selling will *always* be justified because the ongoing impact of joint selling is to suppress the development of the more competitive and mature market that the ACCC considers to be the prerequisite for separate selling.

The consequences of ACCC market intervention to endorse joint selling have been considerable. This was demonstrated by the reported 300 per cent increase in the price of domestic gas supplied by the NWSJV to Alinta.

Joint selling has resulted in Western Australia having the highest domestic gas prices in the country. It provides a subsidy and transfer of wealth from WA business and households to a small number of very large producers.

13.2 The ACCC's approach fails to reflect WA gas market conditions

The ACCC's approach on joint selling reflects a very Eastern States centric approach that fails to take into account WA gas market conditions. The Gorgon Determination in particular was based on serious errors of fact and does not reflect a market that has undergone significant transformation and State Government reforms over the past 10 years.

[130] 2002 COAG Energy Market Review Report ("the Parer Report"), pp.199-200.

That Determination was made in the face of overwhelming opposition by industry, power generators, infrastructure operators and gas consumers. The ACCC ignored the detailed factual evidence presented by WA gas users and relied exclusively on the claims made by major producers.

The ACCC for instance expresses a mistaken belief that major producers and different projects would compete with each other on price to expand market share.

This ignores the fact that the WA gas market is experiencing - and will continue to experience - an extremely tight supply situation with producers withholding supply. In such a market, producers are seeking to maximise prices for the limited supplies of gas that they make available. They are not seeking to compete on price to increase market share as the ACCC would believe.

Similarly, the ACCC appeared to accept major producer claims of an "oversupply" in the WA gas market. As shown above, such claims are patently false, and indeed are contradicted by major producer own assessments of the WA gas market.

13.3 Gas storage and balancing

The ACCC's approach does not reflect recent and ongoing developments in gas storage and balancing arrangements in the current WA market.

DBP has highlighted substantial changes in the role that the duplicated DBNGP can play in load profile management and storage:

- The capacity of the DBNGP is being expanded with expansion expected to be completed in early 2010;
- Following expansion, the pipeline will be approximately 85 per cent looped with approximately 441 km of additional looping installed as part of Stage 5B;
- Firm full haul capacity of the pipeline will be increased to approximately 840 TJ/day;
- The DBNGP provides shippers with an unconditional Accumulated Imbalance Limit of +/- 8 per cent of Contracted Capacity and a conditional limit of +/- 20 per cent – which are among the most generous in the world;
- Given that the current Contracted Capacity across all firm services on the DBNGP exceeds 800 TJ/day, this equates to over 160 TJ/day – which is more than the proposed initial production target for the Gorgon Project;

- In addition, DBP offers Park & Loan Storage services on the DBNGP and has entered into Operational Balancing Limits with the operators of production facilities and interconnected pipelines;

- Producers and gas customers therefore have a high degree of flexibility to balance daily, monthly and even yearly variances between contracted sales and actual gas volumes.[131]

- DBP is in active discussions with gas shippers on engineering options to further increase the storage capability of the pipeline. This could significantly expand storage by around 150-200 TJ/d.

In addition, the APA Group already operates a gas storage facility at Mondarra in the Perth Basin, which is used by Western Power. A report by the WA Office of Energy during the Varanus Island outage notes:

> "[T]he APA Group's Mondarra Storage facility, which is located adjacent to both the Parmelia and DBNGP pipelines south of Dongara, has been running at full production for the entire duration of the outage, presently contributing a useful 12 TJ/d to the overall WA gas market."[132]

This volume alone *exceeds* the additional 10 TJ/d in domestic gas supply that the Gorgon participants claimed would be delivered under joint selling as opposed to separate selling, and which the ACCC assessed to be a potential benefit from authorisation. The Alliance understands that APA has proposed further expanding this storage capacity through the installation of additional gas compressors.

It is compelling that a report commissioned by APPEA, and presumably prepared in close consultation with major gas producers, recognises the existing role of pipeline infrastructure. The report does not consider any lack of gas storage options as a significant gas market barrier:

> "Australia's need for storage facilities is mitigated by the fact that gas production facilities are generally located close to the main demand centres. Gas production matches demand and Australia relies on spare pipeline capacity to deal with the supply / demand mismatch. *This spare capacity acts effectively as gas storage*."
>
> "Unlike other countries, most of Australia is not exposed to strong seasonal swings in demand. However, Victoria, Tasmania and the ACT experience seasonality in winter demand and the storage facilities do not always solve the problem as they have limited capacity. *Whilst it would be ideal to have additional storage facilities in key locations, an*

[131] DBP submission to the ACCC, 4 June 2009.
[132] Office of Energy, 'Information Update', 18 June 2008, available at: http://www.energy.wa.gov.au/cproot/1179/10284/Gas%20Update%20OOE%20Web%2020%20Jun%2008.pdf

option to increase pipeline capacity will also increase flexibility in the markets."[133]

13.4 Short term trading

The ACCC's approach does not reflect the significant expansion in short term gas trading already underway in Western Australia, and which the State Government has committed to further fostering.

A gas trading exchange (gasTrading) already facilitates trades of both gas and pipeline capacity, with trades accounting for up to 10 per cent of the gas delivered into the DBNGP on some days.

Extensive work is being undertaken by the State Government and gas market participants to improve transparency and expand short term trading through the establishment of a Gas Bulletin Board.

The State Government has committed to the establishment of a permanent Gas Bulletin Board in response to the recommendations by the Gas Supply and Emergency Management Review Committee.

As the Independent Market Operator has pointed out, such arrangements could be successfully implemented in Western Australia and within a short period of time. Gas consumers are supportive of efforts to improve transparency and short term trading arrangements.

13.5 The same market features have not prevented separate selling to international customers

The ACCC considers that a small number of large customers, long term contracts and a lack of liquidity prevent separate selling in the WA domestic gas market.

Those very same features have not prevented Shell, Chevron and ExxonMobil from separately selling Gorgon gas to overseas customers. These same companies compete with each other in separately marketing LNG to international customers. Recent Gorgon LNG contracts involve:

- supply to a very small number of very large customers – "lumpy customer demand";
- very long contract terms – 20 to 25 years;
- at a time when – according to producers' own statements - the spot market "has almost disappeared".[134]

[133] Asia-Pacific Partnership and PriceWaterhouseCoopers, *Asia-Pacific Gas Market Growth*, June 2009, p.31.

[134] The North West Shelf Joint Venture (which Shell and Chevron are participants in) has reported as recently as 10 August 2009 that "spot demand for LNG in Asia, and Japan in particular, has almost disappeared: Dow Jones Newswires and The Australian, 'LNG spot

As the ACCC-commissioned Allen Consulting Group report pointed out, to the extent there are commercial risks attached to gas marketing, these lie heavily in relation to the international marketing of LNG as opposed to domestic gas:

> "[T]he relative impact of differing modes of Gorgon domestic marketing on price outcomes is almost certainly less than the price volatility which LNG sales will encounter. While each of the Applicants are attempting to secure term contracts for some or all of their expected LNG entitlements from Gorgon, pricing will be heavily exposed to oil price volatility and probably spread across less than four customers. Domestic pricing is likely to be linked to less volatile indices and to multiple customer contracts." [135]

The major difference between the international and domestic market however is this. While Shell, Chevron and ExxonMobil compete with each other and with other producers in selling to international customers, they are excused from doing so in WA.

It is illogical that three of the world's biggest oil and gas companies need the protection of joint selling arrangements to sell their 5 per cent of Gorgon gas to Australian consumers. They sell separately and compete with each other when marketing 95 per cent of Gorgon gas overseas.

Asian demand hit by global downturn', 10 August 2009, available at: http://www.theaustralian.news.com.au/business/story/0,28124,25908572-5005200,00.html.

[135] ACG Report, p.24.

Table: Timeline of ACCC responses

Apr 2007	Gas users raise concerns over the NWSJV joint selling arrangements in a meeting with ACCC Commissioner Ed Willett
Jun 2007	Gas users write formally to ACCC seeking clarification of joint selling arrangements under the *Trade Practices Act*
Nov 2007	Gas users write to ACCC repeating concerns
Dec 2007	Gas users write to AER / ACCC repeating concerns
Dec 2007	WA Minister for Energy writes to ACCC Chairman Graeme Samuel requesting clarity on the NWSJV joint selling arrangements
Jan 2008	Gas users request ACCC to undertake review of joint selling arrangements and take enforcement action
Jan 2008	Gas users provide detailed submission identifying Potential breaches under the TPA
Mar 2008	Gas users meet with ACCC Enforcement Branch
May 2008	Alliance provides further detailed submission to ACCC
Jun 2008	Alliance teleconference with ACCC Enforcement Branch
Jul 2008	Alliance provides additional information to the
Dec 2008	Alliance provides detailed legal submission, prepared by leading competition law expert
May 2009	Chevron, Shell and ExxonMobil apply for ACCC authorisation to jointly sell Gorgon gas. Gas users given just 10 working days to respond.
June 2009	ACCC grants interim authorisation within just five weeks
Nov 2009	ACCC grants final authorisation to Chevron, Shell and ExxonMobil

APPENDIX 2: DOMESTIC GAS RESERVATION BACKGROUND

1. North West Shelf Project reservation commitment

Domestic gas reservation has been a long standing feature of the WA gas market since the 1970s. The domestic gas reservation commitment underpinned the establishment of the original North West Shelf Project, and Australia's subsequent LNG export industry.

The North West Shelf State Agreement, which facilitated the Project, was concluded between the State Government and the North West Shelf Joint Venture participants, and ratified by State Parliament as a schedule to the *North West Shelf Gas Development (Woodside) Act 1979*.

The original intent of the North West Shelf State Agreement was to ensure sufficient priority was placed on meeting the requirements of the WA domestic gas market.

The original State Agreement cites an agreement between the NWSJV parties and SECWA which committed the NWSJV parties to supply SECWA up to 10.5 million cubic metres per day (or 414 TJ/d) of domestic gas over 20 years. It also envisaged LNG exports of up to 6.5 million tonnes per year over a term not less than 20 years.[136]

When the State Agreement was originally negotiated, the North West Shelf Gas project was envisaged to have three phases:

- Phase I – the domestic gas development, which involved construction of the domgas processing plant and the Dampier to Bunbury Natural Gas Pipeline (DBNGP). This was underpinned by the 20 year take-or-pay contract entered into with the State Energy Commission of WA (SECWA), which was in turn backed up by a major commitment from Alcoa.

- Phase II – the initial LNG export phase, involving the construction of LNG Trains 1 and 2; and

- Phase III – the expansion of capacity to process and export LNG, resulting in the construction of LNG Train 3.

In 1994, the Agreement was amended to provide for the disaggregation of the original SECWA contract into the supply of "First Priority" gas – the balance of the 3023 PJ which was the subject of the SECWA contracts – to the SECWA Replacement Buyers.[137]

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[136] *North West Gas Development (Woodside) Agreement Act 1979*, Schedule 1, recitals (c) and (d)
[137] *North West Gas Development (Woodside) Agreement Act 1979*, Schedule 1, clause 4(1).

These replacement contracts were termed the Disaggregation Contracts, which came into force on 1 January 1995 and were for terms of up to 12 years. These contracts were:

- the Electricity Corporation (for electricity generation in the South West) for a daily contract quantity of approximately 120 TJ per day;
- the Electricity Corporation (for electricity generation in the Pilbara) for a daily contract quantity of approximately 12 TJ per day;
- the Gas Corporation for a daily contract quantity of approximately 95 TJ per day;
- Alcoa of Australia Limited for a daily contract quantity of approximately 170 TJ per day;
- Hamersley Iron Pty Limited for a daily contact quantity of approximately 14 TJ per day; and
- Robe River Mining Co Pty Ltd and Robe River Iron Associates participants for an aggregate daily contract quantity of approximately 4 TJ per day.[138]

The 1994 amendment therefore transferred the domestic reservation obligation from the original SECWA contract to the State Agreement. This obligation was to supply the Disaggregation Contracts for the stipulated volumes for terms of up to 12 years.

The contracts would therefore have expired by 1 January 2007. The Alliance understands that contracts have been subsequently renewed.

The 1994 amendment also committed the NWSJV participants to reserve and supply Third Priority Gas only for consumption in Western Australia. This is defined as sufficient proven reserves to deliver 2041 PJ to the domestic market, which are additional to the reserves dedicated to First Priority Gas and Export Gas.[139]

The NWSGJV currently supplies daily maximum quantities exceeding 550 TJ/d to the domestic market.

2. The domestic gas reservation has delivered significant benefits to Western Australia

The NWS reservation commitment has delivered significant economic, social and environmental benefits to Western Australia. It underpinned the

[138] *North West Gas Development (Woodside) Agreement Act 1979*, Schedule 1, clause 4(1).
[139] *North West Gas Development (Woodside) Agreement Act 1979*, Schedule 1, clause 4(1) and 44A(4).

establishment of the North West Shelf Project - Australia's largest gas development - and the subsequent LNG export industry.

It provided stable, secure and affordable energy supply to Western Australia for 25 years which enabled development of the State's mining, minerals processing, power generation and manufacturing industries. It also provided price competition to other alternative energy sources such as coal, ensuring competitive energy pricing for state development.

As the State Government noted in 2006:

> "The domestic gas reservation for the North West Shelf project is considered to have created an incentive for the project to sell gas into the domestic market, even if the price obtained was less than for exported LNG, as the only available alternative would be to leave the reserved gas in the ground, providing no return at all."
>
> "This has effectively resulted in the price of domestic gas being significantly less than average world prices. This in turn has placed competitive pressures on other alternative energy sources, such as coal. *The availability of low cost gas is considered to have been a major driver of the State's strong economic growth over the past two decades*."[140]

Domestic gas supply has underpinned investment and development of the State's value-adding mining, minerals processing, power generation and manufacturing industries – and the employment and export benefits they provide. The long term benefits to the State of energy supply far outweigh that attributable to LNG exports.

3. The NWS reservation commitment has not kept pace with the State's growing energy needs or increased LNG exports

While the North West Shelf reservation commitment has delivered significant benefits to Western Australia, the commitment has not kept pace with the State's growing energy needs. According to the WA Government's assessments:

- Of the original 4.7 Tcf of domestic gas reserved under the NWS State Agreement, around 2 Tcf of gas remains to be used and all of this has been allocated under contracts to existing gas users.

- An additional 1.85 Tcf of gas is reserved under the state agreement for the yet to be constructed Gorgon project.

- These gas reservations, along with the approximately 30 per cent of domestic gas currently supplied from smaller, non-export size fields,

[140] WA Department of Industry and Resources, *WA Government Policy on Securing Domestic Gas Supplies: Consultation Paper*, February 2006, p.2.

> will only be sufficient to meet the State's needs for approximately 10 years.[141]

The original reservation commitment has also failed to keep pace with the significant expansion in LNG exports. Since the original NWS State Agreement was concluded, LNG exports from the Project have substantially increased:

- Debottlenecking of the three original LNG trains increased capacity to 7.5 million tones per annum from the 6.5 million tonnes per annum originally envisaged;
- LNG Train 4 was completed in 2005;
- LNG Train 5 was commissioned in 2008 – increasing LNG exports to 16.3 million tonnes per year;

LNG exports from the NWSGJV have therefore increased by over 150 per cent from the originally envisaged 6.5 million tonnes per annum, with further expansions foreshadowed.

In contrast, supply to the domestic market by the NWSGJV has increased only marginally.

In 1997, the North West Shelf Joint Venture participants claimed, as part of their justification for seeking ACCC authorisation for joint selling, that authorisation would enable an expansion in domestic gas processing plant capacity to 1,100 TJ/d through the construction of an additional domestic gas processing train. This commitment was never met despite the ACCC granting authorisation to sell jointly, and clear demand for domestic gas.

The risk to the State's energy security from the focus on LNG developments was recognised by the State Government in 2006:

> "The domestic gas reservations under the North West Shelf State Agreement have essentially been used up, through allocation to commercially agreed contracts. Given the recent escalation in demand (and prices) for LNG, there now appears to be little incentive for the NWS Joint Venturers to supply additional quantities of gas to the domestic market. This is borne out by the fact that the NWSJV has recently scaled back its local marketing effort, while putting additional resources into marketing gas into new export markets (particularly China and the USA) where demand is growing rapidly and higher returns can be expected."[142]

Major producer focus on LNG exports has intensified in recent years:

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[141] WA Department of Premier and Cabinet, *WA Government Policy on Securing Domestic Gas Supplies*, October 2006.
[142] WA Department of Industry and Resources, *WA Government Policy on Securing Domestic Gas Supplies: Consultation Paper*, February 2006, p.2.

- Woodside is developing the Pluto Project which comprises a 4 million tonne per annum LNG train. The company is plans to build at least two more LNG trains to increase production to 12 mtpa;

- Woodside has flagged the potential for extra six LNG processing trains in WA and 77 million tonnes of additional capacity within the next few years;

- Chevron, Shell and ExxonMobil is developing the Gorgon Project which will entail three LNG trains with total capacity of 15 million tonnes per annum; and

- Apache Energy and KUFPEC have agreed to undertake joint development of the Brunello and Julimar fields with Chevron's Wheatstone LNG project.

According to the Australian Petroleum Production and Exploration Association (APPEA), up to 12 new LNG projects are at various stages of development and have the potential to increase LNG capacity to 80 million tonnes per annum.[143]

This underlines the importance of an effective domestic gas reservation policy to ensure that the long term energy needs of the local community are met.

4. Gorgon Project domestic reservation

The Gorgon Project is Australia's largest gas development project since the original North West Shelf Project. The Gorgon Project involves development of the gas reserves of the Greater Gorgon Area by Chevron (Project operator), Shell and ExxonMobil.

The original Gorgon Project proposed construction of two LNG processing trains for the production of up to 10 million tonnes of LNG per year. The Project was subsequently expanded to include a third LNG processing train to increase LNG production to 15 million tonnes per year.

The Gorgon State Agreement, scheduled in the *Barrow Island Act 2003*, includes a domestic gas reservation obligation. This commits the Gorgon participants to:

- reserve gas sufficient for the delivery of 2000 petajoules to the WA market;[144] and

[143] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.47; APPEA, 'Natural Gas: a Strategic National Asset', Speech of 25 March 2009.
[144] Gorgon State Agreement, clause 17(1).

- establish a domestic gas plant by 31 December 2012 to progressively deliver at least 300 terajoules per day of natural gas.

With around 40 Tcf of identified gas resources in the Greater Gorgon area, the 2000 petajoule (2 Tcf) obligation equates to only a 5 per cent domestic reservation commitment.

The State Agreement permits the Gorgon participants to apply to the Minister to extend the date for the establishment of the domestic gas project on the grounds that the domgas project "is not then Commercially Viable".[145]

The State Agreement defines "Commercially Viable" as meaning that a domgas project could be established "such that the commercial rates of return (including recovery of all capital and operating costs, taxes, royalties and other charges associated with the delivery of domestic gas) meet or exceed the minimum return considered acceptable for this type of project by a reasonable petroleum developer or by investors or lenders to this type of project."[146]

Commercial Viability is determined by having regard to prevailing market conditions (market access, contract duration, prices, certainty and timing of market opportunities), and the use of proven technology readily available within the industry.[147]

Following an application by the Gorgon participants, the Minister for State Development extended the date of establishment of the domgas project to 31 December 2015.[148]

The Gorgon partners also indicate that the supply volume will not be available until 2021 – some 12 years after the project's final investment decision:

- first domgas supply will only be "at or around ready-for-start up of the Project's third LNG train";[149]

- even at First Gas, the Project participants only anticipate supplying "up to 150 TJ/day of domgas";[150] and

- "it is their current expectation that may take six years after First Gas in 2015 to reach the 300 TJ/day target under the State Agreement". [151]

[145] Gorgon State Agreement, clause 17(7)
[146] Gorgon State Agreement, clause 17(8).
[147] Gorgon State Agreement, clause 17(9).
[148] Gorgon participants' submission to the ACCC in support of application for interim and final authorisation, 20 May 2009, para. 2.17.
[149] Chevron Australia, *Gorgon Project Update*, October 2008.
[150] Gorgon participants' submission to the ACCC in support of application for interim and final authorisation, 20 May 2009, para. 7.51.
[151] Gorgon participants' submission to the ACCC in support of application for interim and final authorisation, 20 May 2009, para. 7.51.

Chevron has claimed this is to avoid an "oversupply" in the WA gas market. The *West Australian* quotes Chevron:

> "Chevron says it does not expect to be delivering its full quota of 300 tj/day until 2021 *because of an expected oversupply in the domestic market* … Chevron said a number of competing projects would come on to the market by 2015 *and it needed to be mindful of oversupply*."[152]

As outlined above, there is no basis to these claims. Western Australia faces a serious gas shortfall of some 500 TJ/d until 2020, equivalent to half the size of the existing WA gas market.

Given domestic gas supply will account for just 5 per cent of expected Gorgon production and less than 5 per cent of development costs, there is no justification for delaying supply of Gorgon gas.

Indeed, withholding supply could be interpreted as a deliberate attempt to leverage the market conditions from a very tight gas market to ensure maximum prices from customers with no viable alternatives.

As the ESAA Report points out: "On strategic reasoning, it could be argued that producers are parking commercially viable gas resources in anticipation of future large-scale LNG developments or holding supply to leverage domesic gas prices above competitive levels."[153]

The ESAA Report also considers that deferral of "first gas" to the end of 2015 and supply of the full 300 TJ/d obligation until 2021 suggests that the State Government's application of the gas reservation policy is uncertain. This creates difficulties and increases investment risks for LNG producers subject to domestic gas obligations as well as for domestic gas producers trying to anticipate alternative sources of supply.[154]

5. The current State reservation policy

5.1 15 per cent reservation policy

The North West Shelf and Gorgon reservation commitments are contained in their respective State Agreements and therefore limited in application to their respective projects. They do not apply to prospective new gas developments in the State.

The need for a State-wide domestic reservation policy was identified by the State Government in 2006:

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[152] *The West Australian*, 'Barnett opens door to gas reserve changes', 16 June 2009.
[153] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.48.
[154] Energy Supply Association of Australia, *Western Australian Energy Market Study*, November 2009, p.47.

> "In addition to the Gorgon project, there are a number of other large gas projects in Commonwealth waters adjacent to Western Australia under active consideration. These include the Scarborough project (BHP Billiton the lead proponent), Browse Basin (Woodside, Inpex) and Pluto (Woodside)."
>
> "The driving force behind each of these projects is the rapidly expanding global market for LNG. In the absence of any other constraints, project proponents can be expected to seek to maximise their financial returns by developing each of these projects purely for export LNG sales, without a domestic gas component."
>
> "From the State's perspective, in order to ensure the continued availability of low cost gas supplies into the domestic market, it would appear prudent to impose domestic gas reservation requirements on each of these projects, through the use of State Agreements covering onshore processing facilities, in a manner similar to that used for the NWS and Gorgon."
>
> "It will also be important to ensure that, where gas reservations are imposed, that appropriate mechanisms are in place to ensure that the reserved gas can be delivered to the domestic market."[155]

In October 2006, the State Government announced a 15 per cent domestic gas reservation policy. The key elements of the policy are:

- The State's objective is to secure domestic gas commitments up to the equivalent 15 per cent of LNG production from each export gas project.
- This target reflects (then) current estimates of future domestic gas needs, estimated gas reserves and forecast LNG production. As these estimates could change over time the target will be subject to periodic review.
- The State will negotiate with LNG project proponents, on a case by case basis, regarding the method by which they will meet their domestic gas commitments.
- Market mechanisms designed to provide gas producers with maximum flexibility will be considered – including the option of fulfilling the obligation from a different source.
- The price of gas sold onto the domestic market will be determined through commercial negotiations between the gas producers and the consumers of that gas.[156]

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[155] WA Department of Industry and Resources, *WA Government Policy on Securing Domestic Gas Supplies: Consultation Paper*, February 2006, pp.2-3.
[156] WA Department of Premier and Cabinet, *WA Government Policy on Securing Domestic Gas Supplies*, October 2006.

The 15 per cent reservation policy has been strongly endorsed by the present State Government:

> "[T]he 15 per cent, that's been around since [Premier Charles Court's] day in the North-West Shelf agreement in a sense, it's not new. Alan Carpenter certainly articulated it in a strong way and I support what he did on that."
>
> "[W]ith respect to domestic gas, you can therefore expect governments to play a pretty strong role: it's our gas, we want to see it developed, exported as LNG, but we want to see the needs of the domestic gas market met. It is a proper objective, of the State Government has and one the Commonwealth Government supports."[157]

5.2 Pluto Project domestic reservation

In December 2006, Woodside committed to the State's 15 per cent reservation policy in announcing investment in the Pluto LNG development. In welcoming this decision, the State Government articulated the policy's application to Pluto:

- Under the terms of the Pluto domestic gas arrangement, Woodside has agreed to market and sell the equivalent of 15 per cent of the project's produced LNG to the WA energy market, providing it is commercially viable.

- Woodside and the State will negotiate in good faith an appropriate test of commercial viability.

- The commencement date of the commitment will occur five years after the date LNG is first exported from Pluto, or the date on which the 30-millionth tonne of LNG produced at the Pluto site is exported."[158]

Unlike the North West Shelf and Gorgon Projects, the Pluto Project is not the subject of a State Agreement. It is unclear what arrangements have been implemented to formalise the policy's application to Pluto, other than an exchange of letters between the WA Government and Woodside.

Woodside has been seeking to expedite development of Pluto LNG Train 2, and potentially Trains 3 to 5, by further exploration or buying-in gas from other fields.

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[157] Premier Colin Barnett, 'Transcript – Speech – Petroleum Club of Western Australia', 8 September 2009.
[158] Premier Alan Carpenter, 'Woodside commits to domestic gas reservation policy', media statement, 8 December 2006.

APPENDIX 3: TAX, ROYALTY AND INVESTMENT INCENTIVES

1. Current tax and royalty arrangements

The Commonwealth and State levy taxes and royalties on petroleum products which are extracted from Commonwealth and State territory. These taxes and royalties are levied to ensure that the people of Australia are adequately compensated for resources exploited by companies for commercial gain.

Broadly, if a hydrocarbon field is located in a Commonwealth area (defined as outwards of three nautical miles from the territorial sea baseline) it will be subject to the Petroleum Resource Rent Tax (PRRT) regime, which is levied by the Commonwealth Government.

If a hydrocarbon field is located in State or Territory areas (on-shore or in coastal waters) it will be subject to petroleum royalties collected by the State or Territory, and a crude oil excise collected by the Commonwealth Government. The PRRT regime does not overlap with the royalty and excise regimes.

In Western Australia, there are two exceptions to this arrangement. First, Barrow Island, an on-shore field which is subject to a resource rent royalty (RRR) which is shared by the Commonwealth and Western Australian Governments.

Second, North West Shelf exploration permits WA-1-P and WA-28-P, off-shore fields, which are subject to petroleum royalties and crude oil excises collected by the Commonwealth Government.

2. Current arrangements may act as a disincentive to domestic gas development

While the current Federal and State tax and royalty regime does not appear to provide any deliberate bias in favour of investors pursuing large scale LNG projects, certain features of the regime operate to encourage LNG export while discouraging domestic gas exploration and development.

Certain concessions provided under the PRRT system may act as an incentive for large companies to explore and develop large size petroleum fields in remote offshore locations. Because of the scale of the projects in terms of reserve development and production potential, gas export options have been pursued.

PRRT is levied on the super profits (as the regime permits for compounding to recognise the timing and risk of the exploration expenditure incurred) of a petroleum project, and as such expenditure spent on exploring and developing a petroleum field reduces a company's PRRT liability.

Furthermore, concessions afforded to larger companies, or groups of companies, allow them to transfer these un-deducted expenditures between projects or between companies, to minimise overall PRRT liability. This concession attracts large companies and groups of related companies, who have the capital and infrastructure to support exploring and developing multiple fields.

The exploration expenditure 150 per cent uplift concession also incentivised companies to explore and develop remote 'frontier' fields, located a substantial distance from existing infrastructure.

In practice, this concession was only able to be utilised by large companies, with substantial amounts of capital and infrastructure. These fields are too large and too remote from existing infrastructure to be developed for the domestic market alone and tend to be developed with a focus on the LNG export market.

In contrast, many of the smaller gas fields are located on-shore and in coastal waters. These fields are generally not large enough to support an LNG development and as such gas developed from these fields could be directed into the domestic market.

These inshore and onshore petroleum fields are subject to the royalty and excise regime, where royalties are calculated on the wellhead value of the petroleum produced, as opposed to profits. Because of this, producers may incur royalty liabilities for years before fields become profitable. This will impact upon the net present value of the investment and could discourage domestic gas development.

3. Results of modelling

To quantify the impact that fiscal incentives can have on domestic gas field developments, two quantitative models were examined:

- a near-to-shore conventional gas field; and
- an on-shore tight gas field.

The impact of alternative incentives has been calculated in terms of the net present value (NPV) of after tax cash flows which the projects are expected to yield over a 10 and 20 year period.[159]

The base case scenario represents the current fiscal and taxation regime, in which no incentives are offered. These projects forecast marginal returns over a 10 and 20 year period, to reflect the situations often facing potential investors in domestic gas fields.

[159] A discount rate of 15% was used to calculate the net present value of future after tax cash flows

The impact of the alternative tax, royalty and investor incentives on the NPV of the projects over a 10 and 20 year period are shown in the Table 1 below.

Table: Results of scenario modelling

	Scenario	Near-shore DomGas project				Onshore tight gas project			
		NPV of 10 years of after tax cash flows ($M)	% impact of incentive on NPV	NPV of 20 years of after tax cash flows ($M)	% impact of incentive on NPV	NPV of 10 years of after tax cash flows	% impact of incentive on NPV	NPV of 20 years of after tax cash flows	% impact of incentive on NPV
1	Base case (no incentives)	55.96	*na*	$18.52	*na*	$70.31	*na*	$119.76	*na*
2	Reduce royalty rate to 5%	89.79	*60.46%*	$57.14	*208.56%*	$91.48	*30.12%*	$144.13	*20.35%*
3	Royalty holiday until 2015	101.08	*80.64%*	$63.64	*243.68%*	$97.11	*38.13%*	$146.57	*22.38%*
4	Rebase commodity value for OPEX and depreciation	59.70	*6.69%*	$22.26	*20.21%*	$84.50	*20.19%*	$135.69	*13.30%*
5	Resource Rent Royalty (40%)	-70.84	*-226.60%*	-$101.75	*-649.45%*	-$0.33	*-100.47%*	$35.41	*-70.43%*
6	Uplift in pre-well head expenses (175% allowable tax deduction)	79.03	*41.23%*	$41.59	*124.60%*	$73.60	*4.68%*	$123.05	*2.75%*
7	Reduce statutory cap on effective life of pipeline to 10 years	60.48	*8.07%*	$22.63	*22.21%*	$71.24	*1.32%*	$120.93	*0.97%*
8	Provide 3 year cash grant to offset CAPEX	79.18	*41.49%*	$41.73	*125.37%*	$73.96	5.19%	$123.41	*3.05%*

As demonstrated by the results, incentives such as reducing the royalty rate to 5% or providing a royalty holiday for the first 6 years of the projects have the greatest impact on the NPV of these projects over a 10 and 20 year period.

In these models, introducing a resource rent royalty has the effect of reducing the NPV of the projects, due to the significant revenue which the fields generate at the height of their production, relative to their costs.

Other fiscal incentives (such as rebasing commodity value for royalty assessment, providing increased deductions for eligible expenditure, allowing for quicker depreciation of capital assets or providing cash grants) all help to improve the NPV of the expected returns from the project.