The Allen Consulting Group

Gorgon Gas Project Joint Venture Application for Authorisation of Joint Marketing

Final Report

July 2009

Report to Australian Competition and Consumer Commission

The Allen Consulting Group

The Allen Consulting Group Pty Ltd

ACN 007 061 930, ABN 52 007 061 930

Melbourne

Level 9, 60 Collins St
Melbourne VIC 3000
Telephone: (61-3) 8650 6000
Facsimile: (61-3) 9654 6363

Sydney

Level 12, 210 George St
Sydney NSW 2000
Telephone: (61-2) 8272 5100
Facsimile: (61-2) 9247 2455

Canberra

Empire Chambers, Level 2, 1-13 University Ave
Canberra ACT 2600
GPO Box 418, Canberra ACT 2601
Telephone: (61-2) 6204 6500
Facsimile: (61-2) 6230 0149

Online

Email: info@allenconsult.com.au
Website: www.allenconsult.com.au

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Chapter 1

Introduction

The ACCC has sought the advice of the Allen Consulting Group on matters relating to an application by the participants in the Gorgon Gas Joint Venture to engage in joint marketing of natural gas to Western Australian customers. ACG committed to provide a preliminary report by June 30th, 2009 and a final report in July 2009.

On June 24th 2009, the Commission granted conditional interim authorisation for joint marketing to occur. Interim approval is conditional on the GGJV committing to an independently audited and approved ring-fencing regime, and any gas sales agreements entered into during the period of interim authorisation containing a condition precedent that the agreement will not come into effect unless the ACCC grants authorisation.

The ACCC may review its decision on interim authorisation at any time.

Chapter 2

Background

2.1 Project description

The Gorgon project is a major gas project scheduled to commence operation in 2012, subject to a final investment decision by end 2009.

The Gorgon Gas Joint Venture (GGJV) is an unincorporated joint venture consisting of Chevron (50%), Shell (25%) and ExxonMobil (25%). The project will source gas from several petroleum permits held in varying percentage holdings between the proponents (or their affiliates) and a smallholding by BP. The total resource is more than 40 trillion cubic feet (TCF) of natural gas. The project may be the most expensive project ever developed in Australia. The Greater Gorgon resource is the largest known undeveloped gas resource under common control in Australia. The project will be initially based on the Gorgon and Jansz/Lo fields and other nearby fields. The Greater Gorgon permits and nearby permits held by other parties has considerable exploration potential. Figure 2.1 shows the location of the GGJV resources and their proximity to other Carnarvon Basin gas operations and prospects.

The project envisages:

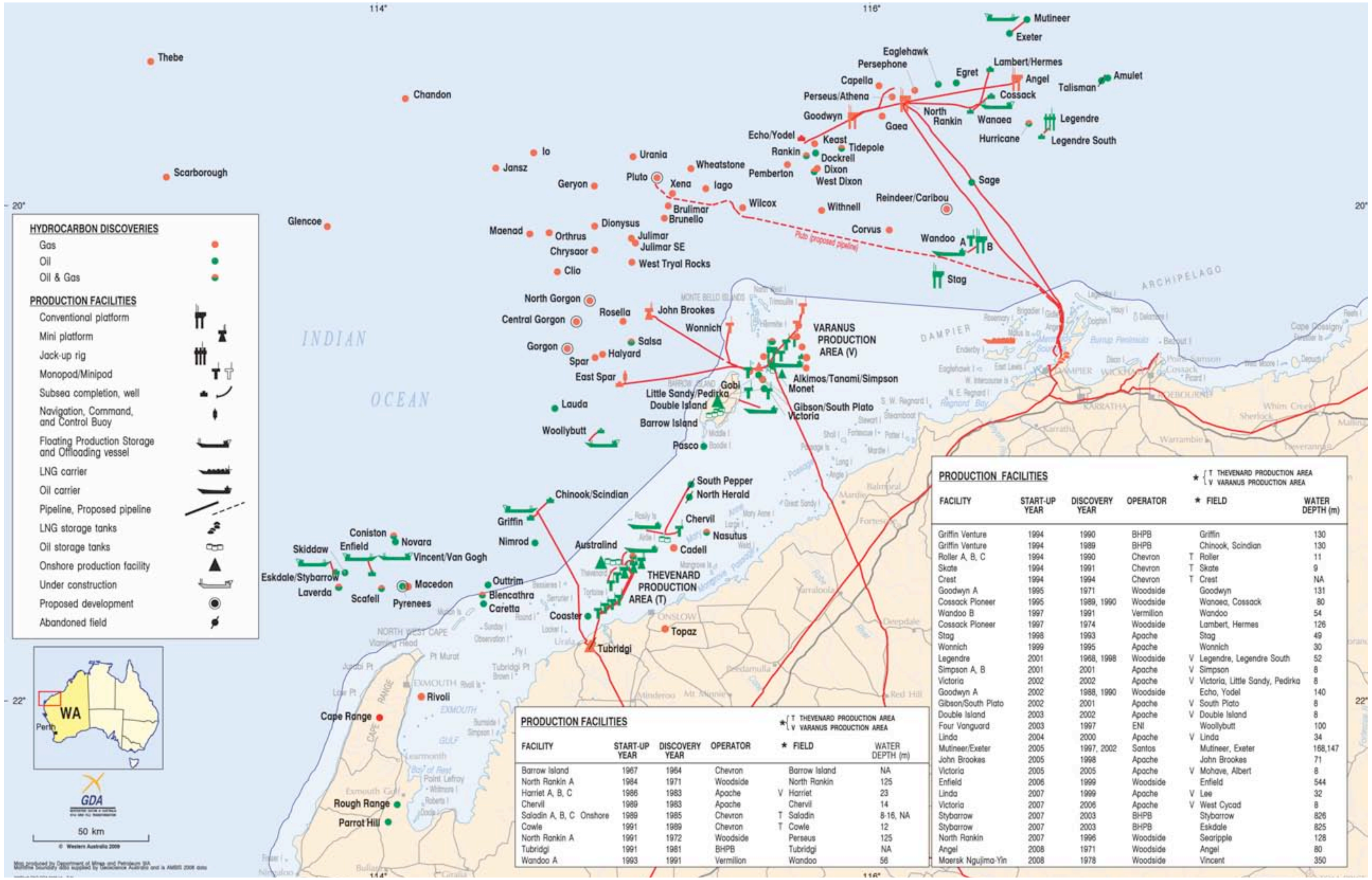
- Sub-sea development with pipeline connection to Barrow Island.
- Construction of an export-oriented liquefied natural gas (LNG) plant and a domestic gas plant on Barrow Island.
- Petroleum liquids (condensate and possibly liquefied petroleum gas (LPG)) will be separated.
- Storage and shipping facilities.
- Carbon dioxide re-injection into geological formations on or near Barrow Island.

The first of three LNG trains is planned for commissioning in 2012 with the third targeted by 2015. Each liquefaction train has a nameplate capacity of 5 million tonnes pa (mmtpa). Indicative gas consumption for the 15 mmtpa LNG plant is ~2500 terajoules per day (TJ/d), although de-bottlenecking could increase the throughput.

The domestic gas phase is planned for commissioning after the 3rd LNG train in 2015. Domestic gas production is anticipated to rise from 150 TJ/d in 2015 to 300

Figure 2.1

CARNARVON BASIN OIL AND GAS PRODUCTION, JANUARY 2009



FACILITY	START-UP YEAR	DISCOVERY YEAR	OPERATOR	★	FIELD	WATER DEPTH (m)
Barrow Island	1967	1964	Chevron		Barrow Island	NA
North Rankin A	1984	1971	Woodside		North Rankin	125
Harriet A, B, C	1986	1983	Apache	V	Harriet	23
Chervil	1989	1983	Apache		Chervil	14
Saladin A, B, C Onshore	1989	1985	Chevron	T	Saladin	8-16, NA
Cowle	1991	1989	Chevron	T	Cowle	12
North Rankin A	1991	1972	Woodside		Perseus	125
Tubridgi	1991	1981	BHPB		Tubridgi	NA
Wandoo A	1993	1991	Vermilion		Wandoo	56

★ T THEVENARD PRODUCTION AREA; V VARANUS PRODUCTION AREA

FACILITY	START-UP YEAR	DISCOVERY YEAR	OPERATOR	★	FIELD	WATER DEPTH (m)
Griffin Venture	1994	1990	BHPB		Griffin	130
Griffin Venture	1994	1989	BHPB		Chinook, Scindian	130
Roller A, B, C	1994	1990	Chevron	T	Roller	11
Skate	1994	1991	Chevron	T	Skate	9
Crest	1994	1994	Chevron	T	Crest	NA
Goodwyn A	1995	1971	Woodside		Goodwyn	131
Cossack Pioneer	1995	1989, 1990	Woodside		Wanaea, Cossack	80
Wandoo B	1997	1991	Vermilion		Wandoo	54
Cossack Pioneer	1997	1974	Woodside		Lambert, Hermes	126
Stag	1998	1993	Apache		Stag	49
Wonnich	1999	1995	Apache		Wonnich	30
Legendre	2001	1968, 1998	Woodside	V	Legendre, Legendre South	52
Simpson A, B	2001	2001	Apache	V	Simpson	8
Victoria	2002	2002	Apache	V	Victoria, Little Sandy, Pedirka	8
Goodwyn A	2002	1988, 1990	Woodside		Echo, Yodel	140
Gibson/South Plato	2002	2001	Apache	V	South Plato	8
Double Island	2003	2002	Apache	V	Double Island	8
Four Vanguard	2003	1997	ENI		Woollybutt	100
Linda	2004	2000	Apache	V	Linda	34
Mutineer/Exeter	2005	1997, 2002	Santos		Mutineer, Exeter	168,147
John Brookes	2005	1998	Apache		John Brookes	71
Victoria	2005	2005	Apache	V	Mohave, Albert	8
Enfield	2006	1999	Woodside		Enfield	544
Linda	2007	1999	Apache	V	Lee	32
Victoria	2007	2006	Apache	V	West Cycad	8
Stybarrow	2007	2003	BHPB		Stybarrow	826
Stybarrow	2007	2003	BHPB		Eskdale	825
North Rankin	2007	1996	Woodside		Searipple	128
Angel	2008	1971	Woodside		Angel	80
Maersk Ngujima-Yin	2008	1978	Woodside		Vincent	350

Source: Department of Industry and Resources: Western Australian Oil and Gas Review - 2008

TJ/d within six years. This is in line with the GGJV obligation outlined in the Barrow Island Act.

If approved, it will be the third export oriented LNG project developed in Western Australia. Each project is required to allocate gas reserves to the WA domestic market. The GGJV participants have been aware of the domestic obligation since at least 2003 when the Barrow Island Act was ratified. This agreement pre-dated the 2006 WA Domestic Gas Reservation policy that requires all WA-based export gas projects to reserve up to 15% of gas reserves for the domestic market. The price of gas sold will be determined by commercial negotiations. While both the Barrow Island Act and the Gas Reservation policy are unclear on the issue, presumably there would be some expectation by the seller for the price and terms to be not significantly less than export alternatives.

The State Agreement required the Gorgon participants to:

- reserve 2000PJ of domgas (i.e. natural gas for delivery to the mainland);
- submit to the Minister for State Development proposals for the establishment of a domgas project by 31 December 2012, including design features for the progressive expansion of the pipeline connection to deliver at least 300 TJ/day of natural gas. (The timing of this requirement was subsequently amended in April 2009 to 31 December 2015);
- until the time when at least 300 TJ/day of gas is first delivered to the mainland:
  - actively and diligently undertake the ongoing marketing of natural gas in WA and the design, engineering and other relevant activities for the establishment of a domgas project; and
  - report on progress to the Minister.

2.2 WA gas market

History

The Western Australian gas market is heavily influenced by the supply policy and contractual terms of the North West Shelf (NWS) gas project. Since NWS commenced domestic gas supply in 1984, it has been the mainstay of market supply. It made available seemingly abundant supply at internationally competitive gas prices. Under their agreement with the WA government, the NWS Joint Venture (NWSJV) was obliged to reserve and supply over 5000 PJ (~5 trillion cubic feet) of gas reserves for the domestic market. These obligations were made up of 3023PJ for supply to the State Energy Commission of Western Australia (SECWA) and 2041PJ to industrial customers. The first obligation (assigned to five large offtakers when SECWA was disaggregated in 1994) was finalized in 2005, and the other is expected to be completed in ~2016 or 2017.

The NWS partners market jointly to customers that meet minimum offtake requirements.

The Harriet project was commissioned in 1992, but did not become a major supplier until East Spar was commissioned in the late 1990s. Since then, NWS and Harriet have dominated market supply as Harriet supply has risen and production from other non-NWS WA gas fields has fallen. Over 95% of market supply of ~1000TJ/day now emanates from either the NWS (~63%) or Varanus Island (East Spar/Harriet/John Brookes) (~33%) developments.

The initial Harriet Joint Venture (HJV) marketed jointly to various customers. However, since John Brookes was expanded from ~70 TJ/d to ~180 TJ/d in 2008, participants have engaged in separate marketing. The 15 TJ/day Santos contract to supply Moly Mines' Spinifex Ridge project 33 PJ of gas over six years from mid-2010 at $16.20/GJ (basis US$90/bbl) is an example of this change in marketing arrangements. Santos has a 45% equity share in John Brookes. Presumably, gas offtake is balanced against deliveries to common customers, or by a gas balancing agreement that includes a notional price for valuation.

Market demand and prices

Gas demand is heavily industrialized. Based on CCIWA information, manufacturing (alumina smelting, steel, glass and cement), power generation and mining consume ~90% of domestic gas with residential cooking and heating using only ~10 per cent. Significantly, ~60% of electricity generation is gas-fired. This is the highest ratio of any state market other than South Australia.

Table 2.1

ESTIMATED GAS CONTRACTED BY WA BUYERS (PJ)

Customer	Volume	%
Alcoa	1025	24.72
Verve Energy	782	18.86
Burrup Fertilizer	710	17.12
Alinta	574	13.84
BHPB DRI	343	8.27
NewGen	340	8.20
Telfer	120	2.89
Wesfarmers	51	1.23
Origin Energy	45	1.09
EDL	42	1.01
Newmont Gold	26	0.63
Hammersley Iron	23	0.55
Edison Mission	21	0.51
Centaur Mining	16	0.39
Midland Brick	8	0.19
Windimurra Vanadium	6	0.14
AGL	6	0.14
TiWest	4	0.10
Wiluna	2	0.05
Great Central	2	0.05
TOTAL	**4146**	**100.00**

Source: MMA "Natural Gas in Australia" 16 July 2007

Western Australian producer gas prices have recently been among the lowest in Australia. Industrial demand has been fuelled by gas prices that are low by international standards. Historically, WA term contract producer gas prices have been slightly above A$2/GJ[1]. This equates to ~$12/barrel (oil equivalent). These prices are more reflective of price levels seen in market glut conditions in international markets. Notably, they are lower than the oil price equivalent energy prices that prevailed during the early 1980s (US$15-20/bbl). Prices have risen in recent years with several mining operations switching to gas from diesel fired power generation, but over 80% of demand continues to be in the south-west of WA for traditional industrial applications (alumina smelting, power generation, etc).

[1] Santos, "Value in the Energy Sector", UBS Resources Conference, 27 June 2007

Average producer prices are still below Australian East Coast prices. The average price in December 2008 was ~US$2.80/GJ or slightly below East Coast domestic prices[2]. By comparison, Henry Hub[3] prices peaked in June 2008 at ~$US13/GJ. In Australian dollar terms, this was similar to the price negotiated for the small volume of gas to be supplied by Santos from John Brookes to the Moly Mines Spinifex Ridge project. By comparison, in recent months, the NYMEX Henry Hub gas price has fallen sharply. The current price is $3.36/mmbtu[4], but this is still higher than the December 2008 average WA gas price of ~$US2.80. At no time in recent years has the Henry Hub price fallen to levels near the WA price. Current new LNG contracts are being indicated at near oil parity. At current oil and exchange rates, and assuming combined liquefaction and Asian shipping costs of $3/GJ, this equates to a netback price of ~A$12/GJ.

Supply availability

The NWS domestic obligation of 414 TJ/day expires in ~2016/17. Domestic sales after this time will presumably be dependent on whether domestic prices can be achieved at nearer to international alternative price levels. The outlook for LNG continues to look attractive despite the GFC. While LNG prices relative to oil have fallen (both the base price and escalation), they are still very high historically. Term contractors can expect to secure 90-95% of the base and escalation of oil. At US$75/barrel, this would netback to approximately A$12/GJ domestic gas equivalent, or more than three times the current NWS term contract price for domestic gas.

Supply from existing Varanus Island fields will also decline as reserves are depleted, but the nearby area has significant exploration and 'step-out' well potential nearby.

Supplementary supply sources are significant. A series of developments are slated for commissioning before the NWS obligation is exhausted. The Varanus Island partners plan to commission Reindeer in 2011 (120 TJ/day) and possibly the 200 TJ/day Julimar field in ~2014[5]. Both these projects are too small for stand-alone 'export orientated' projects. Similarly, the 150-180 TJ/d BHPB/Apache Macedon field is possible for the domestic market from 2012. In addition to Gorgon, the ExxonMobil/BHPB Scarborough (export from 2014) and Pluto developments will have domestic obligations. The combined potential incremental domestic availability of these fields is 1200 TJ/day, or larger than the size of the current market. Significant exploration potential also exists in the Carnarvon, Browse and Perth basins; for instance, the recent Halyard discovery offers potential for tie-in to the East Spar facility[6].

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2 Western Australia Department of Mines and Petroleum Statistics Digest 2008, Figure 29

3 Henry Hub (a pipeline inter-connect point in Louisiana) is the benchmark location for US gas prices.

4 NYMEX settlement price for August contract, July 10, 2009

5 Julimar development alternatives are still being reviewed. In May 2009, Woodside announced that it would engage in discussions with Apache and Kufpec to review the possibility of supply of Julimar gas into Woodside's Pluto LNG project. Apache Corporation's 10K statement (March 2009) said that it was evaluating LNG options as well as domestic gas options for Julimar gas.

6 Apache Corporation 2008 10K statement p7

Present price levels

In the WA gas market price environment, it is understandable that the NWSJV has elected to pursue export alternatives for gas that are not subject to reserves reservation. The LNG market has matured significantly in the past five years with a large portion of the Atlantic Basin market now reliant on spot and short-term purchases. With increased market depth and price transparency, energy derivatives enable US buyers and sellers to optimise between domestic and imported gas supplies. Additionally, the increase in demand from the strengthening Chinese economy (and their broader acceptance of spot market transactions relative to acceptance by Japanese and South Korean buyers) meant that LNG sellers like the NWS had sales alternatives at near oil parity. At the peak of the oil price, this could have generated a netback price more than eight times the domgas term contract price.

The Harriet JV partners do not have an export alternative, but were able to negotiate higher prices with customers in 2007 and 2008. For instance, in mid 2008, diesel for power generation at mine sites was being delivered at over $30/GJ. The Varanus Island projects were able to capture several customers with delivery via the Goldfields and Pilbara pipeline at up to $16.20/GJ, although most were below $10/GJ. The fall in oil prices since mid-2008 has resulted in reduction in prices.

Marketing arrangements

With the exceptions noted, all WA gas has been marketed by projects jointly. Market sources suggest that one or more of the Reindeer and Macedon partners may consider separate marketing of some or all of their entitlements.

Pipeline access

Pipeline access and capacity has been a significant impediment since the early 1990s. The major trunk line from Dampier to Bunbury (DBNGP) was at or near capacity for many years before expansion in 2005 increased daily throughput from ~550 TJ to ~785 TJ. A further expansion is planned for late 2010 that will increase capacity to approximately ~840 TJ/day[7]. The firm full haul capacity of the DBNGP is fully contracted under pre-existing contracts until at least 2019 with the potential for the capacity to remain fully contracted under these contracts until 2029 if options under these contracts are exercised by shippers.[8]

Limited access to the DBNGP was the prime motivation behind the construction of the Goldfields Gas Pipeline (GGP). Even though its capacity is only ~130 TJ/day, it enabled an outlet for the East Spar and expanded Varanus Island gas from 1996. It intersects the DBNGP near Onslow and delivers gas to Esperance via Newman and Kalgoorlie. This pipeline continues to be relatively fully utilized. Plans to expand capacity to 150 TJ/day by the addition of extra compression are underway.

The Pilbara Pipeline System (PPS) is a collection of three pipelines in the Dampier to Port Hedland region which have an uncompressed capacity of ~180 TJ/day. Capacity could be increased to 400 TJ/day relatively quickly if additional compression is installed. Both the PPS and 25 TJ/day capacity Telfer pipeline are primarily used for gas fired power generation at mine and mineral processing sites.

[7] DBNGP submission to ACCC on GGJV application for authorisation – June 4th, 2009

[8] Ibid

Even with all planned and potential expansions, if market demand increases even moderately, additional pipeline will be required.

An additional impediment to market liquidity are the terms of pipeline access. Both the DBNGP and GGP are subject to onerous access and reservation requirements that appear to restrict the ability of producers and buyers to consummate short-term supply deals.

2.3 Gas reservation policy

The Western Australian government passed legislation in 2006 which requires all gas projects in Western Australia to reserve up to 15 per cent of recoverable reserves for sale to domestic customers. The intent is to continue to capture the economic and social multiplier effects on WA domestic development of readily available gas supplies.

Each gas project seeking to establish processing facilities on WA territory must negotiate the quantity and delivery timetable and flexibility of the domestic obligation. The defining factors considered in assessing domestic obligations will be characteristics such as the size and accessibility of the resource, potential markets, construction timetables, etc). Significantly, an option available to project developers is the possibility of fulfilling the obligation from an alternative source. According to the WA government, “this will provide opportunities for owners of fields particularly suited to domgas development to negotiate commercial arrangements with LNG producers to meet their domgas commitment. The policy acts (as) an incentive for junior explorers to focus on developing domestic gas opportunities”[9].

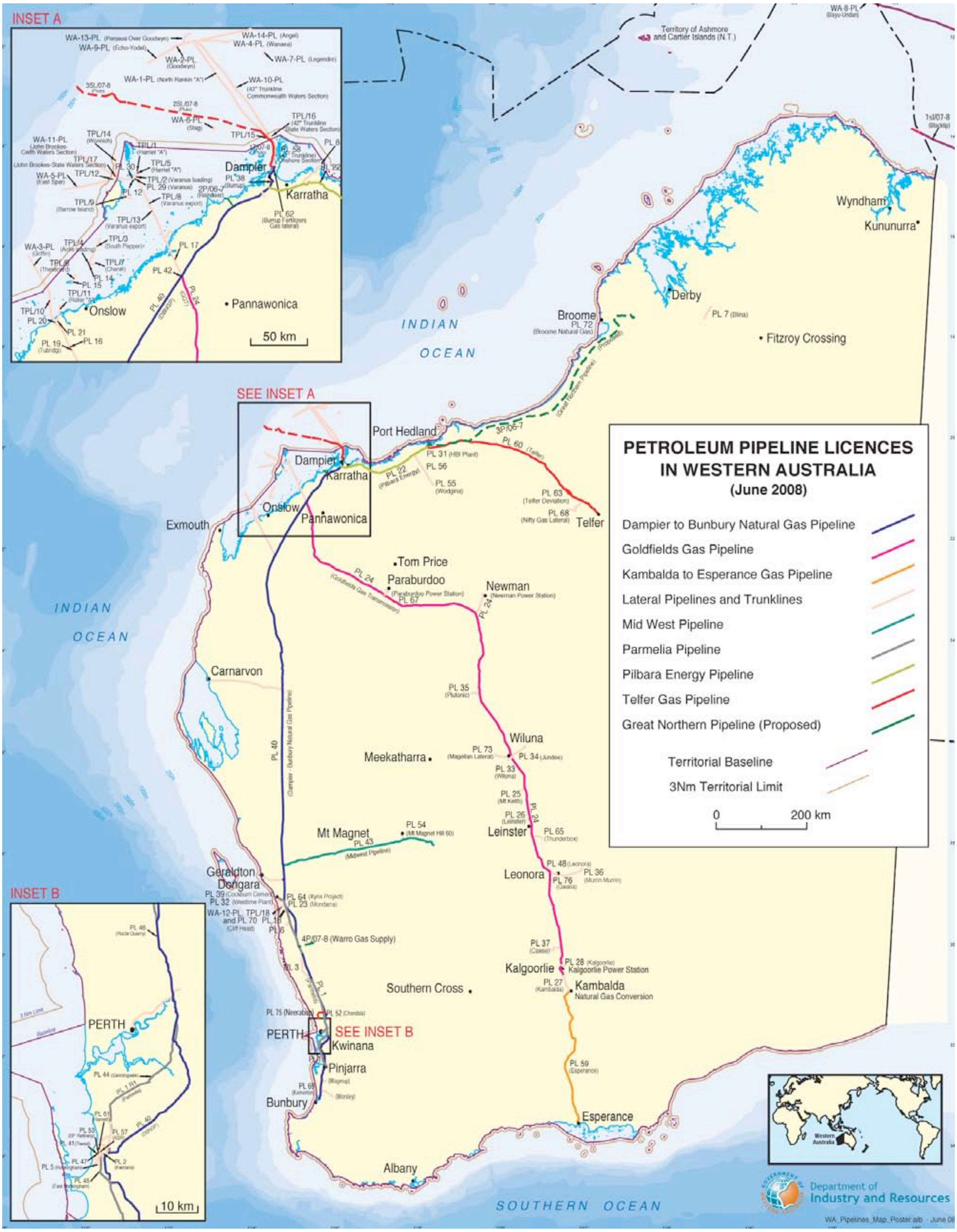
The price of domestic gas will be determined through ‘commercial negotiation’ between sellers and buyers. Even though Woodside’s Pluto project is the first export-oriented gas project to be approved subject to the domestic requirement since NWS approval, local sales will not commence until ~2016-18. Gorgon will be the first project required to conclude domestic contracts since the 2006 legislation passed.

Separate marketing into any market involves additional risk and increases the potential for conflict within the JV. These issues are compounded when the market is illiquid and lacks price transparency. Further, the potential to extract a premium for the risk is limited. Not withstanding these factors, the degree to which the participants would be dissuaded from future domestic gas production is debatable, particularly given the requirements of the WA Gas Reservation policy.

[9] Department of Premier and Cabinet, Government of Western Australia; “WA Government policy on securing domestic gas supplies”, October 2006, p5

Figure 2.2

WESTERN AUSTRALIAN PIPELINES



Source: Department of Mines and Petroleum June 2006

A significant risk to any seller in the WA domestic market is the risk of achieving prices lower than prices available in the export market. Based on recently negotiated Asian LNG contract levels, the equivalent gas netback price is significantly higher than current large-scale domestic gas prices. Historically, gas was available to WA customers at price levels that reflected the 1980s prices of energy alternatives when oil traded in the US$15-25/barrel. The current medium to long-term oil price outlook is much higher. Fundamental to arguments presented by several parties who have opposed authorisation of joint marketing is the claim that secure, low cost gas supply is required for sustained economic development in Western Australia. At issue is who should bear the cost of the underwriting of economic advantage. Should it be producers due to a requirement to sell a portion of the resource into a designated market rather than the best market, or should it be Government via subsidies to domestic buyers?

As a consequence of these price relativities, those projects that have an export alternative will have higher price expectations than those projects that do not have sufficient resource size or financial capability. The risk of lower prices is related to the compulsion to sell domestically rather than the mode of marketing even with the greater market power associated with joint marketing.

Complicating this situation is the ability to ‘trade’ domestic obligations with other gas producers/production areas. It is possible that trade of the domestic obligation could be the impetus of greater market liquidity.

Chapter 3

Submissions

3.1 Application for Interim and Final Authorisation by GGJV

The Gorgon partners argued that authorisation should be granted due to:

- Urgency because the Final Investment Decision (FID) is scheduled for second half 2009 but Shell and Exxon do not have suitable and capable staff to adequately assess the domestic market before FID is required.
- No material change to the WA market since 1998 ACCC NWS decision. ACCC concluded that separate marketing in WA was not feasible until some or all of the following factors were present:
  - increased number of customers;
  - increased number of new supply sources;
  - better access to delivery alternatives;
  - gas storage;
  - entry of brokers/aggregators;
  - creation of a gas related financial market; and
  - development of substantial short-term and spot market.
- The Gorgon project is a major greenfields undertaking with substantial upfront investment. It is imperative to minimize risks and ensure security of cashflows for the participants to have the confidence to invest.
- The WA market lacks the maturity of markets where separate marketing occurs (US and UK examples are given).
- Joint marketing will not give rise to anti-competitive effects in the WA market.
- For separate marketing to occur, a Gas Balancing Agreement (GBA) for the domestic phase would need to be negotiated between GGJV participants.
- There are risks involved with operating a GBA.
- There are specific factors that render a GBA infeasible in the WA market:
  - lack of a transparent spot market;
  - misalignment of project risks and rewards; and
  - potential for detrimental impact on field development and expansions.
- The obligations to supply the domestic market under the State Agreement are subject to a 'commercial viability' test. Without authorisation to joint market, GGJV participants would face higher costs (marketing representation, transaction costs, gas balancing, etc) that could result in one or more of the participants determining that supply to the domestic market is financially unattractive. This would deprive buyers of a supply source.

- Joint marketing would have no material impact on price and other terms and conditions of sale.
- Joint marketing would have no impact on the number of significant suppliers because several companies' hold of equity shares in several gas projects.
- If GGJV were required to engage in separate marketing it would dissuade the GGJV participants from future investment in domestic gas production.
- The duration of joint marketing authorisation sought is the earlier of (i) when agreements have been reached for the sale of 2000PJ of domestic sales, or (ii) six years from the date of first gas. If condition (ii) is applicable, joint marketing should be permitted for the duration of these agreements.

3.2 Public benefit

The GGJV argues that greater public benefit is derived from the approval of joint marketing than the impact of anti-competitive detriments:

- Public benefit will be derived from:
  - economic development in WA, including encouragement of capital investment, greater competition in the gas market and regional benefits;
  - improved business efficiency, including improved international competitiveness;
  - expansion of employment;
  - development of import replacements;
  - growth in export markets;
  - promotion of environmental protection by enabling greater availability of gas for power generation;
  - lower cost base likely to lead to prices that are lower, or at least no higher, than prices under separate marketing;
  - strong inter-project competition;
  - more domgas available on the market, and sooner; and
  - avoids creating a disincentive for future investment.
- There will be no material anti-competitive detriments, because if GGJV participants are required to market separately offerings on price, volume and delivery points are very unlikely to be materially different because participants:
  - share a common cost base;
  - will be restricted to their equity share in the volumes that they can offer for sale; and
  - share a common infrastructure for the delivery of domestic gas.

3.3 Submissions from other parties

Alcoa

Alcoa believe that market conditions in the WA gas market have changed sufficiently to support separate marketing due to:

- the increased number of sellers;
- multiple buyers;
- short-term gas trading; and
- balancing and storage arrangements in place.

Pipeline line pack flexibility can be used to store gas.

Additional costs associated with separate marketing are immaterial.

Whilst acknowledging the public benefit provided by the Gorgon project, the public benefit provided by companies like Alcoa who rely on a competitive market is also important. Joint marketing will hinder market liquidity.

Interim authorisation would substantially weaken the commercial interests of buyers if the ACCC subsequently reverses the authorisation.

Alcoa considers the potential increase in costs associated with separate marketing is insignificant relative to the increase in costs incurred by Alcoa if recent gas market contract prices are passed on to Alcoa. They claim that their competitive advantage stems from the relative security to long-term low cost energy supplies. If value-added businesses such as Alcoa become unviable, it will result in the loss of many thousands of jobs and community benefits. Alcoa link the increase in WA gas prices with lack of competition. They believe the time is right to further mature the market by introducing new competition.

Synergy

This submission addresses many of the issues covered in the Alcoa submission. In addition to these points, Synergy highlights that the need for urgency has resulted from inaction from the Applicants. Synergy states that the ‘Project’ was established in 2001, but until the interim application was submitted to the ACCC in May 2009, the Applicants did not appear to show the inclination to act urgently.

Given the Applicants’ assertion that at this time, Shell and ExxonMobil do not have the marketing capabilities in place to permit separate marketing, Synergy questions whether Chevron could commence marketing their 150 TJ/day entitlement and Shell and ExxonMobil market their entitlements once they have put in place the necessary staff.

Synergy also highlights a submission for authorisation for joint marketing of the Pohokura gas field in New Zealand. In 2003, the participants of the field sought authorisation from the New Zealand Commerce Commission for joint marketing of natural gas. The primary arguments presented were that the NZ market was illiquid with the result without authorisation for joint marketing; participants would delay investment commitment until they had sufficient confidence to their ability to conclude marketing arrangements. The applicants claimed that this might delay the project by up to three years. They argued that the public benefit of early development outweighed any potential competition issues. The Commerce Commission queried some of the arguments about market liquidity but on balance accepted that public benefit would accrue from earlier development than if the request for authorisation was refused. Accordingly, they authorised the Applicants (Shell, OMV and Todd Petroleum Mining) to market jointly.

In 2004, the Pohokura JV (PJV) advised the Commission that they were unable to agree on issues associated with joint marketing and sale, and that they intended to market and sell the gas separately. Separate marketing arrangements were concluded soon after. The timing of the investment commitment was unchanged from the original timetable.

In 2006, the Commission revoked the authorisation for joint marketing.

DomGas Alliance

Note: The DomGas Alliance submissions (8 June and 6 July) are the most detailed and comprehensive submissions. Many of the arguments are discussed in the submissions of others and therefore will not be re-stated in this summary. Only arguments that have not been adequately addressed in other submissions will be highlighted.

Joint selling by the GGJV would result in significant anti-competitive detriment by:

- significantly reducing the number of independent sellers from three to one;
- reducing customer choice over terms and conditions on offer;
- entrenching the already dominant market power exercised by Shell, Chevron and ExxonMobil;
- enabling the coordinated exercise of market power;
- extending the market power to other projects in which the participants are involved; and
- entrenching the effective minimum price for domestic gas.

The Alliance argues that the additional ‘public benefits’ claimed by the Applicants are illusory and accrue exclusively to the Applicants, including significant windfall gains expected from the suppression of competitive and concentration in market power with joint selling.

The market structure has altered materially since the 1998 NWS Determination and would now permit separate marketing.

The submission makes multiple references to the requested authorisation of joint marketing of the Pohokura gas project and the subsequent decision by the equity holders to market separately.

The submission also raised issues about the timing and importance of domestic supply. It questions why 'First Gas' is not expected until six years after FID and the full 300 TJ/day State Agreement Target is not reached for a further six years. The submission also notes that the domestic gas availability is only after full LNG production has been reached and in total represents ~13 per cent of gas utilisation after nine years after commencement of LNG exports. It notes that the Applicants have been separately marketing their expected shares of LNG to international customers since at least 2005. On this basis, the Alliance questions the Applicants' claim that joint marketing is necessary to underpin the overall Gorgon investment.

The submission argues that granting of interim authorisation would create significant harm to consumers. It refutes the Applicants' argument that if interim approval was granted, but then final authorisation was not given, the relevant market would be unchanged. The submission states that it appears to ignore the market reality in WA of the immense market power exercised by major producers and the commercial behaviour of suppliers operating in an extremely tight market. Further, it would reduce the number of potential sellers, limit customer choice over terms and conditions and entrench the strength of Chevron and Shell enabling the co-ordinated exercise of market power while entrenching an effective minimum price for domestic gas. It will create price expectations by the Sellers that may be detrimental to buyers if the GGJV is subsequently required to market separately. There would be an unavoidable risk of collusion because all sellers would now the others price expectations. The submission argues that buyers may then be in the invidious position of having to support the granting of final authorisation because any sales agreement entered into would include a conditions precedent that agreements will not be fulfilled unless and until final authorisation is granted.

WA gas prices have risen dramatically to be four to five times prices in the Eastern states. Further, despite WA's 'abundance' of gas reserves, current domestic prices are significantly higher than in overseas markets (such as Henry Hub or LNG netback prices).

On the question of 'urgency', as well as disputing the Applicants' claim for urgency so that the participants could obtain a firm understanding of the likely level and timing of demand, the submission also asserts that the Alliance had previously understood that the GGJV participants were marketing separately.

The submission appends a number of additional reports. Namely:

1. Domgas Alliance 2009 report: Western Australia's Domestic Gas Security.
2. Application for authorisation for joint selling for the Pohokura gas development December 2002.
3. CRA Report, Coordinated marketing of Pohokura Gas: An economics Analysis December 2002.
4. NZ Commerce Commission Decision 581 revoking authorisation for joint selling of Pohokura gas, December 2006.
5. Economics Consulting Services: Natural Gas Demand Forecast for Western Australia and Economic Impact of Supply Shortages, 2007.
6. Economics Consulting Services, Natural Gas Demand Outlook for Western Australia and Economic Impact, 2008.

The pertinent issues from these documents have either been included in the submissions of those opposing authorisation or in the ACG report.

Premier of Western Australia

This submission notes the obligation of the GGJV to deliver gas to the WA under a 2003 State Agreement and is pleased that the GGJV plan to honour this commitment. The submission supports the GGJV application for interim authorisation. The implication of the endorsement of the Application is that the Premier believes that the public benefit of joint marketing is greater than the potential anti-competitive consequences of it.

Wesfarmers Energy

Wesfarmers strong preference is for the GGJV to market separately because authorising the GGJV to market jointly will only serve to slow the development of a more dynamic competitive market. Wesfarmers is aware that Chevron had approached the market on behalf of the GGJV seeking expressions of interest in gas.

DBNGP

This submission claims that the Applicants made a number of factual errors in their submission. They conclude this is evidence that the GGJV have not made any significant investment in investigating the WA gas market.

Other than issues already canvassed in the submission of others who are opposing authorisation, DBNGP claims that the volume of gas trading represents up to 10 per cent of the gas delivered into the DBNGP on some days. It cites the March – May 2009 period where monthly average daily volumes ranged from 54.5 TJ to 69.8 TJ. It claims that the major customers all diversify their purchase arrangements across suppliers and even maintain a number of contracts with different terms and conditions with each supplier. These practices are creating a degree of liquidity in the WA market that did not exist in 1998 when the NWS authorisation was granted.

The submission expresses concern about how effective ‘firewalling’ of information between Gorgon and NWS marketing teams will be at Chevron.

CSBP

This company is a subsidiary of Wesfarmers Limited. It expresses similarly views and makes similar comments to those in the Wesfarmers Energy submission.

Eneabba Gas

This submission does not oppose the granting of interim authorisation but is concerned about the availability of short-term or spot supply.

ERM Power

This submission opposed authorisation, and noted that as a member of the Domgas Alliance, it support the Alliance’s views in this matter.

Chapter 4

Discussion topics

4.1 Joint marketing

Joint marketing is a common mode of operation in immature or failing markets. Markets of these types are characterized by features such as:

- a small number of buyers and/or sellers;
- predominately term contracts with a long tenure;
- a small and illiquid spot market;
- little price transparency; and
- few delivery alternatives.

The Eastern Australian gas market has many of these hallmarks, but the increase in the volume of spot gas availabilities and pipeline connectivity in recent years has increased market liquidity. Further, the development of a small derivatives market has resulted in greater price discovery. Despite this, the Eastern Australian gas market is still immature by international comparisons. The Western Australian market is even less developed.

Other features of the history of investment in gas projects in Australia have been the revenue profile of the project and financial standing of participants:

- When the large gas developments of Gippsland, Cooper Basin and the NWS were envisaged, revenue from domestic gas sales was the projects' most important revenue stream. (Note: high volume and high margin crude discoveries such as Fortescue and West Kingfish/Flounder/Bream were discovered after Esso-BHP committed to Bass Strait development. At NWS, the export phase commenced five years after supply to the domestic market).
- Companies that are now viewed as financially secure (e.g. Woodside, Santos) were virtually 'one project' companies when they committed to their respective projects. Even BHP was significantly exposed to the financial success of its Bass Strait investment.

Joint marketing is commonplace as a risk mitigation tool. Gas projects are characterized by high capital expenditure, low return and long payback. Long-term take-or-pay contracts reduce project risk and are generally required to give sufficient comfort to commit to the investment. This is even more significant where project funding is required. Joint marketing is perceived to reduce these risks.

The ACCC in its July 1998 determination that granted authorisation for joint marketing by the NWSJV noted that:

> "until some of the features more commonly associated with gas commodity markets develop in WA, the Commission accepts that separate marketing is likely to remain infeasible."

The determination went on:

> "While it is impossible to be prescriptive about exactly what market features need to develop before separate marketing will become viable in WA, the greater the number of the following list of market developments that are introduced, the greater the likelihood that separate marketing will be viable:
>
> - A significant increase in the number of customers.
> - The entry of new competitive suppliers.
> - Additional transportation options.
> - Storage.
> - The entry of brokers/aggregators.
> - The creation of gas-related financial markets.
> - The development of significant short-term and spot markets."

Most of these factors have not materially changed since the 1998 determination, but there has been some broadening of the number of customers and improvement in transportation capacity.

Number of customers

The 1998 determination noted that the NWS had seven domestic gas customers (Alcoa, Alinta, Western Power, Hamersley Iron, Robe River Mining, Mission Energy Co-generation and BHP DRI. Alinta and Western Power (now called Verve Energy) retailed to smaller customers. In addition, some of the small Perth Basin gas producers also had gas contracts with several of these customers.

Market demand continues to be heavily concentrated. In 2007, the top seven and ten customers in WA (not only NWS customers) represented 93.9% and 97.2% of total market volume respectively. Overall, only 20-30 customers had contracted directly with gas producers. Notwithstanding this fact, buyers still significantly outnumber sellers, although this would occur irrespective of whether joint or separate marketing occurred.

Entry of new suppliers

The importance of NWS to overall WA supply has fallen since the 1998 authorisation with the large increase in gas processed through the Varanus Island gas gathering system. The Apache/Santos East Spar JV (up to 200 TJ/day from 2000 before production decline) was closed in 2005, but their John Brookes development has filled the gap with a similar volume. Total Varanus system production remains over 300 TJ/day with the Apache/Kufpec/Tap Oil Harriet system continuing at ~90 TJ/day. Much of this gas was shipped via the Goldfield pipeline to mining customers, but the market continued to be significantly undersupplied, particularly when commodity prices were strong.

Production from NWS and Varanus Island accounted for only 96% of WA production in 2007, therefore the market continues to be restricted for choice.

Transportation options

Expansion of the DBNGP in 2005 and the commissioning of the Goldfields Pipeline in 1996 eased capacity limitations but pipeline access continued to be a limiting factor. Limited gas availability is more of a constraint, but if market demand (and supply availability) increases even moderately, additional pipeline capacity will be required.

There is a lack of clarity of the volume of gas that may need to be stored or the potential imbalance of gas sales that may occur. The DomGas Alliance submission[10] discusses the availability and use of the DBNGP for managing imbalances. It discusses the +/- 8% volume flexibility that users are allowed. It also quotes “total flexibility between inlets (production) and outlets (demand) which could be managed on the DBNGP under these various arrangements is therefore approximately +/- 470 TJ or in excess of one days production from the NWSG plant”. Unfortunately, in the absence of a GBA that enables exchange and/or valuation of entitlements, or availability of gas storage facilities, it is possible that the flexibility to manage normal imbalances of domestic gas offtake of the order of 100 TJ/day for a minimum of 90 – 180 days, or 9,000 – 18,000 TJ may be required. As a guide, the only current gas storage facility that operates in WA has the capacity to input or output 10 TJ/day.

Storage

WA currently has limited capacity to store gas. A small gas storage facility at Mondarra (Perth Basin near Geraldton) is operated by APT. Synergy described the WA situation as “(there is) limited storage availability within the Mondarra gas storage facility” in their submission to the Australia Energy Market Commission in February 2009. While APT announced plans in 2006 to expand the input/output capacity, it is not apparent whether it has been increased from 10 TJ/day. BHPB purchased the Tubridgi facility near Onslow in 2004 with the intention of potential use as a gas storage facility for their nearby fields, but it has not been developed. The Barrow Island producers have been injecting gas into their oil fields for many years so as to maintain reservoir pressure, but no extraction facilities are in place.

The scale of the current facilities could not in any meaningful way accommodate sufficient volume to store Gorgon domestic gas.

An indication of the comparative size and sophistication of the WA relative to US market is gauged by a summary of the US based on EIA statistics[11]:

- more than 210 natural gas pipeline systems;
- 302,000 miles of interstate and intrastate pipelines;
- more than 11,000 delivery points, 5,000 receipt points and 1,400 interconnection points;
- 399 underground natural gas storage facilities, including 123 operators;
- storage capacity for 4000 PJ of gas (~20% of annual demand);

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[10] DomGas Alliance, “Gorgon Gas Project: Application for joint selling authorisation” June 8th 2009, paragraphs 278-286

[11] Concept Economics December 2008 “Marketing of Natural Gas in the WA domestic gas market” pp57-59

- 49 natural gas import and export points.

Brokers/aggregators

The WA market does not have the structure to support trading. BHPB trade out of their take-or-pay gas obligation associated with the HBI commitment. Alinta and Synergy act as aggregators who on-sell to small industrial and commercial buyers. SECWA performed this role prior to its disaggregation. No significant new ‘arms-length’ aggregator as entered the market due to liquidity and pipeline access issues.

A number of brokers participate in the market, but the volume of gas brokered is limited.

Gas-related financial instruments

These instruments require a transparent market or settlement price. Despite an attempt to launch a derivatives market, a sufficiently liquid derivative market or representative pricing basis does not exist in WA.

Short-term gas market

With little substitution in the market, supply restriction and onerous pipeline access, the conditions are not conducive to short-term availability.

Much of the debate about the ability of the GGJV to market domestically hinges on the assessment of scale. The GGJV gas volume will make available ~ 15 - 30% more gas than currently in the market. The WA market will go from one that has been supply constrained (and therefore not in need of significant gas storage, gas broking and price transparency capabilities) to adequate supply. The advancements that have occurred in market maturity have not had to deal with the scale of volume that will become available with Gorgon.

On balance, it is fair to conclude that sellers attempting to conclude separate domestic gas marketing arrangements for a common resource of the size of Gorgon in a market the size of WA would incur higher marketing costs and significant risk of economic hurt[12] relative to other participants. Even with the negotiation of a GBA for domestic gas entitlements, participants are likely to face significant timing and price risk due to the absence of a viable and deep derivative market and inadequate storage opportunities.

The contrast between the market parameters of the WA domestic market and the international LNG market is significant. Similarly, the Western Australian market may never attain the level of liquidity seen in the US and UK. However neither of these facts implies that separate marketing will never be viable. Accepting that Gorgon will have a larger market presence, it could be asked why it is that medium-large fields like Harriet, John Brookes and possibly some of Reindeer and Macedon can be and are marketed separately, but the Applicants believe that the market conditions will not be conducive for Gorgon to be separately marketed for many years.

[12] “Economic hurt” is defined as effects that are not felt equally by each JV partner.

4.2 Buyer choice

Separate rather than joint marketing may provide buyers with greater choice of terms. While this may not necessarily result in lower prices, it will change the risk profile for the buyer. If joint marketing occurs, buyers may be faced with a single basis of pricing terms, escalation/de-escalation linkages, price review periods and triggers, payment terms, contract duration, take-or-pay terms and options relating to contract termination and extension, assignment, etc. Separate marketers could offer a range of terms that would not impinge of the responsibility of each seller to commit to supply subject to the terms of the project operating agreement. By changing the terms of the sale, the risk profile of the buyer changes.

4.3 Gas Balancing Agreements

Where JV participants engage in separate marketing, imbalances of ownership of product delivered, in-tank or unproduced between parties[13] invariably occurs. While this is counter to the philosophy of entitlement to production based on the level of equity participation, it is logistically unavoidable. Separate marketing of hydrocarbons is commonplace, so the principles of overlift and underlift are well established in project operating agreements. In fungible products like oil, condensate, LPG and LNG, imbalances are generally easily resolved and are therefore immaterial. Most petroleum joint ventures have operating agreements and/or lifting agreements which set out the principles under which entitlement imbalances can occur and how they must be resolved. These principles are determined before the commencement of operations so as to reduce scope for disputation and will cover:

- entitlement to product;
- the relative ownership of product produced or in-tank at the time that a marketable parcel is available. This is particularly relevant for availability of product that is delivered in discrete parcels i.e. a marine lifting of LNG or a truck loading of LPG. It is less obvious, but still relevant, for a continuous mode of delivery like a pipeline. In these instances, liftings are assumed to occur in periodic parcels (hourly, daily, etc);
- mechanisms to dispose of product that a participant declines to take. Generally these mechanisms are only executed where the operational integrity of the project is jeopardized, or as a last resort;
- the method and timing of actions to rectify an imbalance of ownership;
- projects will generally appoint an individual or group with the responsibility to ensure orderly function of the offtake operation. The key principles are fairness to all participants and protection of the operational integrity of the project. Some projects empower the coordinator of offtake to take whatever actions are required to ensure production can safely continue. In the first instance, the underlifting party is informed of their obligation to dispose of product. If the underlifting party does not propose an offtake program that alleviates the problem (i.e. agree to lift or arrange a sale or exchange with another

[13] Underlift is defined as when an equity partner is entitled to more gas (based on their equity share of the project) than they have received. Conversely, overlift is when a participant has received more gas than their equity share.

participant), the offtake coordinator will make the product available to other participants in the order of next entitlement to lift; and

- imputation of a value to product that the underlifting party failed to lift. This requires either a methodology to determine a market or transfer price for the assignment to another participant or in the case where disposal does not occur, determination of a penalty up to and including loss of entitlement (i.e. the defaulting party is assumed to have lifted the product and therefore their ownership entitlement is debited by an amount up to the level of lost production).

By definition, no party can be overlifted (other than within defined operational tolerances) without the approval of an underlifted party.

It is a guiding principle of most or all JV operating and lifting agreements that allocations of costs are based on equity entitlements rather than delivery of product.

4.4 Pohokura decision

It was reported that participants in New Zealand's Pohokura JV (PJV) could not agree on the terms of the joint marketing arrangements, but it could have related to conflicting business interests of the partners. The equity participation of the PJV was OMV 26%, Shell 48% and Todd Petroleum Mining 26 per cent. Among the various assets and activities of each of the partners, OMV held a 10% interest in the Maui gas field (the largest gas field in NZ), Shell had interests in the Maui and Kapuni gas fields as well as being a participant in the Whangeri oil refinery, and Todd Energy holds interests in Maui, Kapuni, Mangahewa and McKee gas developments as well as being a significant power generator and retailer. It is possible that the conflicting interests of Shell and Todd as operator of various fields and Todd's role as a gas buyer could have been the source of the disagreement. Power generation consumes almost 50% of NZ gas. Total NZ gas production fell ~40% between 2001 and 2004. Access to gas may have been the source of conflict.

4.5 Financial position of applicants

The GGJV application requests approval for joint marketing for:

- a period of up to approximately twenty years;
- less than 5% of the Greater Gorgon gas resource (2000 PJ of >40,000 PJ);
- between ~6% of project gas production in 2015 escalating to ~12% within six years of commencement of domestic sales;
- after inclusion of revenue from condensate and (possibly) LPG, a revenue stream that probably represents less than 5% of total project revenue (adjusted for time value);
- three of the largest companies (by market capitalization) in the world with a combined 2008 operating income of over $US120 billion;
- Chevron and Shell are equity partners in the largest domestic gas seller in WA; and

- ExxonMobil is the third largest gas seller in Australia, including a small interest in the WA market. Additionally, it is a 50% owner of the ~8000 PJ Scarborough gas field with potential development by mid next decade. ExxonMobil's share of the domestic gas allocation of Scarborough would be similar to their Gorgon equity (~500 PJ).

It is difficult to accept the argument put forward by the Applicants that joint marketing is required as a risk mitigation tool. While it is likely that separate marketing to domestic buyers will result in higher risk to the Applicants and domestic gas represents larger psychological risk than international market risk, it is not apparent that it is a large enough increase to materially impact on the investment decision because:

- it represents a small proportion of the total project;
- the domestic phase post-dates the export phase start-up by three or more years, therefore the project will probably by 'cash-positive' soon after commencement of the incremental capital expenditure required for the domestic phase;
- domestic gas prices will almost certainly have lower price volatility than the export and liquids phase;
- 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. They have over forty years of experience in the Australian gas market with current equity operations in Gippsland and Griffin, and previous involvement in the Cooper Basin gas marketing (through Delhi Petroleum).

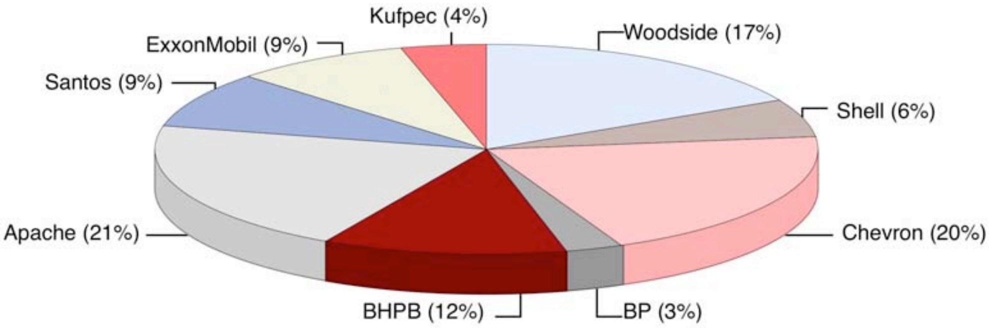
4.6 Marketing structures

An alternative to joint marketing on a project basis is separate marketing on a corporate basis. If this occurred, there may not be any material difference to market power relative to joint marketing on a project basis.

By late next decade, Chevron may have equity interest in three projects and ~20% of total WA domestic gas via its equity in the NWS, Gorgon and Wheatstone. By contrast, Gorgon at peak production will be ~17% of domestic supply. Based on all WA gas being marketed separately, there may be seven sellers with equity shares of 50 TJ/day or more with each of Woodside, Chevron, BHPB and Apache controlling more than 200 TJ/day. Figure 4.1 and Figure 4.2 demonstrate an estimate of the comparative market shares of 'corporate' and 'project' marketing structures for WA when Gorgon reaches full domestic production.

Figure 4.1

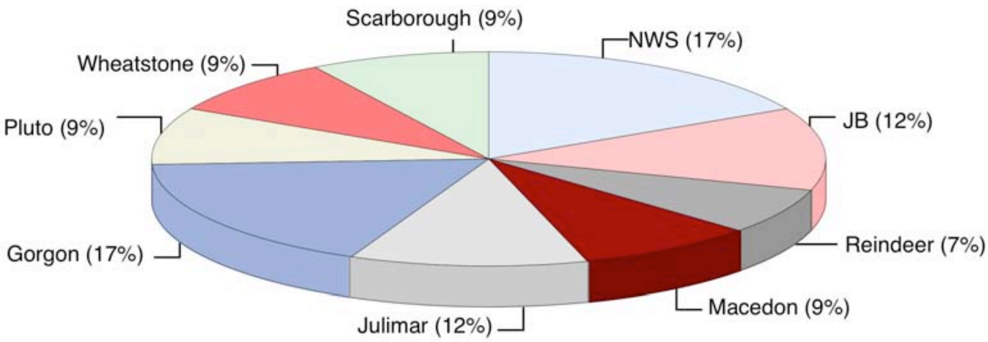
WA GAS PRODUCTION — ESTIMATED SHARES BY COMPANY



Source: Internal analysis

Figure 4.2

WA GAS PRODUCTION — ESTIMATED BY PROJECT



Source: Internal analysis

Further, it is possible that the next three projects to be developed may be separately marketed. Reindeer (2011), Macedon[14] (2012) and Julimar (2014) are all possible/likely to be separately marketed based on the actions of Apache, Santos and Kufpec in other joint ventures. Even though the contract to supply Citic Pacific 75 TJ/day for seven years was jointly marketed, Apache and Santos appear to be undecided about how they will market the remaining Reindeer gas. Additionally, as Pluto (~2015) is 100% owned by Woodside, it is possible that the next project to consider seeking authorisation is Scarborough (BHPB/ExxonMobil) for production in 2015-16.

The GGJV applicants are effectively requesting a 'life of obligation' joint marketing authorisation[15]. From the perspective of some buyers, this may be preferable because greenfields buyers would be disadvantaged by shorter period. New developments may require a longer period of security of supply to obtain

[14] DBNGP submission to ACCC on GGJV application for authorisation – June 4th, 2009

[15] The duration of joint marketing authorisation sought is the earlier of (i) when agreements have been reached for the sale of 2000PJ of domestic sales, or (ii) six years from the date of first gas. If condition (ii) is applicable, joint marketing should be permitted for the duration of these agreements.

project funding. Additionally, 'brownfields' customers may not commit to contract execution until 2012-14 when NWS decision is made, therefore increasing the duration of the authorisation.

4.7 Single monopoly argument

It could be argued that the Gorgon joint venturers will accrue all the market power that they can possibly get from their joint production agreement, and so they cannot obtain any more market power from a joint marketing arrangement. On this argument, joint marketing of Gorgon gas is not in itself anti-competitive.

This argument, well known in the industrial organization literature, is known as the 'single monopoly' argument.[16] It is often used to argue that vertical integration of upstream and downtream suppliers is not anti-competitive, because all the monopoly rents that can be obtained are already obtained if either the upstream or downstream firm is a monopolist.

However, for this argument to hold, the final good must be produced with goods that are combined in fixed proportions (i.e. there is no possibility of substituting between inputs if their relative prices change) and the monopolist supplies to a competitive industry. For example, suppose that there is a monopoly supplier of car engines that sells those engines to a competitive market of car assemblers, who put the engines together with other components. For each car, there is always one engine – no more, no less. Because each car requires one engine, and the engine industry is already monopolised, the output of the assembly industry is already at the level it would be if it were monopolised. The engine monopolist would have no incentive to raise prices of cars if it became also the assembly monopolist. Thus, there would be no anti-competitive effects if the monopoly engine supplier became also the monopoly car assembler.

Thus, in application to the gas industry, it could be argued that, given that Gorgon gas producers will already be in a production joint venture, there is nothing to be lost, from a competitive view point, from them jointly marketing as well. However, a weakness of this argument is that gas, as an input into production of final products, is not generally used in fixed proportions with other inputs. For example, a large buyer of gas, such as a petrochemical producer, if faced with a rise in the price of gas, would face an incentive to switch production to less-gas intensive petrochemicals. Similarly, there would be a switch from gas-fired to other types of electricity generation. When a monopolised input is combined with other inputs in variable proportions, economic analysis shows that while vertical integration may lead to lower overall costs, most likely prices in the downstream markets will rise, due to monopolisation effects.[17]

[16] See W Kip Viscusi, John M Vernon and Joseph Harrington, *Economics of Regulation and Antitrust,* 2nd edition, MIT Press, Cambridge Mass, Ch 8., *While* the Gorgon JV will not be the monopoly supplier of gas to the Western Australian market, the same argument can generally be made when the market is an oligopoly.

[17] Viscusi et al, p238.

4.8 Domestic gas project risk

Gorgon project risk emanates from various geological, engineering (offshore and onshore), market, environmental, political and financial exposures. Domestic gas is therefore a comparatively small component of total risk. The question regarding joint marketing versus separate marketing is an even smaller portion of total risk. It may therefore be misleading to consider the question of joint versus separate marketing from a 'whole of project' perspective as outlined in the arguments detailed in the Lateral Economics[18] and Concept Economics[19] reports. They discuss price determination, market power and risks from a 'whole of project' perspective but the issues pertaining to the request for authorisation of joint marketing are a sub-set of the Gorgon investment decision. CRA International[20] describes joint marketing arrangements as "an essential feature to the development of certain offshore Western Australian gas fields". It is likely that this statement is generally correct (e.g. the initial marketing of the NWSJV domestic gas due to its scale, or East Spar because of its geological risk), but not necessarily in relation to Gorgon.

It is self evident that the price drivers and market parameters of the LNG and domestic markets are significantly different. Delivery options and market depth are the two key differentiators, but others exist. As Lateral Economics states when discussing the comparative parameters of various Australian gas markets,

> "these arguments nevertheless remain ones where judgements between reasonable people and between different parts of the industry will continue to differ however much informed discussion might narrow the differences"[21]

but it is accurate to argue that the influence of the introduction of Gorgon into the WA domestic market will be greater than its introduction into the world LNG market. Notwithstanding this situation, the 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.

In general, ownership (i.e. gas, oil, LPG) balancing agreements are negotiated to confirm the entitlement to product and to compel participants to act in a manner that maintains the operational integrity of the project. They generally do not address the relative commercial position of parties, although overlifted parties can take action to ensure they are not commercially disadvantaged.

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[18] Lateral Economics "Accomplishing precisely nothing: Requiring joint venture producers to market their gas separately" September 2002

[19] Concept Economics; Marketing of natural gas in the Western Australian domestic gas market, December 1st, 2008

[20] CRA International "Critique of the Synergies report: WA Gas supply & demand – the need for policy intervention" 25 July 2007

[21] Lateral Economics "Accomplishing precisely nothing: Requiring joint venture producers to market their gas separately" September 2002 p3

4.9 Market failure

It has been claimed or implied in several submissions, both in favour and opposing authorisation, that the WA domestic gas market is suffering 'market failure'. In reality, all markets suffer from some degree of market failure; the only question is the degree to which specific market participants are disadvantaged, the duration of this disadvantage and whether authorities should take action to ameliorate the extent of the market failure.

Any market where supply increments represent a material proportion of the market size will suffer market failure. The WA gas market will regularly be characterised by this because of the size of the gas resource developments and the comparative size of the West Australian market. The WA market may see the launch of several large gas projects in the near future. At least some of these projects would not otherwise have a domestic market phase but for the WA Gas Reservation policy. Price, volume or timing of some of these projects may need to be compromised to accommodate increments of this size.

CRA International critiqued a report prepared by Synergies Economic Consulting Group for the DomGas Alliance. The Synergies report cites examples of market failure because gas supply was not available at prices that buyers were prepared to pay. While being described as 'market failure', it more likely reflects the size of the intended market opportunity relative to the size of the gas resource, the economics of alternative market development applications, or other development options for the resource owner.[22] For instance, on the balance of probabilities, GGJV gas sold into the domestic market will achieve netback prices below those achievable in the international market.

Further, on balance, these prices will probably be lower if the GGJV markets separately rather than jointly because of the weakened bargaining power of the sellers. The GGJV will be competing with strong, experienced, established sellers (the NWSJV, Apache and Santos) and a unified and well-briefed buyers group due to the actions of the DomGas Alliance.

[22] The rapid and sustained rise in energy prices between the late 1990s and 2008 coincided with large energy demand increases for mineral processing in WA. Most large oil/gas companies have been manpower constrained in developing projects. Consequently, projects have been prioritised to develop the biggest (or most profitable) rather than all projects.

Chapter 5

Comments and recommendations

ACG notes the decision by the ACCC to grant conditional interim authorisation for joint marketing. The Applicants are seeking to reach FID by late 2009. To date, the Applicants have acted on the assumption that joint marketing will be authorised. The Joint Venture Operating Agreement would need to be modified to allow separate marketing by negotiation of a Gas Balancing Agreement. Similarly, marketing teams would need to be mobilized to allow separate marketing. The Applicants claim that this could take up to six months. While this claim may be exaggerated, denial of authorisation will delay market enquiry to some extent.

ACG believes that the granting of interim authorisation is unlikely to have a material impact on competition in the short term because Buyers may not seriously engage in negotiation for some time. The marketing phase in this period may be exploratory or indicative only. Buyers may not provide anything more than expressions of interest. It is possible that little commercially sensitive information will be divulged.

With regard to the period prior to FID, joint discussion with potential buyers is logically sound. If a unified view of the market is developed, it reduces the potential for disputation on project viability and increases the efficiency of decision-making.

Given the potential for delay and the likelihood of minimal impact on market competition, the interim conditional authorisation is warranted.

Separate marketing of the GGJV domestic gas is possible in the WA market, but it is possible, or perhaps even likely, that one or more of the GGJV participants will incur economic hurt if separate marketing occurred. The market currently has few of the characteristics that would allow the Applicants to be confident that they each can secure contractual arrangements for comparatively similar lifting profiles at comparatively similar prices. Nor does the WA market have the attributes to allow large sellers like the GGJV participants to mitigate their risks through gas-related financial instruments or deferred supply by access to gas storage facilities. The extent to which this could defer the timing or alter the outcome of the FID is subjective, but requiring the GGJV to engage in separate marketing at this time would most likely be detrimental to the investment confidence of the GGJV. Notwithstanding this assessment, as noted in the submissions of the Domgas Alliance and others, the Applicants are some of the largest, most experienced and most financially sound corporations in the world. Further, the domgas investment represents a comparatively minor portion of the total project risk.

It is also noted that some (but not all) of Harriet and John Brookes[23] gas is currently marketed separately. Further, it is possible that some of Reindeer and Macedon gas could be marketed separately rather than jointly. Deliveries from these projects may start in 2011 and 2012 respectively.

[23] DomGas Alliance: "Western Australia's domestic gas security" 2009 Report p 65

Accepting that Gorgon is a significantly larger quantity of gas individually (but not cumulatively) than Harriet, John Brookes, Reindeer and Macedon, it raises questions about why the financially stronger GGJV believe joint marketing is essential for a comparatively small part of the total investment.

The Applicants have requested authorisation to jointly discuss and negotiate common terms and conditions, including price with buyers for the sale of 2000PJ or for a period of up to six years from the date of first supply of domestic gas. The Applicants' submission also states:

> Interim authorisation is urgently needed to enable the Participants to obtain a firm understanding of the likely level and timing of demand for domgas from the Project prior to a Final Investment Decision, which is scheduled for the second half of 2009.

There appears to be a conflict between the request to jointly conclude agreements for 2000PJ and "to obtain a firm understanding of the likely level and timing of demand". Given that Interim Authorisation has been granted, it 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.

If the ACCC decides to authorise the current request for joint marketing, it should endeavour to retain the option that separate marketing can occur when market conditions become conducive. By 2013 – 2016, in addition to Gorgon, it is possible that 550–700 TJ/day of new supply will either be in the domestic market or attempting to find a domestic market. Macedon (150-180 TJ/day from 2012), Julimar (200 TJ/day from 2014), Scarborough (100 – 200 TJ/day from 2014 - 16) and Pluto (maybe 100 TJ/day from 2016) all have a reasonable prospect of success. Additionally, Chevron's Wheatstone discovery is under consideration. Also, in this time frame, the probability of new discoveries in the Carnarvon and Browse Basins cannot be ignored because development can occur in 5-6 years from discovery; for example, Pluto was discovered in April 2005 and gas sales are expected in late 2010. As these projects attempt to enter the domestic market, it may lead to significant change as companies and projects develop marketing tactics. Gorgon cannot contribute to this 'competitive tension' if joint marketing arrangements have enabled its volume obligation to be locked away.

The Applicants' request for approval for joint marketing of up to the full 2000 PJ is effectively a request for authorisation for approximately 20 years. The Applicants' assertion that the Western Australian gas market lacks the market maturity at this time to allow all applicants to market their equity share of gas without one or more participants being harmed relative to other participants is probably correct. The source of the economic harm is disadvantage relative to other participants with regard to their share of project and operating costs, rather than lower prices and timing of sales receipts. However, it is not apparent that the necessary market conditions will not evolve over the next 6-8 years. The ACCC could consider joint marketing authorisation for a shorter duration (8-10 years), smaller total resource (1000 PJ) or restricted delivered quantity (200 TJ/day). In its decision, the ACCC should be mindful that authorisation for a shorter duration may disadvantage a 'greenfields' buyer in that it may not afford the buyer sufficient duration of supply security.

Alternatively, authorisation to jointly market could be on a case-by-case or 'exception' basis for specific customers, (i.e. the applicants could seek authorisation to jointly market if a buyer is seeking more than a defined volume or duration; for instance, 50 TJ/day or ten years). 'Exception' basis authorisation of large, long-term customers would create an offtake basis against which all Applicants could balance their ownerships. The customer could provide the price transparency for valuations for gas balancing or could effectively act as a physical 'clearing house' for volume settlement.

The alternative to joint marketing is separate marketing.

It could be that the outcome of separate marketing may not lead to significant diminution of market power relative to joint marketing. If the Applicants' request for final authorisation is refused, the Applicants will presumably separately market their WA gas entitlements. Depending on development scenarios and future NWS production, when Gorgon reaches full production, the Applicants will control either ~17% of the WA gas market if they jointly market, or Chevron, Shell and ExxonMobil will have ~20%, ~6% and ~9% respectively of market supply if they aggregate their entitlements from various projects and market on a corporate basis.

Chapter 6

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Wesfarmers Energy Limited – 3rd July, 2009