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## Annexure 7

# Structural characteristics of gas industry that prevent separate marketing

## 1. Introduction

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- 1.1 There has been considerable analysis of the feasibility of separate marketing in Australia, including analysis by reference to market structures which support separate marketing in overseas jurisdictions compared to Australia. This analysis includes the Australian Competition and Consumer Commission (**ACCC**) in various authorisation determinations<sup>1</sup>, the 1998 Upstream Issues Working Group's (**UIWG**) report<sup>2</sup> and the Council of Australian Governments (**CoAG**) December 2002 Energy Market Review entitled 'Towards a Truly National and Efficient Energy Market' (**Parer Report**).<sup>3</sup> Despite a clear preference expressed for separate marketing in these decisions and reports, there has been consistent recognition that the Australian gas industry lacks the requisite depth and liquidity to support separate marketing, and that there are a number of specific features that require further development before separate marketing could be considered feasible.
- 1.2 This annexure analyses recent developments in the gas sector with reference to those recognised structural barriers to separate marketing. It is clear from this analysis that although recent developments have increased supply side competition, the barriers to separate marketing of gas have not been significantly reduced. Those barriers, including a very shallow pool of customers and a prevalence of long term contracts, present particular difficulties for green fields projects. Further, the Participants believe that there is little prospect of the barriers to separate marketing being overcome in the foreseeable future, in particular because there will continue to be insufficient industry depth and liquidity to support separate marketing.

## 2. Industry characteristics and maturity

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### Historical background

- 2.1 The Parer Report recognised that Australia's gas sector has developed away from the 'previously common scenario of monopoly supply, single pipeline, single distributor-retailer in each capital city'.<sup>4</sup> Over the last decade, the removal of restrictions on interstate trade in

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<sup>1</sup> See *Mereenie Producers – Gasgo Sales Agreement (Mereenie Producers authorisation)* (1999) ATPR (Com) 50-271; *North West Shelf Project (North West Shelf determination)* (1998) ATPR (Com) 50-239.

<sup>2</sup> Upstream Issues Working Group, *Report of the UIWG to ANZMEC and CoAG (UIWG Report)*, December 1998.

<sup>3</sup> Council of Australian Governments Energy Market Review, 'Towards a Truly National and Efficient Energy Market', 20 December 2002.

<sup>4</sup> Parer Report at 112.

gas, the introduction of access to pipelines (both transmission and distribution) and the increase in access to customers (through the removal of exclusive franchises) have encouraged new pipelines, further exploration for and development of new gas reserves and the introduction of new suppliers. The Parer Report recognises that these developments have increased competition.<sup>5</sup>

- 2.2 Notwithstanding recent developments, the Australian gas industry is still immature in many important respects. The industry is characterised by a number of structural barriers which have been recognised by the ACCC and in various government reviews as a barrier to the separate marketing of gas. These barriers include a limited number of buyers and sellers and a lack of storage facilities, resulting in insufficient liquidity or depth of demand to support any significant spot market.
- 2.3 Rather than stifling upstream competition, joint marketing provides the very mechanism by which upstream participants are able to overcome those structural characteristics which would otherwise act as a barrier to production and development. As is evident from the market structure in North America and Europe, and as the ACCC acknowledged in the Mereenie Producers authorisation,<sup>6</sup> the feasibility of separate marketing is directly related to the operation of the market overall.
- 2.4 It is debatable whether the Australian gas industry will eventually mature sufficiently for separate marketing of gas to be viable, particularly due to its shallowness and lack of liquidity. As the Parer Report recognised, attempts to prematurely force upstream participants to overcome not only commercial but structural barriers in the development and supply of gas through a requirement to separately market are likely to retard the development of the industry rather than promote competition. This was also recently recognised by the Australian Bureau of Agricultural and Resource Economics (**ABARE**) in its report entitled 'Australian Gas Markets: Moving Towards Maturity' (**ABARE Report**).<sup>7</sup>

### **3. Previous consideration of joint marketing by regulators and government**

- 3.1 It has been consistently recognised in various authorisations granted by the ACCC, as well as in government reviews, that although separate marketing is preferable in a competitive sense to joint marketing, and should be promoted where possible, the Australian gas industry lacks maturity and is missing many important structural features present in Northern American and Europe. As discussed above, it has been recognised that in a shallow market such as Australia joint marketing is necessary to overcome these structural problems.

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<sup>5</sup> Ibid.

<sup>6</sup> In the Mereenie Producers authorisation at 33, the ACCC stated that 'the experience in other countries ... suggests that the feasibility of separate marketing is more directly related to the operation of the market overall than the production arrangements'.

<sup>7</sup> ABARE Report, December 2003 at 12.

- 3.2 A summary of the structural barriers to separate marketing identified in previous government considerations of the gas industry is set out below.

#### **4. ACCC**

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- 4.1 In the North West Shelf determination the ACCC stated:

While it is impossible to be prescriptive about exactly what market features need to develop before separate marketing would be viable in [the relevant market], the greater the number of the following list of market developments that are introduced, the greater likelihood that separate marketing would be viable:

- a significant increase in the number of customers;
- the entry of new competitive suppliers;
- additional transport options;
- storage;
- the entry of brokers/aggregators;
- the creation of a gas related financial market; and
- the development of substantial short term and spot markets.<sup>8</sup>

- 4.2 These factors were recently repeated by the ACCC in the Mereenie Producers authorisation as being potential market developments which would increase the likelihood of separate marketing becoming viable.<sup>9</sup>

#### **5. UIWG**

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- 5.1 The UIWG was given responsibility to report on issues relevant to the upstream gas industry that impact on the growth, diversity and level of competition in downstream gas markets. In this context, the UIWG considered whether joint venture suppliers should be required to market gas individually rather than collectively.

- 5.2 The UIWG recognised however that where gas markets are immature, prohibiting the joint marketing of gas could raise the costs and/or increase the risks of entering gas production. The UIWG identified the following features as indicative of a mature market and therefore relevant to the feasibility of separate marketing:

- a large number of gas customers, ensuring a diverse gas demand profile;
- the expansion of interlinks between pipelines leading to intensified inter-basin competition, thereby increasing the number of competitive suppliers;
- the existence of gas brokers or aggregators, providing supply and/or demand aggregation services;

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<sup>8</sup> North West Shelf determination at v. The Participants accept that these comments were made in the context of an authorisation application which related to Western Australia, however for the reasons outlined below it is clear that these factors also create a barrier to separate marketing in eastern Australia, particularly in the context of a greenfields project.

<sup>9</sup> Mereenie Producers authorisation at 37.

- the use of gas storage facilities close to demand centres;
  - the widespread use of borrowing and payment systems, balancing of accounts and other tools by joint venturers that will facilitate separate marketing; and
  - the existence of spot, secondary and/or futures markets for gas.
- 5.3 Of the features listed above, those that are 'already emerging in parts of Australia' according to UIWG are the increased number of gas customers (primarily as a result of the National Gas Code which is likely to act as a spur to demand and ensure diverse gas demand profile) and the development of pipelines, including the privatisation of pipelines, through the elimination of legislative and regulatory barriers to interstate trade.

## 6. Parer Report

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- 6.1 The Parer Report noted that structural features impact on the nature of competition in the Australian gas industry. These factors include:
- the large distances between supply sources and demand centres;
  - the prevalence of long term take or pay contracts;
  - competitive alternative fuels; and
  - a relatively small domestic market.<sup>10</sup>
- 6.2 The Parer Report considered the ACCC's observations, outlined above, in the North West Shelf determination in relation to market maturity. The Parer Report accepted that those factors presented a barrier to separate marketing.<sup>11</sup>
- 6.3 The Parer Report clearly recognised that joint marketing may be necessary for greenfields developments.<sup>12</sup> A report commissioned by the Parer Committee, entitled 'Separate Marketing of Natural Gas in Australia' (**KPMG Report**), expressly recognises that separate marketing of gas produced by the Project is not feasible:

Having regard to the need of the Project and the development of Timor Sea resources to secure significant market to underpin the investment, the importance of timing and coordination between joint venturers in a greenfields development and the remoteness of the gas from the major demand centres, separate marketing would not appear to be feasible.<sup>13</sup>

## 7. ABARE

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- 7.1 The ABARE Report considered whether requiring gas producing joint ventures to separately market gas would be likely to increase competition. ABARE stated that the:

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<sup>10</sup> Parer Report at 116.

<sup>11</sup> Ibid at 117.

<sup>12</sup> Ibid at 119.

<sup>13</sup> KPMG, CoAG Energy Market Review, *Separate Marketing of Natural Gas in Australia*, October 2002 at 37.

...impact of breaking up joint venture marketing is unclear. With three suppliers meeting over 95 per cent of consumption needs in the eastern market, the level of competition would increase, but the resulting structure would lead to serious questions as to how competitive the outcomes would be. Further, regardless of the competitive outcomes achieved, it is unlikely to be sufficient to generate enough liquidity to establish transparent spot markets. This situation is unlikely to change significantly over the medium term.<sup>14</sup>

## **8. Structural features preventing the separate marketing of gas**

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8.1 Although there have been significant developments in some areas of the gas industry in recent years, those changes have not removed some of the considerable barriers recognised by the ACCC and UIWG to separate marketing. An assessment of the nature and extent of structural barriers to separate marketing of gas in Eastern Australia, and the likely impact of those barriers on the Project, confirms that separate marketing of Project gas is not feasible in the foreseeable future. The Participants make these submissions in the context of their relevance to a greenfields development.<sup>15</sup>

## **9. Number of customers**

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9.1 The number of end user customers acquiring gas has increased in recent years. For the reasons outlined in section 5 of the Submission, it is submitted that this increase provides evidence of the substitutability of gas for alternative energy forms from the perspective of both residential and business customers.

9.2 However, although a large number of ultimate end consumers of gas will benefit directly from the impact that the introduction of Project gas will have on the price of gas and other energy forms in eastern Australia, the relevant demand profile for Project gas does not include the totality of end users. Rather, the viability of the Project depends on its ability to secure contracts with a much more limited range of major gas customers in eastern Australia who require gas in sufficient quantities to enable the Project to proceed.

9.3 As noted in section 5 of the Submission, there are essentially three major customer types who require gas in sufficient quantities and for a sufficient duration to enable the Project to secure sufficient contractual commitments to proceed. These customer types are:

- (a) energy retailers, most of whom supply electricity as well as gas to residential and business customers. The number of energy retailers has contracted in recent years through industry consolidation and may continue to do so;<sup>16</sup>
- (b) generators and co-generators who use gas as a fuel in the production of electricity. Although the number of gas fired generators is increasing, most are peaking plants

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<sup>14</sup> ABARE Report at 12.

<sup>15</sup> The Parer Report at 199 stated that 'not all the features of a mature market need be present for separate marketing from joint facilities to be possible'. The Participants do not agree with all of the conclusions reached by the Parer Committee in relation to this issue. It is not necessary, however, to debate the findings of the Parer Report in this context, since the Project is a greenfields project, not an established project.

<sup>16</sup> This position is supported by BHP Billiton in its supplementary submission to COAG, 14 October 2002 at 6.

which use little gas and gas is coming under increasing pressure from coal seam methane in Queensland to supply these plants; or

- (c) large industrial customers who use gas as a fuel for the generation of energy in various production processes, or as a feedstock in the production of ammonia and other products. The number of industrial customers using gas may increase gradually in the future as gas replaces other energy forms such as electricity and oil.

- 9.4 As the ACCC is aware, there has been a significant amount of horizontal and vertical integration in the electricity and gas industries. For example Origin Energy has been involved in horizontal integration by trading and retailing a variety of energy products. In addition, each of Origin Energy, AGL and TXU have undertaken significant vertical integration between businesses engaged in gas production or electricity generation, and the retail of those energy products.
- 9.5 In recognition of the narrowness of the customer base available to gas producers, and the fact that greenfields developments are unlikely to proceed unless sufficient contractual commitments are achieved prior to the final development decision, UIWG observed that the market, at least in so far as greenfields developments are involved, tends to operate as a 'contract' or 'project' market.<sup>17</sup> The ACCC recognised in the North West Shelf determination, and in its submission to the UIWG Report, that a project or contract market does not support separate marketing.<sup>18</sup>
- 9.6 It is clear that the ability of a greenfields project such as the Project to proceed is contingent upon securing sufficient, often long term, contractual commitments in order to underwrite the costs and risks of the project. This was recognised by ABARE in its 2002 report entitled 'Australian Gas Supply and Demand Balance to 2019-20', which stated that:
- The viability of the 2500km pipeline project (typically referred to as the PNG pipeline) relies on a large number of factors, but critically on securing sufficient foundation customers to underpin long term demand.<sup>19</sup>
- 9.7 The larger the project, the greater the number of contracts required. The confidential table at Annexure 5 which summarises negotiations between the Project and potential customers over the last five years clearly illustrates the limited number of customers with large demand requirements to which Project gas has been marketed. Until recently the Project had been unable to aggregate sufficient customer commitments to justify a decision to proceed to the Front End Engineering and Design (**FEED**) stage. Substantial further commitments are still required for the Project to achieve required financial returns over its life. It is, therefore, still appropriate to characterise the demand for gas from a greenfields project, such as the PNG Project, as being 'project' or 'contract' based, and the relevant class of customer, to whom Project gas will be delivered, as quite narrow.

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<sup>17</sup> UIWG Report at 29.

<sup>18</sup> North West Shelf determination at iv.

<sup>19</sup> M Fainstein; J Harman and A Dickson, *Australian Gas Supply and Demand Balance to 2019-20*, ABARE Report to the Commonwealth Department of Industry, Tourism and Resources, August 2002 at 22.

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## 10. Expansion of interlinks between pipelines

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- 10.1 As detailed in section 5, the construction and proposed construction of a number of gas pipelines in recent years has significantly increased both 'gas on gas' competition in eastern Australia, but also competition between gas and other energy forms. Important developments include:
- the construction of the Eastern gas pipeline which now allows Gippsland gas to compete directly with Cooper Basin gas in NSW;
  - the construction of the Port Campbell to Adelaide gas pipeline (the SEAGAS pipeline) which results in gas from the Otway region directly competing with Cooper Basin gas. This will allow gas from the Gippsland basin to be supplied to South Australia;
  - the construction of the Tasmanian gas pipeline which has resulted in the conversion of one of the two generating units at the Bell Bay Power Station from fuel oil to gas and links Tasmania to the Australian mainland gas network through connection to the Eastern gas pipeline; and
  - the construction of the VicHub which allows gas to flow freely between Victoria, New South Wales and Tasmania through construction of a link between the Eastern gas pipeline, the Tasmanian gas pipeline and the GasNet pipeline system.
- 10.2 As noted above, it is likely that the Project will result in a dry gas pipeline being constructed between Ballera and Moomba which will result in the Australian east coast dry gas network being interconnected for the first time.
- 10.3 In terms of gas on gas competition, the Project will compete directly for customers in Queensland, South Australia and New South Wales. The Project will therefore significantly increase inter-basin competition and will effectively compete against all other gas production joint ventures in eastern Australia. This represents one of the significant public benefits of the Project and is discussed in section 9.

## 11. Number of suppliers

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- 11.1 Notwithstanding the expansion of gas pipelines between the states and new gas projects such as Thylacine, Geographe, Minerva and Yolla, there will still remain a relatively small number of production joint ventures and producers supplying gas to eastern Australia in the foreseeable future. By way of contrast, the Northern America market, for example, is hugely competitive in production. A comparison of the United States, Europe and Eastern Australian gas industries, along with maps comparing the extensive and integrated gas networks in the United States and Europe compared to the relatively limited networks in Australia, is attached at Annexure 10.
- 11.2 Although there are only a limited number of suppliers in eastern Australia, strong inter-basin competition means that gas prices remain amongst the lowest in OECD countries.<sup>20</sup>

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<sup>20</sup> Parer Report at 109.

These low prices have been delivered through inter-basin competition between gas producers and by competition from other energy sources. Encouraging the development of new basins will increase the level of inter-basin competition, and thus competition in the energy market.

- 11.3 Although a significant increase in the number of suppliers may increase the viability of separate marketing, it cannot be assumed that separate marketing will result in a greater degree of competition than current inter-basin competition provides. In particular, it is very unlikely that artificially increasing the number of suppliers by forcing industry participants to separately market their gas entitlements from a greenfields project will enhance competition in the industry or lead to lower prices. As noted above, such a scenario is likely to act as a disincentive to new investment and development and thus reduce competition.<sup>21</sup>

## 12. Limited circumstances in which separate marketing has occurred

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- 12.1 There are only a limited number of examples of separate gas marketing in eastern Australia. These have occurred very recently, and due to the particular circumstances they do not indicate that separate marketing is viable in general for greenfields projects. To the contrary, they illustrate the extent to which on-going structural features of the industry limit instances of separate marketing to cases involving very small gas fields or fields where a vertically integrated joint venturer can supply itself with gas produced from the field.
- 12.2 The Participants are aware of the following recent developments in which some joint venture participants will separately dispose of their gas entitlement:
- the sale of Minerva gas from BHP Billiton to International Power did not involve Santos (10% equity partner in Minerva);
  - the sale of gas from Yolla joint venture participants to Origin did not include Santos (5% equity holder in Yolla); and
  - Woodside has entered into a Heads of Agreement with TXU for the sale of its share of gas from its interest in the Thylacene and Geographe Basin.<sup>22</sup>
- 12.3 In the first two instances, Santos (the joint venturer who will apparently not participate in sales involving the other venturers) has only a small equity share. The Minerva and Yolla fields are very small and are essentially each being developed to supply a major 'project' customer (International Power in the case of Minerva and Origin Energy in the case of Yolla).
- 12.4 In these circumstances, an established gas producer such as Santos might be able to separately dispose of its small entitlement by integration into its overall portfolio of existing gas supply contracts. The gas produced by Santos will not be supplied in competition with the bulk of the gas from those projects, and no intra-basin competition will occur.

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<sup>21</sup> The KPMG Report at 18 stated that 'it must be observed however that separate marketing is not, per se, a panacea for engendering greater competition in the Australian gas industry.'

<sup>22</sup> Woodside's supplementary submission to CoAG, 11 October 2002 at 2.

- 12.5 In addition, Yolla involves a situation where the majority of the gas produced will be acquired by one of the joint venture participants itself. Origin Energy has a 37.5% interest in the production joint venture, and is the operator of the field. Origin Energy is also the primary foundation customer for the project. This vertical integration clearly provides a greater degree of certainty for the Project.
- 12.6 The proposed development of the Thylacine and Geographe fields in the Otways also involves a situation where one of the significant joint venture participants, Origin, has a substantial gas retail operation. Such a supplier is likely to be confident of finding sufficient demand to dispose of its entitlement, either in the form of new customers or through greater capacity to deal with swing in its existing contracts. In its submission to the Parer Committee, Woodside noted a number of factors which differentiated the marketing of gas from the Thylacene and Geographe joint ventures to the marketing of gas from other fields.<sup>23</sup>

### 13. Gas storage

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- 13.1 An ability to store gas close to demand centres has been recognised as a very important characteristic necessary for the separate marketing of gas. Adequate gas storage facilities facilitate separate marketing by:
- enabling producers to take physical possession of their gas entitlement;
  - allowing joint venture participants to store their gas entitlement in situations where there is no immediate demand for that gas; and
  - providing a means to address imbalances in entitlements, and thereby facilitating the use of borrow and loan arrangements.
- 13.2 There are very few gas storage facilities in Australia, and underground storage capacity is limited.<sup>24</sup> The very limited volume of stored gas in Australia, whether stored in an expired gas field or a separate downstream gas storage facility, is used to respond to peak demand and seasonal swing rather than to provide base load gas. This is because the fixed costs of storage are high, as are the additional costs which arise from the technical and practical difficulties associated with storage (for example, the significant energy used in storing gas and losses incurred in the storage process) and capacity is very restricted. In Australia it is more likely to be economic to develop new gas production facilities rather than to store and extract gas.
- 13.3 Storage facilities provide flexibility to meet contract swing, additional gas supplies on peak days and during seasonal periods. Storage also provides network security and acts as a buffer to help maintain a gas field's production schedule. Availability of gas storage is a

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<sup>23</sup> Woodside, Submission to the Parer Committee, at 2.

<sup>24</sup> Australia has the following storage facilities: the Paaratte facility, Otway Ranges and the Newstead facility, Surat basin, owned by OCA. In addition, subsurface geological conditions which may be suitable for gas storage have been identified in the Two Wells-Port Wakefield area in South Australia. These facilities are used for emergency supply rather than seasonal swing. The Western Underground Storage Facility at Port Campbell, owned by TXU networks, is used for daily swings. It has insufficient release rates to cope with significant emergency supply.

characteristic of a mature gas market because it facilitates the uncontracted production of gas and the operation of a spot market.

- 13.4 Even in Northern America, where there are a significant number of storage facilities to which both producers and large customers have access, stored gas is used for peak supply rather than for base load demand. The high costs involved mean that the storage of gas is only likely to be economically viable in markets with significant seasonal swing. In Northern America, in order to keep the costs of stored gas at a reasonable level, gas is stored when prices are low (for example, when demand for gas is low in summer) and sold when demand peaks and the price increases, for example in winter.
- 13.5 In Australia, the state with the most substantial seasonal swing is Victoria. In South Australia, demand is generally flat throughout the year. In Queensland gas is primarily used for industry, and there is relatively little swing involved in gas volumes. In New South Wales, there is some seasonal swing in gas volumes. Adequate storage facilities are unlikely to develop in eastern Australia until industry participants recognise and accept peak load pricing.
- 13.6 Current storage facilities (which are sufficient only to address seasonal swing) are of little practical significance for Project gas sales since the Project will predominantly be supplying flat load customers (ie. customers who do not experience significant swings in gas demand during the year such as industrial customers in Queensland or New South Wales) or alternatively will be supplying a flat load to customers who will separately contract with other gas suppliers for the 'swing' component of their demand.

## **14. Presence of aggregators and gas brokers**

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- 14.1 The gas industry supply chain includes producers, distributors, transmission pipeline operators and retailers. Aggregators or gas brokers, in the Northern American and European sense of market participants engaging in short term or spot market trading of gas, do not exist in Australia. The absence of gas brokers is a reflection of the lack of depth in the market, and that a market structure predominated by long term contracts to a relatively small number of customers does not provide the environment in which a broker can engage in spot market trading.

## **15. Substantial short term and spot markets**

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- 15.1 There are no significant short term supply arrangements between gas producers and customers in Australia, and no meaningful spot markets. This was recognised by ABARE in 2003:

Although it is difficult to know with any certainty how many participants are required for an active spot market, it would appear that with only three to five major suppliers and a demand side that is likely to comprise less than thirty participants there is little likelihood that an

active transparent spot market in commodity gas could emerge in Australia in the short to medium term.<sup>25</sup>

- 15.2 A limited spot market commenced operation in Victoria on 15 March 1999, managed by VENCORP. The Victorian spot market was established under the *Gas Industry Act 2001* (Vic). However, the imposition of the spot market has not changed the market environment in any significant way. The main customers in the Victorian spot market are Origin, AGL, TXU and Visy. The Victorian spot market only deals with imbalances between the amount that a participant injects into the market, and the amount that the participant withdraws. Because swing demand is traditionally provided for by producers under existing gas arrangements, pricing is flat and there is little liquidity in the Victorian spot market. The Victorian gas spot market currently accounts for a very small percentage of Victorian sales per annum.<sup>26</sup> It is unlikely that PNG gas will be able to trade effectively in the Victorian spot market because of its remoteness and because of the additional pipeline tariffs to customers in Victoria.
- 15.3 In New South Wales, Queensland, South Australia and Tasmania, there are no spot markets, and it is unlikely that such markets would naturally develop in the near future in the absence of government mandate. In these states, limited pipeline balancing arrangements occur under long term contracts. Even if spot markets of the kind implemented in Victoria were imposed in other states, the uncertainty of spot market prices and volumes means that it is unlikely that separate marketing of gas under the Project would become viable. The Project relies on long term contracts with guaranteed prices and volumes which, as noted above, are largely unaffected by the spot market model in Victoria.
- 15.4 A comparison cannot be made between the very limited Victorian spot market, and the spot markets in operation in Northern America and Europe. The structure and depth of those markets (including the large numbers of buyers and sellers, the large volume of gas traded, the extensive and integrated pipeline networks) facilitate supply on the basis of spot or short term sales rather than long term contracts. It has been widely recognised that because of the different levels of maturity and size of the Australian and Northern American gas markets, comparisons of their respective marketing approaches are inappropriate.<sup>27</sup>

## 16. Borrow and loan agreements

- 16.1 As explained in section 2 of the Submission, the upstream arrangements between the Participants are very complex. Participants have different interests in the various licence

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<sup>25</sup> ABARE Report at 10.

<sup>26</sup> Lateral Economics, 'Accomplishing precisely nothing': Requiring joint venture producers to market their gas separately. A Supplementary Submission to the Energy Market Review', September 2002, at 25. In 2002, Victorian gas spot market sales were estimated to be less than 4% of Victorian sales per annum. The Participants understand that this figure represents the weighted average of the volumes of gas traded on the Victorian Spot market each month. This report is attached at Annexure 11.

<sup>27</sup> Parer Report at 190.

areas, and the PDLs will be developed at different times throughout the life of the Project. Even if it was theoretically possible for the Participants to separately market their entitlement to Project gas, they would need to implement 'borrow and loan' arrangements, otherwise known as 'gas balancing' arrangements, between them.

- 16.2 A borrow and loan arrangement will generally have three different stages:
- in the first stage it allows production to proceed at a rate which satisfies the needs of the partner wishing to take the most gas whilst ensuring the resource is being managed to produce optimal results;
  - if necessary, in the second stage the shares will be 'reversed' – that is, the party that was taking less in the first stage will take more in order to balance the shares over the life of the field; and
  - in the final stage there is little flexibility and relatively limited production as shares of production need to be kept in close alignment with whatever share is required to deliver balance over the life of the well.
- 16.3 Borrow and loan arrangements are more common in mature markets such as Northern America and Europe where a significant proportion of gas is supplied on the basis of spot or short term sales. In such markets, balancing agreements allow joint venturers to draw upon and separately market their gas entitlements at differential rates. The existence of spot markets means that one producer can repay a gas debt to another relatively easily and quickly.
- 16.4 In Australia, however, the lack of any significant spot market or short term sales, plus the physical process involved in gas extraction, significantly limits the utility of such agreements, particularly for a greenfields development such as the Project. The ACCC has recognised that such arrangements are complex, involving costs and risks as well as potential benefits, and may therefore be less likely in Australia during the early stages of the establishment of a competitive gas market.<sup>28</sup>
- 16.5 The Parer Report also recognised that:
- Effective allocation and balancing arrangements may not be possible in some circumstances, particularly where the risk to producers of finding buyers at a competitive price is high because there are few buyers and/or the volumes individual producers would have to place into the market are disproportionately large.<sup>29</sup>
- 16.6 A report, produced by Lateral Economics for ExxonMobil as a supplementary submission to the Parer Committee (the **Lateral Economics Report**), which more fully analyses the process of gas production and the practical barriers to the use of borrow and loan agreements in Australia, is attached at Annexure 11. In summary, the Lateral Economics Report found that there are a number of practical reasons why borrow and loan arrangements are not currently used by joint venturers in Australia and why they would not facilitate separate marketing of the gas from a greenfields project. These include:

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<sup>28</sup> Re AGL Cooper Basin Natural Gas Supply Arrangements (1997) ATPR 41-593.

<sup>29</sup> Parer Report at 119.

- the implementation of a borrow and loan arrangement depending on the agreement between the joint venturers. Given the considerable capital invested in the Project, this agreement is highly unlikely to be forthcoming where the intention of the Participant seeking an increased share is to bring forward its share of future sales revenue to the present and consequently defer the other Participants' cash flows. It is legitimate that the other Participants would be concerned to protect their own interests and their own investment in the Project;
- gas extraction is an inexact science, and the likely level of reserves many years into the future may not always be estimated precisely in advance, which can lead to disputes when one party is unable to repay its gas borrowings. This is known as the reserves risk;
- even where it is possible to formulate a sound estimate of the level of reserves a less than optimal management of the deposit might result in a certain proportion of it being unable to be extracted at a later time in the absence of extra unplanned wells being sunk (which would require additional capital investment expense and the risk of failure). This is known as facilities risk;
- borrow and loan agreements do not enable joint venturers to break free of their overall entitlement and liquidity constraints of the joint venture project. The scope for moving away from a particular venturer's entitlement is constrained in the short term and must be made up in the medium term;
- the lending joint venturer is subject to greater market uncertainty due to fluctuation of gas prices between the time of the loan and the time of repayment. These risks will increase the price of non-recourse financing and jeopardise the viability of the Project; and
- borrow and loan arrangements which are not confined to arrangements between joint venturers in the same project but extend to arrangements with other producers, are most appropriate where additional capacity is simply required to satisfy relatively small spot sales or short term arrangements. The absence of an available spot market which would enable repayment of borrowed gas means that the negotiation of borrow and loan arrangements in Australia would be very complex and costly.

16.7 The 'reserve risk' noted above is not a theoretical risk. As noted in section 6 of the submission, an incorrect estimate of reserves in the largest gas field in western Europe, the Groningen field, led to a lengthy legal battle between two companies and a compensation payment of \$2.6 billion.

16.8 The Participants also note in this context that the reason the Pohokura field, which was the subject of the New Zealand Commerce Commission (**NZCC**) determination,<sup>30</sup> needed to be developed quickly was to avoid a supply shortfall in New Zealand because, following a re-

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<sup>30</sup> NZCC Determination Decision 505, OMV New Zealand Limited; Shell Exploration New Zealand Limited; Shell (Petroleum Mining) Company Limited; Todd (Petroleum Mining Company) Limited at 59. For a copy of the determination see: [http://www.comcom.govt.nz/publications/GetFile.CFM?Doc\\_ID=428&Filename=505.pdf](http://www.comcom.govt.nz/publications/GetFile.CFM?Doc_ID=428&Filename=505.pdf).

determination of the Maui reserves, it became evident that those reserves had been overestimated by 421PJ (approximately 16% of final estimated reserves).<sup>31</sup>

- 16.9 For the reasons outlined above, there is a high degree of risk attached to the use of borrow and loan arrangements. Having regard to the complexities of the upstream arrangements which govern the Participants' interests in the Project, it is very unlikely that a borrow and loan agreement could be negotiated between the Participants which would be commercially acceptable to all Participants or which would not give rise to significant risks should there be a reassessment of Project reserves. Attempting to negotiate and implement such arrangements would substantially increase the cost and risk of the Project, and give rise to expensive inefficiencies.
- 16.10 Further, it is important to note that financiers would view the need for borrow and loan arrangements between the Participants as increasing the risk associated with the provision of project finance. If it became evident that the Participants would need to separately market during the term of any loan arrangement, then the need for the Participants to enter into borrow and loan arrangements between themselves, and the terms of those arrangements, is likely to affect the availability and the terms upon which funding would be extended.

## **17. Backhaul and swap arrangements**

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- 17.1 Backhaul and swap arrangements are uncommon in the eastern Australian gas industry as there is not a sufficiently deep or liquid market in Australia to support them. The Participants are only aware of the recently announced long-term gas swap agreement announced between Origin Energy and the Cooper Basin producers, although the Participants understand that other swap arrangements have occurred to a limited extent in Queensland. These swap arrangements are for significant volumes of gas over long periods of time, and are not the type of short term, flexible arrangements which are used in spot markets in the United States or Europe. There may also be some defacto swap arrangements in place from time to time (for example, involving occasional agreements between two companies to make available a supply of gas to one another from each other's fields or sources). Swap arrangements rarely occur in the southern states.

## **18. Reduced incentives for investment**

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- 18.1 There is no doubt that joint marketing provides an incentive for participants in the gas industry to make investments in the development of new fields that would not occur if each participant was required to dispose of its entitlement to gas separately. The ACCC has previously recognised that:

where evidence indicates that the prohibition of joint marketing of gas might dissuade new investment in gas production, then authorisation of joint gas marketing is likely to be in the public interest.<sup>32</sup>

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<sup>31</sup> Ibid at 28.

18.2 Similarly, the UIWG recognised that, although separate marketing is more competitive than joint marketing:<sup>33</sup>

... where joint venture production is seen as the most efficient way of undertaking gas developments, the UIWG considers that prohibiting joint marketing could raise the costs and/or increase the risks of entering gas production, where separate marketing is not viable. This could act as a significant barrier to entry, and could have a **perverse effect on supplier competition** by potentially discouraging new parties from entering the industry and by inhibiting the development of reserves. (emphasis added)

18.3 As the ACCC is aware, the exploration, development and production of gas, particularly if located in remote fields, is a very complex and costly exercise. It requires access to very large amounts of capital, the capacity to spread risk and the ability to manage production and sales of gas over many years. Accordingly, in the gas industry, joint ventures are employed as a means to spread risk and acquire sufficient capital at the lowest cost to underwrite exploration, development and production through the 'pooling' of resources. As discussed above, joint marketing provides a major incentive for companies to invest in the development of a gas field because it facilitates participants to overcome and manage the very significant costs and risks involved in a greenfields project such as the Project.

18.4 In a market characterised by a shallow pool of customers, it is highly unlikely that artificially increasing the number of suppliers by forcing industry participants to separately market their gas entitlements will enhance competition in the industry or lead to lower prices. It is likely to act as a disincentive to new investment and development and thus reduce competition.

## 19. Increased marketing costs

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19.1 Separate marketing involves additional costs which act as a further barrier to the Participants proceeding with the Project in the absence of the ability to jointly market Project gas.

19.2 The price of gas established in negotiation with a prospective customer necessarily depends on a number of considerations including:

- the quantity of gas to be sold over the life and duration of the contract;
- the physical point of transfer of ownership of the gas;
- the facilities for delivering gas, which are sized according to the maximum hourly and daily requirements of the customer; and
- the level of service that is required by the customer.

19.3 Customers must coordinate their production, development, financing and other requirements when negotiating the supply of gas from the Project. To require that each Participant negotiate these issues with customers separately could result in management

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<sup>32</sup> Professor Allan Fels, Speech to the AGA 2002 Gas Industry Forum, 5 June 2002, at 6.

<sup>33</sup> UIWG Report at 29.

and economic chaos in the context of development decisions and jeopardise the viability of the Project. Customers would also face additional costs, delays and uncertainty if forced to deal with each Participant separately.

- 19.4 The size and remoteness of the Project and the geographical spread of potential customers means that relative to other greenfield developments, its marketing and administrative costs are significantly higher. These complexities will exist for the life of the Project. As recognised by the KPMG Report, a joint approach will reduce the marketing overheads.<sup>34</sup> It also achieves cost savings in the administration of the contracts and avoids duplication of market development and other services. Negotiation with one commercial operator, rather than multiple producers, is more likely to avoid the possibility of the significant costs that would be associated with multiple price arbitrations/determinations over numerous different contracts.
- 19.5 The increased marketing and administrative costs associated with separate marketing could only be justifiable if they were off-set by a reduction in price or some other benefit through competition between the participants. In mature markets, participants in gas production joint ventures may be able to add value in separately marketing on account of their marketing methods and networks spread across a portfolio of gas production assets. However, where such value cannot be added due to the immaturity of the market (such as in Australia), separate marketing will not yield any meaningful price competition that could off-set these increased marketing and administrative costs. This is because the participants all face the same or very similar cost structures arising out of the joint production of Project gas and, due to the complex balancing arrangements that would be necessary to support separate marketing, the Participants would be unable to compete for each others' market share without owing that market share back to the other Participants during the life of the Project.

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<sup>34</sup> KPMG Report at 43.