

**SUBMISSION TO THE
AUSTRALIAN COMPETITION AND CONSUMER
COMMISSION IN SUPPORT OF
AN APPLICATION FOR AUTHORISATION

PNG GAS PROJECT**





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1. Executive Summary

- 1.1 The PNG Gas Project (the **Project**) is a joint venture between a number of companies within the ExxonMobil group, the Oil Search group, Mineral Resources Development Company (**MRDC**) and Merlin Petroleum Company (**Merlin**) (the **Participants**). The Project is operated by Esso Highlands Limited (**Esso Highlands**).
- 1.2 The Project will be the most significant resource development ever undertaken in Papua New Guinea (**PNG**) and one of Australia's largest infrastructure developments. In summary, the Project will involve the development of a number of petroleum fields in the remote Southern Highlands of PNG, and the delivery of large volumes of natural gas (hereafter referred to as 'gas') to customers in eastern Australia. The gas reserves within those fields are extremely large, and it is estimated that initially up to 200 PJ per annum could be supplied to Australia. This represents a significant volume of gas in terms of total consumption in eastern Australia. Gas is to be delivered to Australia by a dry gas pipeline of approximately 3,200 kilometres which is to be constructed by a separate consortium of companies. Total investment in both the PNG upstream facilities and Australian dry gas pipeline system is currently estimated to be greater than US\$3 billion but this will be determined during Front End Engineering and Design (**FEED**).
- 1.3 As the Australian Competition and Consumer Commission (**ACCC**) is aware, the Project is currently engaging in joint marketing pursuant to an interim authorisation (A40081) granted on 13 October 2000. Two previous interim authorisations were also obtained for the Project.¹
- 1.4 The Participants² now seek final authorisation for the life of the Project under section 88(1) of the *Trade Practices Act 1974* (Cth) (**TPA**) to:
- negotiate the common terms and conditions (including price) under which gas produced by the Project will be offered for sale;
 - jointly market that gas to a common buyer or common buyers; and
 - enter into and give effect to contracts, arrangements and understandings between the Participants relating to common terms and conditions (including price and price arbitrations/determinations) upon which gas will be offered for sale and sold by the Participants to buyers.
- Separate agreements, with common terms, will be entered into by each Participant and each buyer.
- 1.5 In determining whether to grant an authorisation, the ACCC must decide whether joint marketing by the Participants will result in a benefit to the public that will outweigh the detriment, if any, constituted by any lessening of competition resulting from the conduct. It

¹ A90668 and A90667

² For the reasons discussed in paragraph 2.19 below it may become necessary for additional participants to join the Project. The Participants therefore request that authorisation be expressly stated to apply to any future participant in the Project in accordance with section 88(10) of the TPA.

is clear that this test is satisfied since the Project will not only be pro-competitive by increasing competition and lowering prices, but it will also give rise to extremely large public benefits.

- 1.6 Without the ability to jointly market, it would be impossible for the Participants to achieve the volume and quality³ of sales required in order to underwrite the very large investment required for the Project to proceed as a viable investment for the Participants. The Participants and their financiers will only proceed with an investment in the Project if they believe that the projected financial returns over the life of the Project outweigh the costs and risks associated with the Project. The Participants view the ability to jointly market Project gas over the life of the Project as critical to their ability to secure sufficient customer commitments to not only underwrite their initial investment but also to secure growth volumes and to provide sufficient certainty of revenue to justify the costs and risks. The Participants understand this view is likely to be shared by their financiers.
- 1.7 Joint marketing by the Participants will not have any effect or likely effect of lessening competition so as to raise concerns under the TPA. On the contrary, the Project is overwhelmingly pro-competitive as it will provide a new, competitively priced source of gas to the energy market in eastern Australia. Further, the structure of the Project means that the joint supply of gas by the Participants comes within the terms of the joint venture exemption set out in section 45A(2) of the TPA. Accordingly, the Project will not raise any issues under section 45A of the TPA. Although the Participants do not consider that joint marketing would raise issues under the TPA, in order to proceed with the Project each Participant requires the legal certainty of authorisation.
- 1.8 The Participants seek authorisation for the life of the Project, which is currently estimated to be up to 30 years. Without the commercial and regulatory certainty of a long term authorisation, it will not be possible to attract sufficient customer commitments necessary over the life of the Project to justify the substantial costs and the financial risks to the Participants. Long term certainty in relation to the ability to jointly market Project gas is critical for the Participants and their financiers to be able to anticipate sufficient security of investment returns over the life of the Project. A short term authorisation would not provide the Participants with sufficient opportunity to secure sufficient customer commitments initially and over the life of the Project to underwrite their investment in the Project, nor would it provide the security of anticipated revenues necessary to meet development and ongoing operational costs over the life of the Project. This is particularly so given that the Project's implementation is likely to occur in a number of phases over the life of the Project.
- 1.9 In addition to providing a new, competitively priced energy source, the Project will bring significant, long term benefits to the Australian public. These public benefits include:
- economic development including the encouragement of capital investment, increased inter-basin and inter-fuel competition and the provision of an essential supply of gas to eastern Australia;

³ The term 'quality' when used in relation to gas sales refers to, in particular, customer credit rating and the commensurate risk of default.

- fostering regional economic development;
 - fostering business efficiency, especially where this results in improved international competitiveness;
 - the expansion of employment or prevention of unemployment in efficient industries and the growth of employment in particular regions;
 - development of import replacements;
 - growth in export markets; and
 - promotion of environmental protection.
- 1.10 As noted above, it is the Participants' view that there will be no anti-competitive detriment flowing from the joint marketing. However, even if the ACCC concluded that joint marketing may result in a lessening of competition, the public benefits associated with the Project would clearly outweigh any detriment to the public constituted by any lessening of competition that might result from the Project.
- 1.11 Joint marketing is imperative to the delivery of the full complement of public benefits achievable under the Project and is an integral element of the Project. The viability of the Project depends on securing sufficient customer volumes over the life of the Project, to generate anticipated revenues over the life of the Project in order to meet required investment returns. The Participants do not believe that they will be in a position to progress the Project beyond the FEED stage without an authorisation which provides long term security to the Participants to dispose of their gas entitlements by joint marketing. Unless the Participants are permitted to jointly market and sell the gas produced under the Project, development of the Project (and the estimated investment of over US\$3 billion in the upstream facilities and dry gas pipeline) will be jeopardised.⁴
- 1.12 In light of the pro-competitive impact of the Project, and the considerable public benefits that will arise as a result of the Project, the 'future with and without test' is clearly satisfied:
- in the future 'with' a long term authorisation in place, there will be significant public benefits and no anti-competitive detriment; and
 - in the future 'without' a long term authorisation in place, the public benefits will be foregone and a critically important opportunity to facilitate a major infrastructure development with immense national significance will have been denied.

2. The Project

The Participants

- 2.1 The Project is currently being pursued by the following parties:

⁴ In *Du Pont (Australia) Limited (Du Pont)* (1996) ATPR (Com) 50-231 at 56,535 the ACCC recognised that the substantial public benefits were unlikely to be available in the absence of the proposed joint venture and exclusive marketing arrangements.

- the ExxonMobil group (**ExxonMobil**) (through Esso Highlands, Ampolex (Highlands) Limited, Ampolex (PNG Petroleum) Inc. and Merlin Pacific Oil Company Limited);
- Oil Search Limited (**Oil Search**) (and its subsidiaries Oil Search (Moran) Limited, Oil Search (Tumbudu) Limited, Oil Search (Kutubu) Limited, Oil Search (Gobe) Limited, Orogen (Exploration) Inc., Orogen Minerals (Gobe) Limited, Orogen Minerals (Kutubu) Limited and Oil Search (PNG) Limited);
- the MRDC (through Petroleum Resources Gobe Limited and Petroleum Resources Kutubu Limited); and
- Japanese Papua New Guinea Petroleum Company Limited (**JPP**) (through its subsidiary Merlin).

The Participants and their predecessors have in one form or another been involved in the Project and predecessor arrangements since 1996. The Participants appointed Esso Highlands as the operator of the Project in mid-2001 in place of Chevron Texaco.

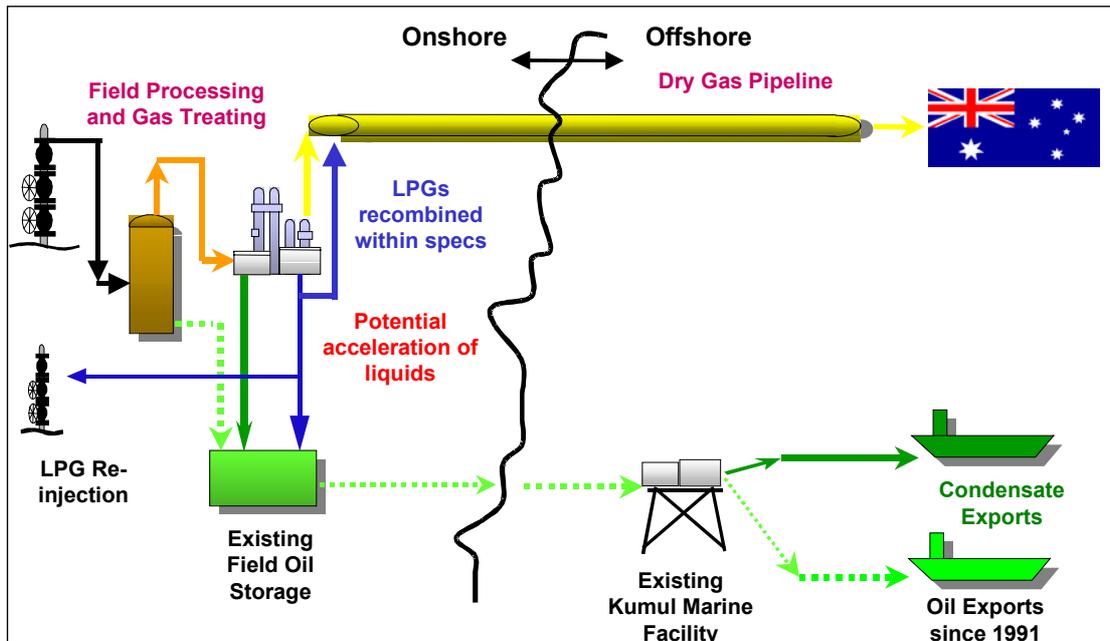
Project structure

- 2.2 On 6 October 2004 the Participants took a decision to enter the FEED phase of the Project and selected the Hides-Kutubu concept for FEED. This concept is described in the following paragraphs. During the FEED phase, detailed design and feasibility studies will be conducted together with the commercial negotiations and actions required to obtain the necessary licences and regulatory and governmental approvals which are necessary to advance the Project to the point where the Participants are able to make a decision to invest the capital required to construct infrastructure and facilities.
- 2.3 The Project can be summarised as involving the following components:
- (a) the onshore production facilities, including wells, primary treatment facilities and gathering facilities, within PNG;
 - (b) pipelines (**PNG Wet Natural Gas Pipelines**) connecting the gas fields to the main processing facility (**MPF**) at Kutubu for the transportation of hydrocarbons (including gas) and liquids (together, **Project gas**);
 - (c) the:
 - (i) processing of hydrocarbons at the MPF to produce the specification products (including dry natural gas of pipeline quality derived from reservoirs (**gas**)); together with
 - (ii) transfer of the liquid products or condensate to storage at the MPF for future export via an existing crude pipeline to the Kumul platform located on the PNG coast;
 - (d) the transportation of dry gas through a pipeline from MPF to the shoreline of PNG;
 - (e) the transportation of gas by way of a submarine gas pipeline from the PNG shoreline to the PNG-Australian border (**PNG Dry Natural Gas Pipeline**);
 - (f) the Australian pipeline (**Australian Pipeline**); and

- (g) the joint marketing and sale of gas on a delivered basis to customers in Australia.⁵ Should it become economically feasible to do so, the Project may extract liquefied petroleum gas (**LPG**).

Figure 1 illustrates these components.

Figure 1: The Project



- 2.4 Due to ongoing delays in the development of the Project, and to reduce the capital investment required, the Project has currently postponed plans to develop a LPG export capability for the Project.
- 2.5 Although the Project will produce a number of products, gas is the only product which is intended to be jointly marketed and sold to customers in Australia. Therefore, it is the relevant product when considering the application for authorisation.

Project reserves

- 2.6 The Participants propose to develop a number of petroleum reserves in PNG to produce gas and other products for sale. The reserves are located within various petroleum development licences (**PDLs**) that were granted under the legislation preceding the *Oil and Gas Act 1998* (PNG) (**OG Act**) and within a petroleum retention licence (**PRL**) granted under the OG Act. The Hides Field is located partly in PRL12 and partly in PDL1. The Moran Field is found partly in PDL2 and partly in PDL5. A map of the relevant licences is at Annexure 1.
- 2.7 The PDLs are held by a number of joint ventures. The interests of the Participants in them are set out below.

PDLs	Licensees	Licence Interests (%)
Hides Owners Group		
PDL1	Esso Highlands* Oil Search (Tumbudu) Limited Oil Search Limited	47.5 14 7.5
PRL12	Esso Highlands* Oil Search	47.5 52.5
PDL5	Esso Highlands* Oil Search (Moran) Limited	47.5 52.5
PDL2 Owners Group		
PDL2	Oil Search (PNG) Limited* Orogen Minerals (Kutubu) Limited Orogen (Exploration) Inc. Petroleum Resources Kutubu Limited Oil Search (Kutubu) Limited Merlin Ampolex (PNG Petroleum) Inc. Merlin Pacific Oil Company Limited	19.375 15.75 9.6875 6.75 27.138175 6.78125 11.611825 2.906250
PDL4	Oil Search (PNG) Limited* Orogen Minerals (Gobe) Limited Orogen (Exploration) Inc. Petroleum Resources Gobe Limited Oil Search (Gobe) Limited Ampolex (Highlands) Limited Merlin	19.37500 20.50000 9.687500 2.0000 27.138175 14.518075 6.781250

* denotes licence operator

‡ These percentages do not equal 100% since Santos has a 31% share in the PDL1 licence.

2.8 Certain Participants also hold a Pipeline Licence issued under the OG Act. This licence, PL2, covers the existing Kutubu pipeline system and the existing Kumul Marine Terminal. The licensees of PL2 are as follows:

PL2 Licensees
Oil Search (PNG) Limited Orogen Minerals (Kutubu) Limited Orogen (Exploration) Inc Petroleum Resources Kutubu Limited Oil Search (Kutubu) Limited Merlin Ampolex (PNG Petroleum) Inc Merlin Pacific Oil Company Limited

Source of gas

2.9 Under the development concept selected for FEED, gas will be sourced from the licence areas listed above. The reserves are located in the following fields: Hides field, the Moran

field (other than any part located within the PPL219 Licence Area), a number of fields collectively referred to as the Kutubu fields, the Gobe Main field and the Gobe 2X field.

2.10 The reserves within each licence area that come within the scope of the Project are set out below.

- **[confidential]**
- **[confidential]**
- the PDL5 Owners' and the PDL2 Owners' participating interest shares of gas from the Moran field (other than any part located within the PPL219 Licence Area); and
- the PDL4 Owners' participating interest shares of gas from the Gobe Main Field and the Gobe 2X Field.

2.11 Figure 2 illustrates the current planned allocation of the reserves.

Figure 2 Planned Reserve Allocation

[confidential]

Participants' interest in the Project

2.12 Pursuant to the HOA, the Participants have agreed that, if the particular development concept envisaged in the HOA is selected for the Project, their respective interests in the Project and Project gas will be determined on an overall entitlement of 50% to the Hides Owners Group and 50% to the PDL2 Owners Group. This division is based on a variety of factors including a balancing of the cost of existing infrastructure in the Kutubu field against the relatively large amounts of gas and other Project gas available in the Hides fields.

2.13 The participating interests of the Participants in the Project and the Project gas (**Project Interests**) are set out below. If a development concept other than the development concept envisaged in the HOA is selected for the Project, or the Independent State of PNG exercises its right to participate further in the Project (see further discussion in 2.19 below), the Project Interests will need to be re-determined.

Company	Participating Interest
ExxonMobil	39.434%
Oil Search	54.151%
Merlin	3.391%
MRDC	3.024%

Participants' interest in sales and funding obligations

2.14 Pursuant to the HOA and the Highlands Gas Project Co-operative Development Cost Sharing Agreement (**CSA**) each Participant is entitled to receive sales revenues in accordance with its interest in the Project as set out above regardless of whether or not it is a licensee in any given PDL covering any given producing field. Similarly, the obligation of



a Participant to contribute funding towards the costs and expenses of the Project will be in accordance with its interest in the Project. The entitlement of each Participant to a proportion of the total volume of gas therefore determines its funding obligations and its entitlement to revenue from sales of gas.

Current operations

- 2.15 There are existing oil production operations carried out by the licensees of PDL2, PDL4 and PDL5. The oil production operations undertaken under each of these licenses are governed by separate joint venture operating agreements. In addition, there are various co-operation and unitisation arrangements in place between the licensees of these licences to allow for the development of the underlying oil fields and production of oil. All of the fields from which oil is currently being produced also contain quantities of gas that will form part of the gas sold under the Project. Oil Search (PNG) Limited is the operator of the existing Kutubu, Gobe, South East Gobe⁶ and Moran oil production operations.
- 2.16 With the exception of the supply of gas from Hides to the relatively small scale Electricity (Porgera) Project, undertaken as a separate venture by Oil Search, the Hides Gas field has not been developed. Nevertheless, there is a joint venture operating agreement in place between the PDL1 licensees, as well as a deed of coordination. There is also a joint venture operating agreement in place between the PRL12 licensees.

Development of Project

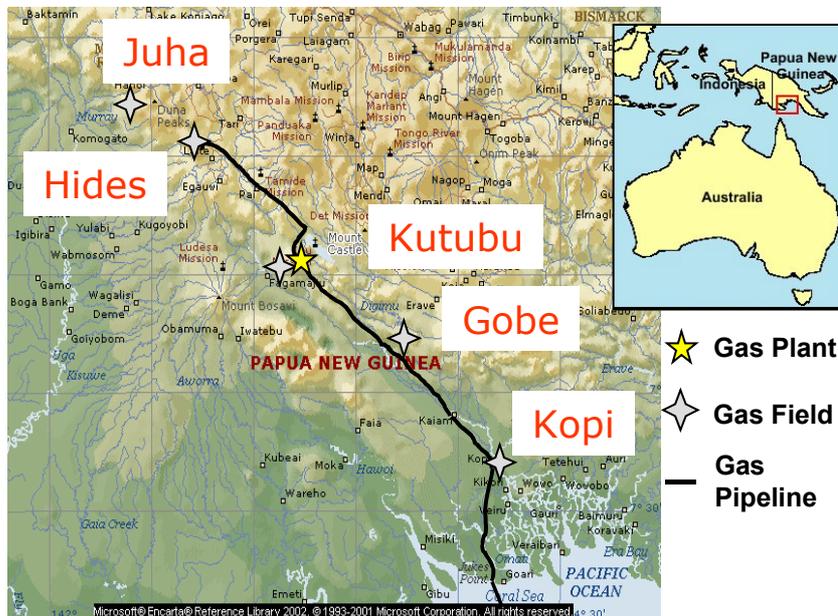
- 2.17 The Project's implementation is likely to occur in a number of phases to achieve the optimal development scenario. The gas sales are likely to occur in at least two tranches. Initial development includes both the blowing down of the Kutubu oil fields and the development of Hides. This will be followed by further development of all or part of the Hides field with product transported via the existing and modified PDL2 facilities. Subsequently, Project gas will also be blown down from the Moran field, and it is anticipated that additional fields will also be developed. The timing and sequencing of production from the various fields will be reviewed periodically and may change depending on reservoir management and economic as well as other considerations.
- 2.18 It is proposed that once the Participants agree to sanction the Project, agreements will be finalised to create an upstream Project gas production joint venture (**Upstream Joint Venture**) and a PNG infrastructure joint venture for the operation of pipelines and processing facilities (including the MPF, the PNG Wet Natural Gas Pipelines and the PNG Dry Natural Gas Pipeline to the PNG/Australian border) (**PNG Infrastructure Joint Venture**). Various integration and cooperation agreements between the Upstream Joint Venture and the PNG Infrastructure Joint Venture will need to be negotiated. At this stage, the agreements necessary to create these joint ventures and associated arrangements have not been drafted. The Participants intend that these agreements will be negotiated and agreed prior to the date on which they finally commit to development of the Project. These agreements will be drafted in accordance with the principles (**cooperation principles**) set out in clause 4 of the HOA.

2.19 At this point in time, the participating interests of the various Participants in the Upstream Joint Venture will be as per the Project Interests outlined above. There is some scope for these interests to be amended, including as a result of the decision of the Independent State of PNG as to whether it will exercise its right to participate further itself or through a nominee in the Upstream Joint Venture (by acquiring an interest in the Hides licence(s) of up to 22.5%) or exercise its right to take an interest of up to 30% in the PNG Infrastructure Joint Venture.

Gas pipelines

2.20 Pipelines and processing facilities will be constructed for the purposes of handling production of Project gas and are intended to be owned by the PNG Infrastructure Joint Venture. A map of the PNG pipelines are set out in Map 1.

Map 1: Map of PNG pipelines

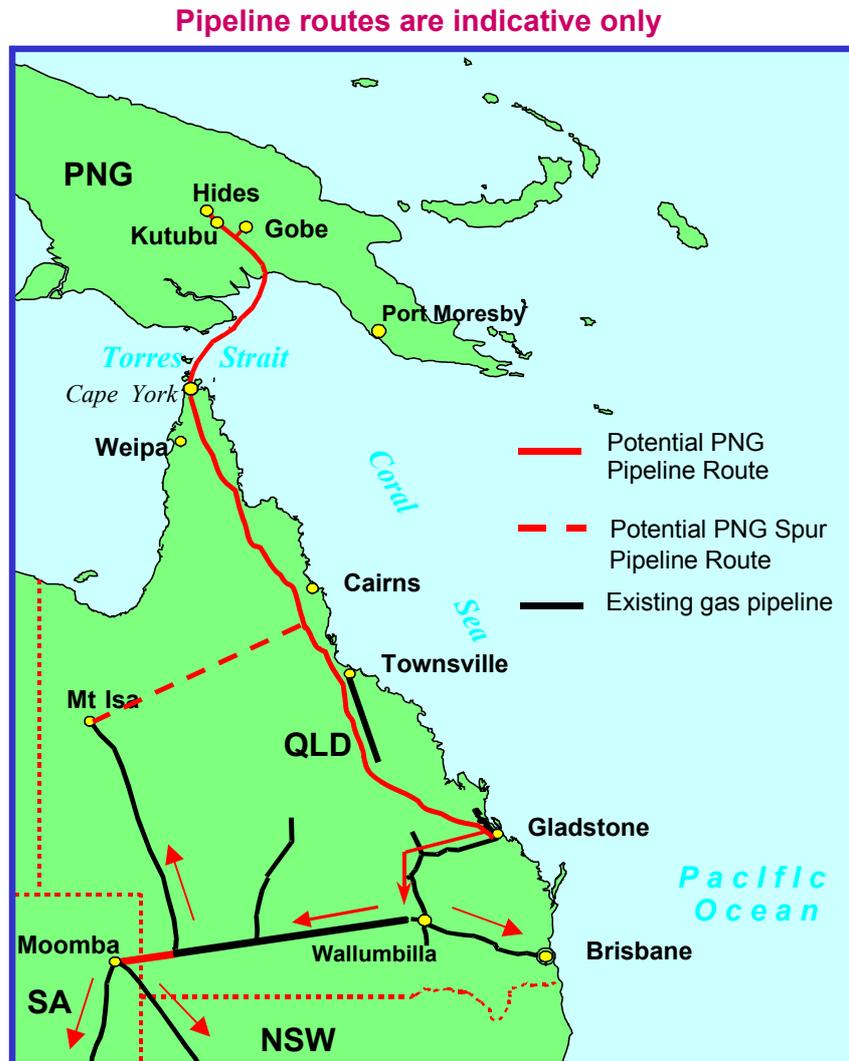


2.21 It is anticipated that a joint venture organisation formed by AGL Pipelines Investments (Qld) Pty Limited and Petronas Australia Pty Limited (**AGL Petronas Consortium**) will build, own and operate the Australian Pipeline from the PNG/Australian border in the Torres Strait to the customer delivery points in Australia. Specifically, it is expected that the Australian Pipeline will run from the PNG/Australian border south to connect with the existing gas distribution infrastructure at Gladstone. It is also expected that a dry gas pipeline will be constructed between Moomba in South Australia and Ballera in Queensland. A map of the Australian Pipeline as currently proposed is set out in Map 2. The actual Australian Pipeline route will be determined by factors such as environmental and land owner issues, cost optimisation and customer demand.

2.22 Accordingly, gas will be supplied to customers in rural, regional and metropolitan Queensland and south-eastern Australia as a result of the Project.

⁶ The South East Gobe field does not form part of the reserves from which gas will be sourced for the Project.

Map 2: Proposed Australian pipeline route



3. Previous interim authorisations granted by the ACCC

- 3.1 As the ACCC is aware, the Project is currently engaging in joint marketing pursuant to an interim authorisation (A40081) granted on 13 October 2000. Two previous interim authorisations were also obtained by the Project.⁷ A summary of the interim authorisations granted by the ACCC in relation to the Project is attached at Annexure 2.
- 3.2 In its consideration and approval of these previous interim authorisations the ACCC was made aware of the many and significant public benefits that the Project will deliver to the Australian public. In granting interim authorisation the ACCC acknowledged these benefits. A detailed analysis of the public benefits of the Project is set out in section 9 below.

⁷ A90668 and A90667.

4. The Participants

4.1 This section provides details of the operations of each of the Participants in the Project.⁸

ExxonMobil⁹

4.2 As outlined in section 1, Esso Highlands, a wholly owned subsidiary of Exxon Mobil Corporation, is the operator of the Project. Exxon Mobil Corporation was formed by the merger of Exxon and Mobil, completed on 30 November 1999.

4.3 ExxonMobil is also involved in oil and gas production in Australia. In particular, through its subsidiary Esso Australia Resources Pty Ltd, it is a party to a joint venture agreement with BHP Billiton for the exploration, development and production of oil and gas fields in Bass Strait.

Oil Search¹⁰

4.4 Oil Search is incorporated in PNG and listed on the Australian and PNG Stock Exchanges. Its head office is in Port Moresby and its corporate centre is in Sydney. Oil Search is a petroleum exploration and production company with its main operations in PNG. Oil Search was a participant in the Kutubu Oil Project from its inception.

4.5 In 2002 Oil Search merged with Orogen Minerals Ltd, a PNG Government controlled resources company. As a result, the PNG Government is now Oil Search's major shareholder with a holding of nearly 18%.

4.6 In 2003 Oil Search acquired ChevronTexaco's interest in the Kutubu Oil Project and operatorship of the Kutubu, Moran, Gobe Main and SE Gobe fields was transferred from ChevronTexaco to Oil Search. Oil Search is now the largest taxpayer and employer in PNG.

MRDC

4.7 MRDC is the 100% PNG government owned body responsible for acquiring, financing and managing the State's equity interests and project land owners equity interests in both mining and petroleum projects in PNG. Landowners' equity for individual mining and petroleum projects is held by various project land owner companies, such as Petroleum Resources Kutubu and Petroleum Resources Gobe, that are managed by MRDC.

4.8 MRDC plays a vital role in the development of PNG's mining and petroleum resources. MRDC enables the PNG government, on behalf of the PNG people, to acquire shareholdings in PNG own world class resource projects.

4.9 MRDC is also responsible for promoting PNG as an investment destination for resource projects, acquiring investments in mining and petroleum projects, managing disputes

⁸ The Project website at <http://www.pnggas.com>.

⁹ ExxonMobil company website at <http://www2.exxonmobil.com/corporate/>.

¹⁰ Oil Search company website at <http://www.oilsearch.com.au>.

between landowners and project managers, overseeing the distribution of profits into the community and protecting and promoting PNG's interests.

JPP

- 4.10 JPP acquired its interest in the Project through the acquisition of Merlin in 1990, which as outlined above, holds interests in various of the underlying petroleum licences to be utilised as part of the Project. Merlin is incorporated in California and is certified to carry on business in PNG, the relevant business activities being 'exploration and development of petroleum resources'.
- 4.11 JPP is a related company of Nippon Oil Corporation. Nippon Oil Corporation's exploration and production activities are primarily focused in the region of South East Asia, Japan, the North Sea and North America under the control of Nippon Oil Exploration Ltd.

5. The relevant market

Introduction

- 5.1 Section 90 of the TPA requires the ACCC to consider whether conduct for which authorisation is sought will result in a benefit to the public which outweighs any detriment to the public through a lessening of competition. The ACCC must balance the public benefits of the Project against any detriment flowing from any lessening of competition in the relevant market caused by joint marketing. Whether joint marketing will result in any lessening of competition, or is in fact pro-competitive, requires an assessment of the relevant market that will be affected by the conduct.¹¹
- 5.2 The Participants submit that, irrespective of how the market is defined, joint marketing of Project gas will not lead to any lessening of competition. The Participants believe that the Project should be viewed in the context of an energy market in which the clear constraint currently imposed by other sources of energy including coal seam methane (**CSM**) is progressively expanded over the 30 year life of the Project. This view is supported by a report compiled by Frontier Economics (**Frontier Economics Report**) which is Annexure 3 to this submission.
- 5.3 Even if the Project is considered only in the context of the supply and consumption of gas, for the reasons outlined below it is clear that the Project will have an overwhelmingly pro-competitive impact by introducing a major new supply of gas to eastern Australia and facilitating increased interconnection of the gas transmission network. The economic report compiled by ACIL Tasman (**ACIL Report**) which is Annexure 4, concludes that the Project will have a significant pro-competitive effect on the market (however defined). The

¹¹ The ACCC in *Mereenie Producers – Gasgo Sales Agreement* (1999) ATPR (Com) 50-271 (**Mereenie Producers authorisation**) at 53,114 stated that:

Public benefit and anti-competitive detriment arising from conduct associated with applications for authorisation are assessed in the context of the relevant market. Market definition is crucial to any assessment of competition and whether any lessening of competition is likely to occur.

pro-competitive effect of the Project gives rise to significant public benefits, which are detailed in section 9.

Market definition principles

5.4 Section 4E of the TPA provides that the term 'market' includes 'a market for those goods and services and other goods and services that are substitutable for, or otherwise competitive with, the first-mentioned goods and services'. It is commonly accepted that a market involves four dimensions. In summary, these are:

- product – in terms of the range of products which, on the demand side, consumers of the product in question could turn to or which, on the supply side, producers could commence supply if there was a small but significant non-transitory price increase in the relevant good;
- geographic – the geographic area within which consumers of the relevant products can obtain supply from producers;
- functional – the structural level of the market at which the relevant supply and consumption occurs, for example wholesale or retail; and
- temporal – the appropriate time frame over which substitution possibilities should be considered.

5.5 The starting point usually adopted by the Courts, the Australian Competition Tribunal (the *Tribunal*) and the ACCC in any consideration of market definition principles is the decision of the Trade Practices Tribunal in *Re Queensland Co-operative Milling Association Ltd; Re Defiance Holdings Ltd* (1976) 25 FLR 169 (*QCMA*) in which it was stated that:

We take the concept of a market to be basically a very simple idea. A market is the area of close competition between firms, or putting it a little differently, the field of rivalry between them ... Within the bounds of a market there is substitution – substitution between one product and another, and between one source of supply and another, in response to changing prices. So a market is the field of actual and potential transactions between buyers and sellers amongst whom there can be strong substitution, at least in the long run, if given a sufficient price incentive.¹²

5.6 This statement was referred to with approval by the High Court in *Queensland Wire Industries Pty Ltd v Broken Hill Pty Co Ltd* (1989) 167 CLR 177. The principles set out in QCMA have been adopted and applied in many decisions by the courts, the ACCC and the Tribunal. In particular, market definition in relation to the supply of gas in Australia has been considered by the ACCC, the Tribunal and other bodies on a number of occasions in recent years.¹³

¹² QCMA at 190.

¹³ For example *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 (*Cooper Basin decision*); *East Australian Pipeline Marketing Pty Limited Determination* (1998) ATPR (Com) 50-263 (*Eastern Australian Pipeline authorisation*); *VENCorp Market and System Operations Rules Authorisation Determination* (1998 *VENCorp authorisation*); *National Electricity Market Management Company & Anor* (1998) ATPR (Com) 50-252 (the *NEM authorisation*); *Eastern Gas Pipeline* (2001) ATPR (NCC) 70-007 (the *Eastern Gas Pipeline decision*); *Mereenie Producers authorisation*; *Duke Eastern Gas Pipeline Pty Ltd* (2001) ATPR 41-821 (*Duke decision*).

Product

- 5.7 The Participants submit that the relevant product market in which it is appropriate to consider the supply of gas from the Project is the energy market, in which gas both competes with electricity as an energy source and is also increasingly used as an alternative to other forms of energy, including coal, to generate electricity. Within this market, in the short term, the closest area of competition will be between Project gas and other gas sources including CSM. However in the medium to long term it is clear that there will be significantly increased competition with other energy forms, including coal in the generation of electricity, due to impact of Project gas on the prices and consumption of gas in eastern Australia.
- 5.8 Project gas will be supplied to three primary customer types:
- energy retailers for re-supply to end users;
 - electricity generators for use as a fuel; and
 - large industrial customers for use as a fuel in boilers and furnaces, to generate electricity in co-generation plants, or as a feedstock in the production of ammonia and other products.
- 5.9 In the supply to these customers, Project gas will compete against not only gas (including CSM) produced from other basins, but also against a range of other energy sources including coal and liquid fuels. Competition between these fuel types within the relevant product market has been recognised in previous decisions by the ACCC, the National Competition Council (**NCC**) and the Tribunal. These decisions are discussed below.
- Tribunal
- 5.10 Seven years ago the Tribunal recognised in the Cooper Basin decision that the supply of gas from the Cooper Basin occurred in a market for 'natural gas, extending at the margin to encompass, at times, alternative and complementary energy sources, principally electricity'.¹⁴ The Tribunal stated that when it referred to a 'natural gas market' 'it should be understood in this extended sense'.¹⁵
- 5.11 The Tribunal commented on competition between gas and other energy sources as follows:
- The content of the product markets has also been expanding. So far as the natural gas market is concerned, the main factor is the relationship with electricity which has become much more important. **In today's market, gas and electricity may be substitute fuels in industrial, commercial and domestic uses, and they are also complements in co-generation;** either way, there may be pressure on the price of gas.¹⁶ (Emphasis added)
- 5.12 Notwithstanding that the Tribunal's decision was made prior to the implementation of the National Electricity Market (**NEM**), the Tribunal found that in respect of electricity, 'the natural gas market has expanded to incorporate a degree of substitutability with

¹⁴ Cooper Basin decision at 44,210.

¹⁵ Ibid at 44,210-44,211.

¹⁶ Ibid at 44,211

electricity'.¹⁷ The NEM has further expanded the substitutability between gas and electricity since the time of the Cooper Basin decision.¹⁸

ACCC

5.13 Since the Cooper Basin decision, the ACCC has recognised that the relevant market (in terms of the wholesaling of gas rather than other functional markets such as transmission and distribution) is a market in which there is substitution between gas and other energy forms. For example:

- In the 1998 Eastern Australian Pipeline authorisation the ACCC found that the relevant market was a market for natural gas, but that there was competition at the margins of this market for other substitutable forms of energy.
- In the 1998 VENCORP authorisation, the ACCC stated that 'the developing nature of energy sector markets makes case-by-case assessment of relevant information necessary to market definition'¹⁹ and also that 'the Commission accepts the Tribunal's description [in the Cooper Basin decision] of the gas and gas transmission product markets as expanding and deepening'.
- In 1998 in the NEM authorisation the ACCC stated that²⁰

At the current time, therefore, the Commission accepts that the relevant market is an electricity rather than energy market. In the longer term, however, it is possible that technological developments, as well as reforms in both the gas and electricity industries, may have an impact on the degree of interfuel competition.²¹

The ACCC reiterated that '[m]arket definition in the energy sector requires a case by case approach' and that '[t]he energy sector and particularly the electricity and gas markets are, however, in a period of transition'.²²

- In 1999 in the Mereenie Producers authorisation the ACCC found that the relevant market in which gas competed in the Northern Territory was 'natural gas with fringe competition from alternative energy sources over time'.²³

5.14 The increasing convergence of separate energy markets to create an integrated eastern Australian energy market was recognised by the former Chairman of the ACCC in a speech to the Australian Gas Association (**AGA**) Gas Industry Forum on 25 June 2002. Professor Fels commented on the success of regulation in the gas pipeline industry and stated that:

¹⁷ Ibid.

¹⁸ The Tribunal considered the concept of market definition in the gas industry in the Duke decision (at 43-06). However in that case, the Tribunal's decision was based on agreement by the parties as to the relevant market rather than on a comprehensive analysis of the market.

¹⁹ 1998 VENCORP authorisation at 18.

²⁰ NEM authorisation at 57,414.

²¹ Ibid.

²² Ibid at 57,415 – 57,416.

²³ Mereenie Producers authorisation at 53,125.

Some benefits from the reforms are now more evident with a growing trend to more efficient gas pricing and substantial new investment in all parts of the energy market. In addition, we **are now seeing the emergence of an integrated energy market** in which gas competes with electricity and where increasingly electricity is being generated using gas, particularly for peak generation.²⁴ (Emphasis added)

NCC

- 5.15 In 2001 the NCC in the Eastern Gas Pipeline decision noted 'the possible convergence of energy markets and the possible construction of other pipelines that will have an impact on this market [the natural gas market]'.²⁵

Ministerial Council on Energy and Council of Australian Governments

- 5.16 The importance of the expansion and integration of Australian energy markets was recognised by the Council of Australian Governments (**COAG**) when it commissioned an independent review into the strategic direction for energy market reform in Australia. The findings of that review, 'Towards a Truly National and Efficient Energy Market' (the **Parer Report**), confirm the emergence of an integrated energy market, albeit a market that is capable of improvement through further developments.
- 5.17 Indeed, competition between fuel sources is also one of the fundamental principles underpinning the energy market reforms being overseen by the Ministerial Council on Energy (**MCE**), which was established by COAG. The energy market reform process formally commenced on 8 June 2001 with the announcement by COAG of its 'Energy Policy' following its meeting held in Canberra that day.²⁶ COAG's Energy Policy contained a number of aspects, including a 'National Energy Policy Framework' which contained a set of 'Agreed Principles', which included the principles that the energy policies of all Australian governments will:
- continuously improve Australia's national energy markets, in particular between and among jurisdictions and – recognising growing convergence between energy markets – between energy sources and supply and demand side opportunities; and
 - encourage the efficient economic development and increased application of less carbon intensive (including renewable) energy sources and technologies, including exploring opportunities for appropriate inter-fuel substitution.
- 5.18 Since that time, the MCE has noted on repeated occasions in its reports to COAG that 'the electricity and gas sectors are converging through growing use of gas for electricity generation and the emergence of 'dual fuel' retailing'.²⁷

²⁴ Professor Allan Fels, 'The ACCC's perspective on regulation in the gas industry', speech to AGA 2002 Gas Industry Forum, 25 June 2002 (**Allan Fels speech to AGA**), at 3.

²⁵ Eastern Gas Pipeline decision at 76,108.

²⁶ Council of Australian Governments' Communique, 8 June 2001. For a copy of the communique see: <http://www.coag.gov.au/meetings/080601/index.htm#energy>.

²⁷ MCE, Report to the Council of Australia Governments: Reform of Energy Markets, 11 December 2003 at 12; MCE Supplement to the MCE Report to CoAG on Reform of Energy Markets Expanded Gas Program, 19 May 2004 at 1.

Conclusion

- 5.19 These decisions and statements all clearly recognise that competition between gas and other energy forms has been steadily increasing. Regulatory reform of the electricity and gas industries has seen the electricity and gas transmission and distribution networks significantly expand to create integrated networks across eastern Australia. The addition of gas from the Project and the construction of the Australian pipeline will provide a major stimulus in the transformation of the market from a gas market with increasing competition from other energy sources, to a fully integrated energy market.
- 5.20 Even if the ACCC adopts a narrower approach, and views the product market as being restricted to natural gas (including CSM), it is clear for the reasons discussed below that suppliers of gas, including the Participants, will be subject to increasingly strong constraints by suppliers of other energy forms.

Customer profile

- 5.21 As noted in paragraph 5.8, there will be three main customer types for Project gas. These are electricity generators, large industrial customers (using gas for either energy or as a feedstock) and energy retailers. As the ACCC recognised in the Mereenie Producers authorisation, ‘the degree that alternative fuels compete with gas varies according to user groups.’²⁸ Although the introduction of Project gas to eastern Australian customers will result in gas being a substitute for other energy forms for each of the three main customer types to varying degrees, in each instance the availability of substitute energy products will act as a constraint on the price of gas.
- 5.22 Of particular importance is that increasing use of gas as a fuel in electricity generation will lead to greater competition in the supply of electricity, against which gas will also compete in terms of supply to industrial customers and energy retailers. Thus the degree of competition between gas as a substitute for electricity is directly affected by the degree of competition between gas as substitute for coal and other liquid fuels.
- 5.23 Table 1 illustrates the customer profile in the market for Project gas to capture over the life of the Project.

Table 1: Anticipated Customer Profile of the Project

Customer Type	Potential volumes %
Retailer	20
Industrial (Energy and Feedstock)	20
Industrial (Cogeneration)	25
Power Generation	35

²⁸ Mereenie Producers authorisation at 53,125.

- 5.24 Annexure 5 contains a confidential analysis of the potential customers that the Project has negotiated with over the last five years, including the companies with whom the Project has current Indicative Terms of Agreement for the supply of Project gas.
- 5.25 The analysis in Annexure 5 reveals that in marketing gas to many customers the Project has competed not only against other suppliers of gas, but also other energy sources including in particular CSM, as well as coal and liquid fuels. Indeed, competition from other suppliers of these sources of energy is one of the main reasons why the Project has, until recently, been unable to obtain sufficient customer commitments to proceed to the FEED stage. Competition from other suppliers has resulted in a number of customers who had previously entered into Indicative Terms of Agreement with the Project subsequently contracting with other suppliers. The loss of these volumes has led to the delay in the Project to date.
- 5.26 The ability of each category of customer to utilise other energy types, and the degree of competition between gas and those other energy sources, is set out below.

Electricity generators

- 5.27 Gas competes against a range of other energy sources including coal, CSM, liquid fuels as well as water and wind in the generation of electricity. In particular, increased competition between gas and coal, combined with legislative requirements to lower greenhouse gas emissions, has seen gas increasingly used as a fuel in electricity generation. The Frontier Economics Report (at Annexure 3) examines the increasing role of gas in electricity generation.
- 5.28 The Parer Report recognised that due to energy market reform since the 1990s:

'[c]ompetitive pressures have seen increased generator efficiency and availability, additional generation investment has occurred that seems market related (that is, new efficient base load plants in South Australia and Queensland, and new peaking plant [sic] in Victoria)²⁹

Annexure 6 lists the existing and new entrant gas fired generators in eastern Australia. It is clear that a significant number of gas fired peaking generators have been constructed in eastern Australia since 1990.

- 5.29 The volume of gas to be supplied by the Project, and the projected decrease in the future price of gas in eastern Australia as a result of the significant increase in competition, is likely to create further demand for gas as a fuel in electricity generation. Support for this proposition is provided by the fact that one of the companies that has currently signed a term sheet with the Project, CS Energy, is acquiring Project gas for use in electricity generation.
- 5.30 Expansion of gas transmission networks has also increased the ability of CSM to compete against gas as a fuel source for electricity generation. CSM has rapidly expanded as an energy source over the last decade. In particular, there has been a significant increase in production in Queensland, where CSM accounts for over 30% of the State's gas consumption.

²⁹ The Parer Report at 8.

- 5.31 CSM is increasingly competitive with gas, and suppliers have been awarded a number of major gas supply contracts recently. For example, in 2002 the Queensland Government awarded a tender for the supply of gas for the Townsville power station to CH4, a CSM supplier. **[confidential]** Many CSM producers also have gas retailing operations, that is vertically integrated operations. For example, Origin Energy has been aggressively marketing CSM from its Surat/Bowen Basins, and has secured major customers including AGL (including in respect of volumes previously committed to the Project).
- 5.32 The construction of the Australian Pipeline as part of the Project has the potential to further increase the level of competition between gas fields as it may facilitate the development of further gas transmission pipelines in eastern Australia.
- 5.33 In some states, gas is unlikely in the near future to be directly competitive on a \$/gigajoule basis with low cost coal. Nonetheless, in those states gas is increasingly being used as a fuel in peaking generators. The Frontier Economics Report analyses the quantity of electricity generated from natural gas in recent times, and notes that this is expected to increase significantly in the future. There has been considerable gas fired baseload and peaking plant capacity constructed in eastern Australia notwithstanding the existence of excess generating capacity in the NEM. Those plants include Smithfield (NSW), Osborne (South Australia) and Roma, Swanbank and Mica Creek (conversion from coal) in Queensland.
- 5.34 Increased competition between gas sources as a result of the Project will lower the future cost of gas to these plants, increasing their efficiency and lowering costs. This will result in greater competition in the NEM between gas and coal based electricity generators. The increasing use of gas as a fuel source for electricity generation in both base load and peaking plants illustrates the substitutability between coal and gas. PNG gas will contribute to the achievement of government (Commonwealth and State) and environmental and energy policy objectives in relation to reducing reliance on coal in the primary fuel mix for electricity generation.
- 5.35 Gas also has other significant benefits which make it an attractive fuel for electricity generation particularly as a result of government legislation requiring electricity generators to reduce greenhouse gas emissions. For example, the Queensland Government plans to introduce the *Electricity (13% Gas Scheme) Amendment Bill (Electricity Bill)* into Parliament later this year. The Electricity Bill is the major initiative of the *Queensland Energy Policy – A Cleaner Energy Strategy* announced in May 2000. The ultimate aim of the Electricity Bill is to reduce the greenhouse gas emissions from the Queensland electricity sector through increased reliance on gas-fired electricity generation and a decreasing reliance on coal fired generation. The Electricity Bill requires electricity retailers and other liable parties (including self-generators and large end users) to source 13% of their electricity from gas fired generation. The scheme is designed to encourage investment in new gas sources and new gas infrastructure, thereby increasing the ability of gas to compete with coal as a fuel for electricity generation. If the Electricity Bill is passed,

the scheme will commence operation from 1 January 2005.³⁰ The NSW Government introduced an amendment to the *Electricity Supply Act 1995* (NSW) which requires electricity retailers and some suppliers to meet mandatory targets for reducing the emission of greenhouse gases from the production of electricity they use or supply. This will similarly encourage reliance on, and therefore investment in, gas-fired generation.

Industrial customers

- 5.36 Large industrial customers who will use gas as a fuel for furnaces or boilers, or alternatively as a feedstock for the production of ammonia and other products (particularly in the manufacture of fertiliser), will also be targeted by the Project. These customers include both customers who currently use gas, as well as customers who will convert to gas from other fuels. Table 1 above indicates that these customers make up 20% of the market that the Project is targeting to capture.
- 5.37 In addition, industrial customers use gas in co-generation. Co-generation occurs where an industrial customer produces steam and electricity for use in its production processes. Generally excess electricity is produced which is supplied into the NEM. Gas is increasingly being used for co-generation. Since co-generation plants tend to operate for a large number of hours during the year, they are generally considered to compete with coal-fired base-load generators for despatch in the NEM. This operates as a real constraint on the price that can be charged for gas to be used in gas-fired co-generation plants, as increases in the gas price can significantly affect the ability of co-generation plants to despatch their excess electricity into the NEM, thus jeopardising the economic viability of co-generation projects generally. As set out in Table 1, it is estimated that 25% of the market that the Project is targeting to capture will involve supply for co-generation.
- 5.38 Gas competes against other energy forms including electricity and liquid fuels for supply to industrial customers. In particular, gas competes against CSM for the supply of industrial customers. CSM is completely substitutable for gas in industrial applications, and has the added advantage of relatively low exploration and production costs (generally involving shallower wells, smaller and more moveable drilling rigs and less complex gas processing plants than for natural gas), and developable reserves that are located close to major industrial centres (in particular, many of the major industrial centres targeted for the sale of Project gas). **[confidential]**
- 5.39 The ACCC has previously questioned the substitutability between gas and electricity in industrial applications.³¹ The ACCC's position in this regard appears to have been influenced by a study by the Australian Gas Association in 1996 entitled 'Price Elasticities of Australian Energy Demand' (**AGA study**), which stated that there is a zero cross-price elasticity between electricity and gas. The Tribunal in the recent Duke decision referred to this study, however, critically it noted that the information in relation to gas and electricity elasticities was calculated 'using data which pre-dates the reforms in the gas industry so

³⁰ Department of Natural Resources (Mines and Energy), Queensland Government, 'Queensland 13% Gas Scheme – A Brief Overview', November 2004. For a copy of this overview see: http://www.energy.qld.gov.au/pdf/gas_scheme_overview.pdf.

³¹ *North West Shelf Project* (1998) ATPR (Com) 50-269 at 55,773 (**North West Shelf authorisation**).

they are likely to be underestimates of the actual position today'.³² The AGA study was based on data between 1973-74 to 1993-94. This data should not be used as evidence of the elasticity of demand today given the very significant changes in both the electricity and gas industries since the mid 1990s.

- 5.40 In addition, an important factor in assessing substitution between gas and other energy products is the appropriate time frame over which substitution possibilities should be considered. The ACCC has previously stated that industrial users are often restricted in their ability to switch energy forms because of the fuel specifications of the plant they have chosen to install, and that switching can only occur at the end of the life of a plant. Similarly, the ACCC points to long term contracts as preventing industrial users from substituting between energy forms.
- 5.41 It is submitted that the process of competition between gas and other energy forms should not be viewed as a short term snapshot, but instead as a spectrum over which industrial customers are continually making investment decisions. At any given time, a range of industrial users will have plants nearing the end of their life, or contracts nearing renewal. It is not the case that all industrial customers must wait 15 years before being able to consider alternative fuel choices. Furthermore, some gas supply contracts contain periodic price review provisions that link the gas price to movements in the prices of alternative energy types, which ensures that even gas supplied under long term contracts must remain price competitive with these alternative energy types when consideration is given to the appropriate temporal dimension of the market (see paragraph 5.59 below).
- 5.42 Finally, switching between alternative energy forms should not necessarily be considered to be a long-term substitution choice. Where industrial customers do make the decision to switch, they will nevertheless commonly maintain the facilities necessary to operate their plant and equipment on the previous fuel source, in case supply of the new fuel source is curtailed. Furthermore, it may be possible for alternative fuel sources to be readily converted to a form which enables them to be used under fuel specifications of existing plant, without requiring the plant itself to be converted. For example, LPG can be aerated at an industrial site to form Syngas as a backup fuel supply of similar heat content to gas. The Participants understand that overseas LPG has been converted to Syngas and delivered via natural gas pipelines as a back up fuel for use in conventional gas appliances.
- 5.43 For this reason, it is instead necessary to determine whether a sufficient quantity of industrial customers are able to consider alternative energy forms at any given time such that these alternative energy forms exercise a competitive restraint on the price of gas. It is apparent that this is the case. As stated above, 45% of the market that the Project is targeting to capture will come from new industrial customers and industrial customers converting from other energy forms (including industrial customers using gas for co-generation).

Energy retailers

³² Duke decision at 43,062.

- 5.44 The Project anticipates that it will supply gas to energy retailers, who re-supply to industrial, business and residential users. Historically, such companies re-supply a particular energy form, such as electricity or gas. However, horizontal integration over the last decade means that today most energy retailers supply a range of energy products, including both electricity and gas. In addition, some energy retailers are vertically integrating. For example, in addition to electricity and gas retailing, Origin Energy has expanded into gas production in the Otway Basin and its CSM production in the Bowen/Surat Basins, electricity generation including the Roma Power Station in Queensland and the Ladbroke Grove and Quarantine Power Plants in South Australia and co-generation in Queensland and South Australia.³³
- 5.45 The main energy retailers in eastern Australia are Origin Energy, ENERGEX, Ergon Energy, Country Energy, the Australian Gas Light Company (**AGL**) and TXU Australia Pty Ltd (**TXU**). A number of these retailers operate in multiple states in eastern Australia.
- 5.46 The demand by energy retail companies for electricity and gas will be driven by retail demand from businesses and residential consumers. CSM is completely substitutable for gas in the use of all natural gas appliances and commercial applications. The ACCC has observed that substitution between electricity and gas at a residential level occurs in relation to applications such as heating and cooking. In the 2002 VENC Corp draft determination in relation to VENC Corp's market and system operations rules (**2002 VENC Corp draft determination**)³⁴ the ACCC stated that the issue of substitutability at a residential level 'is more likely to arise when arrangements for space heating, water heating and cooking are replaced'.³⁵ As outlined above, it is important to consider these substitution possibilities over an appropriate time frame. This issue is discussed in detail in paragraphs 5.59 to 5.65.
- 5.47 The process of substitution between electric and gas appliances should be viewed as a spectrum in which the costs of switching energy forms and acquiring new appliances will constrain the price of gas since a sufficient proportion of consumers at any given time will have equipment that is of a replaceable age or are acquiring such equipment for the first time. In addition, the introduction of new technologies may accelerate substitution between energy forms and increase the rate at which equipment is replaced. For example, the rapid rise in use of reverse cycle air conditioners has seen an increase in the level of competition between those systems and gas heating equipment, resulting in an increase in the level of substitution away from gas heating equipment before the normal end of the life period of those items.

Geographic

- 5.48 Professor Fels observed several years ago in relation to the eastern Australian gas pipeline network that:

³³ See Origin Energy's Exploration and Production information at: http://www.originenergy.com.au/about/about_subnav.php?pageid=222.

³⁴ VENC Corp Market and System Operations Rules authorisation draft determination, 16 October 2002.

³⁵ 2002 VENC Corp draft determination at 10.

Where the industry was previously characterised by restrictions on inter-state gas sales and limited physical connections, it is now possible for gas to be traded and transported between jurisdictions through a developing network. This network includes: the interconnect (from Culcairn to Barnawatha) which links the Victorian and NSW pipeline systems; and the Eastern Gas Pipeline both of which allow gas to be transported between Victoria and New South Wales; and the currently under construction Tasmanian pipeline which will extend from Victoria to Tasmania. Further pipeline proposals will potentially enable gas to flow from Victoria to South Australia and projects which involve gas from the Timor Sea or PNG to supply eastern Australia in the future are being discussed.³⁶

- 5.49 The ACCC and the Tribunal have previously stated that increasing pipeline connections between regions have created a south eastern Australian gas market.³⁷ The construction of the Australian pipeline from the PNG border to Queensland will create competition between gas basins in all eastern Australian states, thus expanding the geographic size of the market to encompass Queensland, New South Wales, Victoria, South Australia, potentially Tasmania and possibly the Northern Territory. The Tribunal noted in the Cooper Basin decision that development of new gas pipelines was likely to expand the geographic scope of the market further than south eastern Australia.³⁸
- 5.50 The PNG pipeline is likely to follow a route down the east coast of Queensland. Project gas will therefore be physically capable of transport to all locations on the Queensland dry gas network. Currently the gas pipeline between Ballera (Queensland) and the Moomba hub (South Australia) is a raw (wet) gas pipeline. It is therefore expected that the Project will be required to construct a dry gas pipeline between Ballera and Moomba. This will result in a fully interconnected dry gas pipeline network over the entire east coast of mainland Australia.
- 5.51 Even in the absence of a Ballera to Moomba dry gas pipeline being constructed, physical interconnection of supply sources and demand centres is not always required to allow gas sales to occur between producers in Queensland and consumers in New South Wales (or vice versa). Two different gas producers in two different regions that are not connected by a pipeline, or are connected by pipelines whose capacity is constrained, are able to enter into gas swap arrangements for delivery of gas produced by the other producer in the other region in order to service customers in that other region.
- 5.52 For example, the Cooper Basin producers and Origin Energy have recently entered into such a gas swap agreement under which Origin has agreed to deliver gas produced at its central Queensland fields to the Cooper Basin producers at Roma in Queensland, and the Cooper Basin producers have agreed to deliver an equal quantity of Cooper Basin gas to Origin at Moomba.³⁹ This arrangement has therefore enabled Origin to achieve delivery of gas through Moomba, and the Cooper Basin producers to achieve delivery of gas to the

³⁶ Allan Fels speech to AGA at p 6.

³⁷ 2002 VENC Corp draft determination at 12; Eastern Gas Pipeline decision at 76,108.

³⁸ Cooper Basin decision at 44-211.

³⁹ Santos Media Release, 'Cooper Basin and Origin in major gas swap agreement', 6 May 2004. For a copy of the release see: <http://www.santos.com/Archive/library/040506%20Origin%20Swap%20Media%20release%20-%20final.pdf>.

south-east of Queensland, without the construction of a dry gas pipeline connecting Ballera to Moomba.

- 5.53 Project gas will therefore compete against Cooper Basin gas in all eastern Australian states, and against gas from Victoria in New South Wales and South Australia. Although Project gas is unlikely to physically enter Victoria, and Victorian gas may not physically enter Queensland, the degree of overlap between gas supplied by the Project and gas from the other basins will result in a direct price competition between gas supplies in the entire eastern Australian region.
- 5.54 Competition between Project gas and gas produced in other regions is illustrated by the announcement by AGL (a former foundation customer of the Project) on 18 December 2002 that, as a result of delays in the Project, it was 're-assessing its options for PNG gas' and that it had decided to enter into new gas supply arrangements with the Gippsland Basin producers, the Cooper Basin producers and Origin Energy in respect of its interests in Queensland's Surat/Bowen Basins in order to meet its existing customers' requirements.⁴⁰
- 5.55 Conversely, WMC (Olympic Dam Corporation) Pty Ltd has reached a conditional agreement with the participants in the Project to acquire Project gas to be supplied to the Olympic Dam in South Australia for liquid fuel replacement and gas fired power generation.⁴¹
- 5.56 These arrangements highlight the fact that Project gas is competing in an eastern Australian market.
- 5.57 In addition, as outlined above, gas will face competition from other energy sources including CSM in Queensland and electricity and other fuels across the entire eastern Australian region.
- 5.58 The geographic scope of the market is therefore eastern Australia. This view is supported by the Frontier Economics Report at Annexure 3.

Temporal

- 5.59 The temporal dimension of the market 'refers to the period over which substitution possibilities should be considered'.⁴² It is clear that when considering the gas industry, and substitution possibilities between gas and other energy forms, that a long term time period is appropriate. This view has also been stated by the NCC and the Tribunal.
- 5.60 The NCC stated in the Eastern Gas Pipeline decision that the temporal dimension of the market:

⁴⁰ AGL Media Release, 'AGL Announces New Gas Supply Portfolio, 18 December 2002. For a copy of the release see: <http://www.agl.com.au/AGL/Press+Releases/18+December+2002.htm>.

⁴¹ ExxonMobil Media Release, 'Sale of PNG Gas to WMC (Olympic Dam Corp.)', 12 December 2003.

⁴² ACCC Merger Guidelines, June 1999 at 40.

refers to whether the size and scope of the market is likely to change over time ... In order to determine the temporal parameters of markets, the Council generally has regard to long-run rather than short-run substitution possibilities.⁴³

5.61 In QCMA, the Tribunal stated that:

a market is the field of actual and potential transactions between buyers and sellers amongst whom there can be strong substitution, **at least in the long run**, if given a sufficient price incentive market definition involved a consideration of supply and demand side substitution possibilities.⁴⁴ (Emphasis added)

5.62 The Tribunal also stated in the Cooper Basin decision that the one year time dimension proposed by the ACCC in that matter 'does not do justice to the dynamic quality of the market setting and the emerging processes of competition'.⁴⁵ The Tribunal held that in an expanding market, it was relevant to examine the market in the future, in that case looking to a period 10 to 15 years away.⁴⁶ This time frame was necessary to properly capture the expanding geographic and product markets.⁴⁷

5.63 Most recently in the Duke decision, the Tribunal held that, although the temporal dimension of the market was not relevant to the issues at hand, 'relevant considerations include the possible future convergence of energy markets and the possible construction of other pipelines that will have an impact on this market'.⁴⁸

5.64 In Determination 505 by the New Zealand Commerce Commission (**Commerce Commission**) in relation to an authorisation application for the joint marketing of gas in the Pohokura field (the **Pohokura Determination**), the Commerce Commission noted that in previous gas industry authorisations it had adopted a temporal dimension of around ten years, but elected instead to consider 'likely market circumstances over the anticipated full life of the Pohokura field'.⁴⁹

5.65 It is clear that in light of the considerable changes in the electricity and gas industries over the last decade, and the continuing expansion of the number of suppliers, increasing horizontal integration of retailers and interconnected networks, that a long term view of the market is necessary. In an industry characterised by long term investment and supply decisions by both producers and large customers, focussing attention on short term substitution possibilities will provide a distorted market picture and will not capture the significant and on-going increase in competition between gas and other energy forms over time.

⁴³ Eastern Gas Pipeline decision at 76,133.

⁴⁴ QCMA at 190.

⁴⁵ Cooper Basin decision at 44,210.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Eastern Gas Pipeline decision at 76,108.

⁴⁹ New Zealand Commerce Commission (**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.

Functional

- 5.66 The ACCC, the Tribunal and the NCC recognise that sales by energy retailers to end-use customers, both industrial, business and residential, are within the same functional market as sales by producers. Relevant decisions include:
- the Eastern Gas Pipeline decision where the NCC questioned whether the retail supply of gas occurred in a functionally separate market to the wholesale supply to large industrial users.⁵⁰ The NCC noted some direct overlap in sales by producers and retailers, since both supply to large users and declined to find that separate functional markets existed and concluded that the relevant market was sales between natural gas producers and end users/consumers, including energy retailers⁵¹;
 - On appeal, it is clear that the Tribunal considered the product market to be a market for the sale of gas to users in South East Australia including residential users⁵²;
 - the 2002 VENCORP draft determination where Consumers at the retail level were clearly included in the market definition adopted by the ACCC⁵³;
 - the Mereenie Producers authorisation where the ACCC considered the market to be a broad market for the supply of gas to users including industrial, commercial and domestic⁵⁴;
 - the North West Shelf authorisation, the ACCC considered the market to be the market for the supply of gas to industrial and domestic users⁵⁵; and
 - the Cooper Basin decision where the Tribunal held that the market was for the supply of gas by producers to industrial, commercial and domestic users.⁵⁶
- 5.67 Although the Australian gas industry is characterised by a shallow pool of customers to whom gas producers can market gas, these decisions recognise that the activities of producers at the production and wholesale level are influenced by activity at the retail level.
- 5.68 Although these decisions were only made in the context of a gas market, it is clear that the same considerations apply in relation to electricity. In the NEM authorisation the ACCC considered substitution possibilities in the relevant product market in terms of industrial and residential applications.⁵⁷

⁵⁰ Eastern Gas Pipeline at 76,142.

⁵¹ Ibid. Note, the NCC used the term 'intermediaries' and 'aggregators' to refer to energy retailers.

⁵² Tribunal decision at 43-062.

⁵³ 2002 VENCORP draft determination at 9.

⁵⁴ Mereenie Producers authorisation at 53,125.

⁵⁵ North West Shelf authorisation at 55,773.

⁵⁶ Cooper Basin decision at 44-211.

⁵⁷ NEM authorisation at 57,414.

- 5.69 In addition, increasing vertical integration between businesses engaged in gas production or electricity generation, and the retail of those energy products (for example Origin Energy, TXU and AGL), further illustrates that substitution at the retail level exerts a competitive influence on the production of gas and electricity upstream. Origin Energy, TXU and AGL each also retail electricity.

Relevant market

- 5.70 The Participants recognise that the ACCC and the Tribunal have previously found the relevant market in gas related matters to be the wholesale market for the supply of gas in south eastern Australia. For the many reasons outlined above the Participants submit that it is appropriate for the ACCC to recognise that the Project will result in a significant change in the nature and structure of the market. It will enhance competition between gas and other energy sources both in product terms and geographic terms, providing energy consumers with an increasing number of potential suppliers as the market continues to expand. Accordingly, the Participants submit that the ACCC should consider the Project in the context of an expanding energy market in Eastern Australia, particularly when having regard to the market over the medium to long term.
- 5.71 If the ACCC concludes that the relevant product market remains limited to gas (although clearly that CSM forms part of that market, and also recognising increasing and important substitution with other energy forms over time), the Participants submit that at a minimum the geographic market is eastern Australia. As discussed above, negotiations with potential foundation customers to date clearly reveal that gas from the Project competes against gas from all other basins in Australia, and will have an impact on prices even in those states where Project gas will not physically be delivered. **[confidential]** In these circumstances it is clear that the relevant geographic area in which substitution between energy sources will occur is eastern Australia.

6. Joint marketing and the appropriate counterfactual

Overview

- 6.1 Section 90 of the TPA provides that the ACCC should grant an authorisation where it is satisfied that the proposed conduct, in this case joint marketing by the Participants, will result in a benefit to the public that will outweigh any detriment to the public constituted by any lessening of competition resulting from the conduct.
- 6.2 The test to be applied in determining whether the public benefit outweighs any anti-competitive detriment is the 'future-with-and-without test'. The application of this test involves consideration of a counterfactual to the situation that would exist if a long term authorisation was granted as sought by the Participants. The counterfactual is the situation that would be likely to exist if authorisation was not granted. For this reason, it is necessary to examine the situation that would be likely to exist if the Participants are not authorised to jointly market Project gas for the life of the Project.

Joint Marketing - Introduction

6.3 For five years the Participants have attempted to obtain sufficient buyer commitments pursuant to the interim authorisations granted by the ACCC to progress the Project to FEED. While this important point has now been reached, these are conditional commitments or indicative term agreements only. Further, the Project will need additional commitments in order to reach financial close, and substantial further contracts into the future in order for the Project to reach its satisfactory investment return. For this reason the Participants seek authorisation for the life of the Project to:

- negotiate the common terms and conditions (including price) under which gas produced by the Project will be offered for sale;
- jointly market that gas to a common buyer or common buyers; and
- enter into and give effect to contracts, arrangements and understandings between the Participants relating to common terms and conditions (including price and price arbitrations/determinations) upon which gas will be offered for sale and sold by the Participants to buyers.

6.4 Separate agreements, with common terms, will be entered into by each Participant and a buyer.

6.5 Issues relating to the joint marketing of gas in Australia have been subject to a large degree of public debate over many years. It has consistently been recognised by regulators and governments that the Australian gas industry currently lacks a number of key characteristics that are necessary for separate marketing to be possible, both from a commercial and a practical viewpoint. As a result, it has been widely accepted that joint marketing is often the most efficient method for producers to market gas in Australia, particularly in the case of greenfields developments such as the Project.

6.6 Indeed, the importance of joint marketing to the Project, and the fact that separate marketing of gas from the Project is not feasible, was expressly recognised in the October 2002 KPMG report commissioned by the Parer Committee entitled 'Separate Marketing of Natural Gas in Australia' (**KPMG Report**) which concluded that:

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.⁵⁸

6.7 In addition to the structural impediments to separate marketing of Project gas, there are also many practical and commercial reasons why it is essential for the Participants to be able to jointly market gas over the life of the Project in order for the Project to be viable. These reasons arise partly as a result of the structural characteristics of the industry which have been recognised as constituting a barrier to separate marketing, however some are due to the nature of the Project itself.

⁵⁸ KPMG, CoAG Energy Market Review, *Separate Marketing of Natural Gas in Australia*, October 2002 at 37.

- 6.8 In particular, the Participants regard joint marketing as critical to their ability to obtain the firm commitments from customers necessary to underwrite the costs of the development and ongoing operation of the Project. In the absence of joint marketing, the Participants do not believe that it will be possible to obtain the level of customer commitment, or to provide customers with the level of credibility, that is necessary to underwrite the Project investment. Indeed, the history of the Project to date indicates that in a market characterised by a shallow pool of buyers who have access to a range of alternative supply options, it is very difficult for a major greenfields operation such as the Project to attract customers who have as an alternative the more secure option of contracting with existing suppliers of natural gas, CSM or other forms of energy.
- 6.9 An analysis of the various structural and practical barriers to separate marketing is set out below. It is as a result of these factors that the KPMG Report stated that:

we have generally concluded that large high capital greenfield new project type developments would be significantly hampered if forced to separately market production and that therefore it is not usually likely to be feasible.⁵⁹

Structural characteristics of the market

- 6.10 It has been consistently recognised in various authorisations granted by the ACCC, as well as in various government reviews, that although separate marketing is usually preferable in a competitive sense to joint marketing, the Australian gas industry lacks maturity and is missing many important structural features present in Northern America and Europe which have enabled the development of separate marketing. It has been recognised that in a shallow industry such as Australia, where there is a very limited number of buyers and sellers, joint marketing is necessary to overcome these structural problems. This is particularly the case in relation to greenfields projects, which face large lead times and require the expenditure of very large amounts of capital well in advance of gas becoming available for consumption.
- 6.11 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

⁵⁹ Ibid at 6.

- the development of substantial short term and spot markets.⁶⁰
- 6.12 These factors were recently repeated by the ACCC in the Mereenie Producers authorisation.⁶¹ The UIWG, in reporting on issues relevant to the upstream gas industry, identified the same set of factors as required to support separate marketing.⁶²
- 6.13 There have been a number of significant developments in the gas industry in recent years which have led to an increase in competition not only between gas suppliers, but also between gas and other forms of energy. These changes are discussed in the Frontier Economics Report at Annexure 3. However, as the Frontier Economics Report recognises, notwithstanding those changes on the supply side, there has not been a significant change in those structural features of the gas industry previously recognised by the ACCC and UIWG as presenting a barrier to separate marketing of gas. In that respect, the gas industry is still characterised by:
- a lack of liquidity on the demand side with a shallow pool of customers;
 - a prevalence of long term supply contracts;
 - limited short term sales and no significant spot market sales; and
 - very limited gas storage.
- 6.14 A detailed discussion of the structural barriers to separate marketing of gas by the Project in eastern Australia is provided in Annexure 7.

Practical and commercial requirements for joint marketing

- 6.15 There are a number of immediate practical and commercial reasons why separate marketing of the gas under the Project is not feasible. Some of the reasons relate to the characteristics of the industry (as discussed above), and are common to greenfields projects. In addition, the specific characteristics of the Project raise other barriers to the separate marketing of Project gas. In summary:
- the capital cost of developing the Project reserves, which are located in remote, mountainous terrain in PNG, and constructing a dry gas pipeline to Australia are extremely high;
 - since the Project is a greenfields development the Participants must incur these costs and risks well in advance of the first supply of gas to customers;
 - as a result, the Participants, the AGL Petronas Consortium and those institutions providing project finance to the participants of the Project all require a high degree of security that the Project is financially viable and will be capable of delivering a rate of investment return over its life that reflects the level of investment required and the risk involved. This requires firm customer commitments to underwrite the costs and risks of the development;

⁶⁰ North West Shelf determination at v.

⁶¹ Mereenie Producers authorisation at 37.

⁶² Upstream Issues Working Group, *Report of the UIWG to ANZMEC and CoAG*, December 1998 at 31.

- customers require security of supply and a high degree of assurance that the Project will proceed before they will commit to the Project rather than source their energy requirements from established suppliers. As the ACCC is aware, there has been much public speculation about the feasibility of the Project over the last few years and the Project has found it difficult to obtain sufficient customer commitments at any one time to proceed to the FEED stage;
- the large amount of infrastructure that must be constructed and the long project lead times mean that the Project has faced great difficulty aligning customer demand with the likely date of commencement of gas supply;
- in addition, the small pool of customers has meant that:
 - it has been difficult to amalgamate sufficient customer volumes to underwrite the project; and
 - buyers have significant countervailing power, since, in the past, the loss of one customer has created significant delays for the Project;
- potential customers have a range of alternative supply options, and numerous customers that entered into indicative term sheets with the Project subsequently contracted with existing suppliers of natural gas or CSM gas instead;
- CSM has much lower development lead times than a greenfields gas project, and has cost advantages over Project gas due to lower transport costs. For these reasons CSM has been, and will remain, an attractive option for potential customers of the Project;
- Oil Search, MRDC and Merlin have no presence or experience in the Australian gas industry. Potential buyers of gas from a greenfields project with substantial development lead times and risks are reluctant to make a commitment unless there is at least one counterparty of investment grade financial substance. It is for this reason that some of the customers that have agreed to contract with the Project have only done so on the basis that Esso Highlands is a participant and that Esso Highlands is expected to remain the Project Operator.⁶³ If the Participants were not able to jointly market, customer confidence in the Project would diminish further. Oil Search, MRDC and Merlin would have no prospect of obtaining sufficient customers to warrant the financial risk of proceeding with the Project.
- Parties such as Oil Search, MRDC and Merlin which have limited experience and/or a relatively small entitlement to Project gas are likely to have little individual bargaining power with large, sophisticated buyers. This is a further reason why multiple commercial negotiations between each Participant and potential customers is likely to result in prices and terms which would not make for a viable project.

⁶³ Customers have also required that any successor operator must be a reputable company in the petroleum industry and have the requisite financial and technical capacity to properly perform the function of Operator.

- 6.16 The ability of the Participants to jointly market Project gas pursuant to the various interim authorisations granted by the ACCC has been critical to address these difficulties, and on-going authorisation will similarly be essential for the Project to proceed. If the Participants had been required to engage in separate marketing to date it is extremely unlikely that customers would have regarded the Project as a credible supply alternative. The Participants would also not have regarded it as a viable commercial proposal to develop the Project due to the structural and practical difficulties outlined above.

Cost of the Project

- 6.17 The Project will be one of the largest infrastructure projects ever completed in Australia. In the Participants' 12 September 2000 application for interim authorisation from the ACCC,⁶⁴ it was noted that:

The amount of capital investment required for this Project will be substantial. Current estimates are approximately US\$2.5 billion. An operation of such immense scale will require the full co-operation and alignment of all Participants, both to provide their own resources and to spread the risks associated with the Project.

- 6.18 Since that application was made, the capital investment required for the Project has increased significantly. It is currently estimated that the Participants will invest more than US\$3 billion in the development and operation of infrastructure for the production, processing and transportation of gas from the Project.
- 6.19 Because of the location of the Project reserves, the costs faced by the Project are more pronounced than those faced by other greenfields projects due to the geographical, geological and political complexities associated with production in PNG. These factors, plus the volatile climatic conditions, add a high degree of complexity to the Project, and significantly increase the costs of development and production.
- 6.20 Although the Project fields are located onshore in PNG, they are located in a remote mountainous area with little or no infrastructure. The Project therefore requires a much greater level of capital investment than the development of typical mainland or even offshore Australian gas reserves. Each aspect of the development is highly complex and requires coordination not just between the Participants, but also with numerous third parties, such as government agencies, the pipeline developers and potential customers.

Financial risk to Participants

- 6.21 A large proportion of the costs of the Project must be incurred by the Participants up front. This increases the financial risk of the investment to the Participants since there will be a substantial period before revenues are received from customers.
- 6.22 The costs of investment, and the substantial on-going costs of Project operation, must be recouped in sales contracts over the life of the Project. This further increases the financial risks facing the Participants in terms of the security of revenue from Project sales. Security of revenue requires that customers have a good credit rating and credit worthiness and are

⁶⁴ At this time, the Project included Santos.

not likely to breach gas sale agreements. Obtaining sufficient volumes for the Project to proceed is therefore not simply a volume based issue but also involves qualitative considerations. In addition to the risk of customer default, the Participants themselves will be exposed to contractual liabilities which will vary between contracts.

6.23 Macquarie Bank, in its May 2002 report to the ACCC 'Issues for Debt and Equity Providers in Assessing Greenfields Gas Pipelines' (the **Macquarie Bank Report**), outlined the risks involved in the development of a greenfields gas pipeline.⁶⁵ The Macquarie Bank Report confirmed that greenfields projects, such as the PNG Project, faced significant financial risks in terms of:

- the physical and financial risks involved in the construction and operation of the Project; and
- the risk of failing to secure adequate revenue, for example through inability to secure contracts or errors in forecasting.

6.24 Joint marketing is critical to the ability of the Participants to share these financial risks, and also to secure sufficient high quality customer contracts in order to minimise risks to the maximum extent possible.

Project finance issues for the Participants

6.25 Oil Search, JPP and MRDC (and potentially the State of PNG and its nominees, if it exercises its right to participate further as discussed in paragraph 2.19) will need to obtain project finance to fund their share of the initial and ongoing capital investment required under the Project. Unless financiers are provided with the security that the Participants will have the ability to jointly market and secure customer commitments they are highly unlikely to provide the necessary funding. As with the Participants themselves, the financiers will need to balance the costs and risks of the Project against the projected revenues over the life of the Project in order to satisfy themselves that the Project is financially viable, and their funds are properly secured. Project finance is generally non-recourse, therefore in deciding whether to extend finance to a Participant, financiers will assess such issues as the risk of capital, expenses, construction and operations, the possibility of cost blow-outs, environment and native title issues, projected revenue flows and security of revenue.⁶⁶

6.26 In particular, financiers of a major greenfields investment such as the Project will require the existence of contracts which meet Project expenses (so that the gas supply will continue in accordance with the Project plan), as well as generate sufficient revenue to service the debt. Financiers will also expect the Participants to be in a position to secure further contracts which ensure that the Project is financially robust over its life and which provide a buffer in terms of the returns required to meet debt repayments.

⁶⁵ Macquarie Bank Report to ACCC, 'Issues for Debt and Equity providers in Assessing Greenfields Gas Pipelines', May 2002 at 3-4 and 13-19. The Macquarie Bank Report deals with the issues faced by financiers of greenfields pipelines. However, it is submitted that the principles discussed in the Macquarie Bank Report extend equally to the financing of a major greenfields gas development such as the Project.

⁶⁶ The risk factors identified in Macquarie Bank Report and discussed above apply equally to financiers of greenfields gas developments.

- 6.27 For this reason, financiers require firm, long term take-or-pay contracts. Financiers require these contracts to extend not only for the term of the loan, but for a significant period beyond that point in order to mitigate against risks such as force majeure occurrences or payment for any penalties under the contract. As noted above, with a greenfields project, particularly one located in another country and reliant on the construction of major gas pipelines, there are much greater risks involved which financiers will wish to offset through the security of a number of long term contracts. The ability to secure such contracts by jointly marketing gas, therefore, makes the Project more 'bankable'.
- 6.28 For those Participants obtaining finance, the costs of that financing are an important factor in determining the overall risk analysis. In order to secure affordable project finance, a Participant will need to demonstrate that all manageable risks associated with the Project have been minimised. In this context, financiers will require the maximum possible commercial and regulatory certainty in relation to gas sales agreements.
- 6.29 If the Participants were only permitted to jointly market for a restricted period, this would adversely impact on the cost and availability of finance. Future income projections will be based on obtaining profits from the sale of gas over the anticipated life of the Project. If the Participants will be required to separately market gas prior to the expiry of the finance agreement, financiers are likely to view this as diminishing the security of those anticipated sales, thereby increasing the risk associated with the loan. This could push the cost of debt or reduce the anticipated rate of return to levels where it makes an investment decision uneconomic. In relation to foundation contracts, financiers will only provide finance if those contracts are firm and free from renegotiation or significant variation during their full term. In relation to any contracts entered into after financial close, a requirement to separately market would be viewed negatively by financiers since it would threaten the prospects of borrowers obtaining additional cashflows over the Project's life as a buffer against repayment obligations. Any requirement to separately market after financial close will also negatively impact upon the ability of the Participants to obtain refinancing after financial close in order to optimise debt or cash flow levels, or fund any further capital expenditure in relation to the Project.
- 6.30 The issues discussed in paragraphs 6.25 to 6.29 above are also relevant to the Participants who will self-finance their investment in the Project. Each Participant will need to be confident that the Project will provide a sufficient rate of return to justify the allocation and use of internal funds. In the absence of sufficient secure, long term contractual commitments by reliable customers, it is unlikely that a required rate of return hurdle would be met.

The Australian Pipeline

- 6.31 The Participants understand that APC will be project financing the Australian Pipeline. Because APC will be receiving payment through the volume of gas transmitted through the pipeline, surety of supply and demand is fundamental to its commercial viability. The viability of the Australian Pipeline is inextricably linked to the viability of the Project, the cost of APC's finance will depend on the risks involved in the Project and the financier will require security of demand and supply.

6.32 As noted in the Macquarie Bank Report, the greater the certainty of project cashflows, the lower the risk profile, the greater the debt capacity and the lower the minimum debt service cover ratios required by financiers.⁶⁷ Unless the Participants are able to demonstrate that they have obtained a sufficient level of committed demand for the Project (and therefore a sufficient level of certainty to commercialise the cost of finance), APC may be unable or unwilling to obtain project finance.

Need to secure customers to underwrite costs and risks

6.33 The security of revenue from the Project necessary to justify the costs and risks involved, and the ability to ensure that the returns from the Project justify those costs and risks, can only be achieved if the Participants can be certain in advance of their ability to sell the gas produced by the Project. The KPMG Report observed that 'valuable exploration and development dollars will not be put at risk until a market can be reasonably defined and accessed'.⁶⁸

6.34 The ability to jointly negotiate the long term customer contracts necessary to secure sufficient aggregate demand is fundamental to the ability of the Participants to secure such contracts, and to thereby justify the necessary investment in the Project. As recognised in the KPMG Report, securing major loads is an important determinant in achieving Project viability.⁶⁹

6.35 There has been much public conjecture about the Project, and scepticism expressed about the financial viability of the Project. Customers require a high degree of certainty that their contracted supplier will be able to deliver gas at the agreed time. Due to the fact the Project is a greenfields project, and the long lead times before gas will become available to customers, the Project has struggled to instil the necessary confidence in potential customers that it represents a secure source of supply.

6.36 In the context of a market characterised by a shallow pool of customers and a range of competitive suppliers, customer perceptions have led to ongoing difficulty in securing sufficient volumes to underwrite the decision to proceed to FEED. Numerous customers have entered into indicative term sheets with the Project only to subsequently contract with existing suppliers of natural gas or CSM gas instead. Figure 3 illustrates the history of the Project losing previously committed customers to other suppliers.

Figure 3: Losses of customers by the Project

[confidential]

6.37 At the current time, even when negotiating collectively pursuant to the various interim authorisations granted by the ACCC, the Project has four conditional commitments. In the past five years, the Project has won and lost over 100 PJ of custom. In the hope of increasing customer confidence and improving its competitive position in the market, the Project has moved to FEED with a smaller committed volume than originally planned.

⁶⁷ Macquarie Bank Report at 12.

⁶⁸ KPMG Report at 23.

⁶⁹ Ibid at 37.

Ability to secure sales against established suppliers

- 6.38 There are currently few anticipated new large manufacturing or resource developments with which the Project can secure initial contracts. The Project will aim to establish gas contracts with a range of actual and potential consumers of gas, including:
- customers which currently need a large, secure supply of gas within Australia and which are currently renegotiating their long term gas contracts;
 - customers which currently use alternative energy forms such as coal, CSM or liquid fuel but which are considering the use of gas to replace all or part of the other forms; and
 - customers whose current gas supply contracts are insufficient to meet their future supply requirements.
- 6.39 In each instance, the Project will face competition from other well established suppliers of gas or other fuels, and the Project's ability to aggregate sufficient contractual commitments is therefore by no means certain. In particular, the ability of the Participants to secure sufficient contracts to underwrite the Project would be significantly compromised if they were required to negotiate individually against established suppliers.
- 6.40 Table 2 below illustrates the difficulty that the Participants face in aligning the customer commitments necessary to underwrite an investment in the Project with the dates at which customers need gas available to meet their demand. The ability to secure sufficient customer supply requirements and to align these requirements with projected supply dates given the long lead times and investment required before gas becomes available would be extremely difficult, if not impossible, if the Participants could not negotiate jointly with customers.
- 6.41 Customers will not make such an investment decision unless they are sure of supply. Existing suppliers therefore have a distinct advantage in marketing gas over the Project, as do existing and potential suppliers of CSM. As discussed in the Frontier Economics report, 'greenfield' CSM fields are able to be developed within a relatively short period of time. Developers of such fields do not require the level of customer commitment, as the costs involved in exploration and production are significantly lower. As is evidenced by the customers lost by the Project to CSM suppliers, CSM presents an attractive option for these reasons.

Table 2: Project timing and customer requirements

[confidential]

Customers unlikely to contract with Participants separately

- 6.42 It is the experience of the Participants in their negotiations with potential customers to date that customers recognise the need for the Participants to jointly market gas. The Participants believe there to be a customer preference to negotiate with a single commercial operator, and to treat the Participants as a 'unit'.
- 6.43 The Participants are firmly of the view that without the ability to engage in joint marketing, customers are likely to be concerned about individually contracting with Oil Search, MRDC

and Merlin. These companies do not have an existing presence in Australia, and are viewed by customers as being inexperienced in the Australian gas industry and lacking the necessary skills to separately market and supply gas. Potential buyers of gas from a greenfields project with substantial development lead times and risks are reluctant to make a commitment unless there is at least one counterparty of investment grade financial substance. It is for these reasons that some of those customers that have agreed to contract with the Project have only done so on the basis that Esso Highlands is a participant and that Esso Highlands is expected to remain the Project Operator.⁷⁰ Furthermore, if the Participants were required to separately market their entitlements, then customers would be likely to focus on the financial security associated with each of the Participants separately.

- 6.44 Even if customers were prepared to negotiate with the Participants separately, there is likely to be a significant disparity in bargaining power between the potential large foundation customers of the Project and each of Oil Search, MRDC and Merlin. There is a significant risk that, in order to sell their respective entitlements, these Participants would be forced to accept pricing which is unsustainably low and terms which are potentially unworkable, thereby jeopardising the viability and bankability of the Project. In particular, financiers are likely to scrutinise, and may be reluctant to accept, any concessions these Participants may be forced to make (for example, in relation to the default provisions of a supply agreement) that would undermine the security of that Participant's long term take-or-pay entitlements. Further, a smaller Participant would not have sufficient offtake entitlements to enable it to satisfy the requirements of a large buyer.
- 6.45 As a further practical point, it should be noted that the gas requirements of the Project's potential customers are unlikely to be satisfied, in terms of both volume and security of supply, by small producers alone. Only a large project is capable of providing the volumes of gas and security of supply required by such customers in aggregate. However, large projects require substantial investment, beyond the capability or willingness of any single producer and in the absence of joint marketing this investment would not be made.

Borrow and loan arrangements

- 6.46 As explained in section 4, the Participants own different interests in the various PDL/PRLs, and the licence areas will be developed at different times. If the ACCC were to require the Participants to separately market, they would need to implement 'borrow and loan' arrangements, otherwise known as 'gas balancing' arrangements, between them. Borrow and loan arrangements are complex commercial arrangements that allow the shareholders in production joint ventures to draw off the gas to which they are entitled at different rates.
- 6.47 There are a number of practical reasons why borrow and loan arrangements between the Participants do not present a practical means of increasing competition through the facilitation of separate marketing of Project gas. In summary, these include:

⁷⁰ Customers have also required that any successor operator must be a reputable company in the petroleum industry and have the requisite financial and technical capacity to properly perform the function of Operator.

- the Participants will inevitably find it difficult to negotiate a borrow and loan agreement. Each Participant will have each committed large amounts of capital to the Project, and the effect of the borrow and loan agreement will be to defer one or more of the Participants' ability to recoup those costs. A Participant seeking an increased share will effectively be bringing forward its share of future sales revenue to the present. This will have the effect of:
 - deferring the other Participants' cash flows; and
 - subjecting the other Participants to greater risk, due to the potential fluctuation of gas prices between the time of the loan and the time of repayment. This is likely to increase the cost of financing.

It is legitimate that the other Participants would be concerned to protect their own interests and their own investment in the Project;

- a borrow and loan arrangement has to be negotiated and implemented in such a way as to ensure production will proceed at a rate which satisfies the needs of the partner wishing to take the most gas while ensuring the resource is being managed to produce optimal results;
- 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, and has given rise to lengthy, complex and expensive litigation in the past (see Annexure 7 for more detail); and
- even where it is possible to formulate a sound estimate of the level of reserves a less than optimal management of the reservoirs 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.

6.48 **[confidential]**

- 6.49 For the reasons outlined above, there is a high degree of risk attached to the use of borrow and loan arrangements. Attempting to negotiate and implement such arrangements between the Participants would increase the cost and risk of the Project, give rise to the likelihood of further delay, and thereby create expensive inefficiencies.

Duration of joint marketing

- 6.50 It is important to note that any decision on the part of the ACCC to impose a time limit on joint marketing would have a significant impact on the Participants' analysis of the overall financial viability of the Project. It is also very likely to affect the analysis by the Project's financiers and the AGL Petronas Consortium of the Project. In particular, any decision by the Participants (in conjunction with their financiers) to proceed beyond FEED will be reliant on their ability to secure future sales. Throughout the FEED process the Project will need to obtain additional contracts in order to reach financial close. Thereafter, substantial further contracts will be needed into the future in order for the Project to reach its required investment return.

- 6.51 While the Participants may decide to proceed beyond FEED, or subsequently to proceed to financial close, based on an assessment that they will be able to secure additional volumes in the future, this will not be the case if the Participants do not have the ability to secure such volumes through joint marketing. The Participants believe that it would be extremely difficult, if not impossible for some of the Participants, to separately market Project gas.
- 6.52 The ability to jointly market gas is therefore a critical input into the Participants' assessment of the likelihood of securing sufficient contracts into the future to make the Project viable. If the Participants are not permitted to jointly market gas, or are only permitted to jointly market for a short period of time, the resulting uncertainty over the stream of Project revenue into the future is likely to result in the Participants (or their financiers) not proceeding with the Project.

Conclusion on the counterfactual

- 6.53 For the reasons described in detail above, in the absence of a long term authorisation for joint marketing, it is the position of the Participants that they will not proceed with the Project within the foreseeable future. For this reason, it is clear that whatever other conclusions are reached by applying a 'future without test', the resulting counterfactual will not involve a dry gas pipeline between PNG and Queensland nor the introduction of Project gas to Australian customers.
- 6.54 The Participants' decision to proceed to FEED reflects their longstanding commitment to the Project and belief that the Project can be commercially viable. However, the Participants' position in this respect is critically dependent on their ability to jointly market Project gas for the life the Project.
- 6.55 This is not a case, such as the recent Pohokura Determination⁷¹, where the development of the Project might be argued to be inevitable, in which case the ability to jointly market gas finds relevance primarily in the degree of delay that might be occasioned if joint marketing is prohibited. It is the firm belief and expectation of the Participants that the Project will not proceed at all in the foreseeable future unless an authorisation is granted in the terms sought which enables the Participants to underwrite the massive investment required by jointly marketing gas over the life of the Project.
- 6.56 Development of the gas reserves held in the licenses held by each of the Participants in the Hides, Moran, Kutubu and Gobe fields is not inevitable. In particular, it is not inevitable that the development of those reserves will result in the construction of a dry gas pipeline between Australia and PNG to bring Project gas to Australian consumers. There are other commercial alternatives for the utilisation and exploitation of the Participants' reserves if authorisation is denied. As is evidenced from the recent news report at Annexure 9, Oil Search has been open about the fact that it might pursue alternative projects to develop its PNG resources. These include:
- a liquids cycling project based on raw gas from the Hides field;
 - supply of gas to a methanol plant within PNG;

⁷¹ A detailed comparison of the facts in the Pohokura determination to the Project is contained in Annexure 8.

- a gas pipeline to Port Moresby for industrial customers; and
 - supply of compressed natural gas to customers in New Zealand and the Pacific islands.
- 6.57 Options for the other Participants include the development of less capital intensive oil and gas projects for domestic supply within PNG or export to Asia, or possibly disposing of reserves.
- 6.58 Even if any of these alternatives proceed if authorisation is denied, none of these options will result in the supply of Project gas to consumers in eastern Australia. The counterfactual is therefore a comparison between a scenario with the Project and without the Project.

7. Balancing public benefits and anti-competitive detriments

- 7.1 Section 90(6) of the TPA requires that, before the ACCC grants an authorisation in relation to provisions of proposed contracts, arrangements or understandings which may have the purpose or effect or likely effect of substantially lessening competition, it be satisfied that, in all the circumstances, the arrangement would result, or would be likely to result, in 'a benefit to the public and that that benefit outweighs or would outweigh the detriment to the public constituted by any lessening of competition' that has resulted, or is likely to result, from giving effect to the arrangement.
- 7.2 Section 90(8) of the TPA provides the test that must be applied by the ACCC when considering whether to grant authorisation to exclusionary provisions, as defined in section 4D of the TPA. While there is some difference in the wording of sections 90(6) and 90(8), the Tribunal has recognised that the practical implications of each test is essentially the same:
- One of the applications for authorization was treated by the parties and by us as being in respect of an arrangement that falls in or may fall in an exclusionary provision within the meaning of that expression in sec. 4D of the Act. The test is the same whether or not the provisions of the arrangements are governed by subsec. 90(6) or constitute "exclusionary provisions" because the language of the relevant subsection in that event, namely, subsec. 90(8), is in all material respects the same. Hence, for all practical purposes one applies the public benefit and detriment test already outlined.⁷²
- 7.3 The Participants submit that, for the reasons set out below in sections 8 and 9, the process of balancing the public benefits against the anti-competitive detriments in this case is straightforward:
- in the future 'with' a long term authorisation in place, there will be significant public benefits and no anti-competitive detriment; and

⁷² *Re Media Council of Australia (No 2) (Re Media Council of Australia (No 2))* (1987) 88 FLR 1.

Also see *Re Rural Traders Co-operative (WA) Limited* (1979) FLR 244; *Re 7-Eleven Stores Pty Ltd (Re 7-Eleven Stores)* (1994) ATPR 41-357.

- in the future 'without' a long term authorisation, these public benefits will be foregone and a critically important opportunity to facilitate a major infrastructure development with immense national significance will have been denied.

8. Anti-competitive detriments

- 8.1 For the reasons set out in detail in section 6 above, the appropriate counterfactual by reference to which the anti-competitive detriments is to be assessed is a scenario without the Project. Whilst the Participants recognise that it is very difficult to hypothesise a 'future without the Project' scenario over a period equivalent to the life of the Project,⁷³ it is clear that the future without the Project is extremely unlikely to involve a scenario where by as early as 2007/2008:
- a major gas transmission pipeline is constructed down the entire eastern coast of Queensland, as well as a Ballera to Moomba dry gas link fully interconnecting the Queensland network to the other eastern Australian states;
 - volumes of gas as significant as those proposed by the Project are made available to Australian consumers, with the immediate and sustained impact on the price of gas and other energy forms that will result from such a large supply source entering the market;
 - the significant impact on the Australian economy, as modelled in the ACIL Report, is achieved.
- 8.2 Joint marketing by the Participants will therefore not create any anti-competitive detriment since it will facilitate a development that would not otherwise occur. As the ACIL and Frontier Economics reports confirm, the Project will have a significant and sustained pro-competitive impact over the life of the Project. Even if the ACCC adopts a narrower view of the market, this does not alter the conclusion that competition between gas suppliers and between gas and other forms of energy will be significantly enhanced by the introduction of Project gas, and will continue to grow as the Project develops. In fact, as detailed in the ACIL Report, one of the primary public benefits flowing from the Project will be an increase in competition in the supply of energy in eastern Australia. This increase in competition will lead to lower prices for Australian industry, and lower costs for Australian consumers.
- 8.3 Furthermore, it is clear that the actual and potential suppliers of natural gas, CSM and other energy sources (including electricity and coal) which have competed with the Project and made it difficult for the Project to achieve sufficient volumes of sales to proceed to FEED will continue to exert a strong competitive constraint on the Project. As the market expands, the level of competition faced by the Project in obtaining and retaining customers will increase. The constraints exerted by the growing pool of alternate suppliers will ensure

⁷³ For example, there has been speculation that pipelines may one day be constructed from gas reserves located in the North West Shelf and Timor Sea to eastern Australia. The commercial viability and likelihood of such developments is unknown, and is likely to be impossible to realistically ascertain at the current time. In the medium to long term, as Cooper Basin reserves begin to decline it may be that the development of some more marginal CSM reserves is accelerated to meet gas demand, particularly in Queensland.

that the Project will not be able to gain any anti-competitive advantage through joint marketing.

- 8.4 Finally, the large customers that will contract for Project gas have significant countervailing bargaining power. This is particularly the case because:
- for the reasons set out above, each has a number of alternative energy sources;
 - each represents a significant volume of gas, and having regard to the history of the Project customers are aware of the importance of those volumes to the ability of the Project to proceed or deliver an acceptable return; and
 - once constructed, the Participants may face the risk of the extremely large investment that has been made in infrastructure and assets becoming underutilised if customers contract with other gas suppliers including suppliers of CSM.

9. Public benefit

Introduction

- 9.1 The ACCC and the Tribunal have consistently recognised that the term 'public benefit' should be given its widest possible meaning.⁷⁴ The concept of 'public benefit' has been explained as encompassing:

...anything of value to the community generally, any contribution to the aims pursued by society including as one of its principle elements...the achievement of economic goals of efficiency and progress.⁷⁵

- 9.2 In the context of efficiency and progress, the Tribunal has also indicated:

Plainly the assessment of efficiency and progress must be from the perspective of society as a whole: the best use of society's resources. We bear in mind that (in the language of economics today) efficiency is a concept that is usually taken to encompass 'progress'; and that commonly efficiency is said to encompass allocative efficiency, production efficiency and dynamic efficiency.⁷⁶

- 9.3 Public benefits which have been recognised by the ACCC⁷⁷ and which are relevant to this submission include:

- economic development including the encouragement of capital investment. In particular, the Project will encourage economic development through increased inter-basin and inter-fuel competition and the provision of an essential supply of gas to eastern Australia. The Project will also foster regional economic development;

⁷⁴ See *Macadamia Processing Company and Suncoast Gold Pty Ltd* (1991) ATPR (Com) 50,109 at 56,101; *Dauids Limited* (1996) ATPR (Com) 50,224 at 56,458; *Du Pont (Australia) Ltd and Ors* (1996) ATPR (Com) 50-231 at 56,529.

⁷⁵ QCMA at 17,242.

⁷⁶ Re 7-Eleven Stores.

⁷⁷ Re *ACI Operations Pty Ltd* (1991) ATPR (Com) 50-108.

- fostering business efficiency, especially where this results in improved international competitiveness;
 - the expansion of employment or prevention of unemployment in efficient industries and the growth of employment in particular regions;
 - development of import replacements;
 - growth in export markets; and
 - promotion of environmental protection.
- 9.4 The Project will bring significant, long term benefits to the Australian public. Each of the public benefits set out above will be achieved through the development of the Project. In addition to the significant public benefits identified above, the Project will provide a major new source of supply to eastern Australia, and will facilitate further expansion of gas supply through the potential for access to the gas pipeline. On this basis, the Project is properly viewed as an essential development, not merely a beneficial one.
- 9.5 Joint marketing is imperative to the delivery of the full complement of public benefits achievable under the Project and is an integral element of the Project. As noted in section 6 above, the Project will not proceed without an authorisation which provides long term security to the Participants to underwrite their investment in the Project by securing sufficient customer commitments through joint marketing. Unless the Participants are permitted to jointly market and sell the gas produced under the Project, development of the Project (at a cost of more than US\$3 billion) will be jeopardised, as will other major resource projects in eastern Australia that depend on large volumes of competitively priced gas from PNG.⁷⁸ Accordingly, the public benefits attributable to the Project overall represent the public benefits from the conduct for which authorisation is sought, namely the joint marketing of gas.
- 9.6 The ACIL Report, which is attached at Annexure 4, was commissioned by the Participants to assess the economic impacts of the Project at a national, state and regional level. Although the Participants commissioned the ACIL Report, its findings are independent.
- 9.7 The ACIL Report sets out in detail the Project's public benefits and provides clear evidence to support its conclusions in this respect. Each of the public benefits identified in the ACIL Report arising from the Project are discussed below.

Economic development

Increased competition in the eastern Australian energy market

General

- 9.8 The Project will involve the supply of initially up to 200 petajoules of gas per annum to eastern Australia. Modelling conducted by ACIL Tasman demonstrates that the Project will boost overall levels of gas supply in the eastern States by up to 12% per year over the

⁷⁸ In Du Pont at 56,535 the ACCC recognised that the substantial public benefits were unlikely to be available in the absence of the proposed joint venture and exclusive marketing arrangements.

period 2010 to 2020.⁷⁹ This is a very significant quantity of gas, the introduction of which to the eastern Australian market will place considerable price pressure on existing suppliers. This was recognised by the Parer Report, which stated that:

Should these new supplies [Timor and PNG] eventuate, the commercial pressures they could bring to the existing suppliers will act to keep prices competitive.⁸⁰

- 9.9 In addition to promoting inter-basin competition between gas producers, the Project will also lead to increased competition in the supply of other forms of energy in eastern Australia, most particularly by reducing the cost of gas fired electricity generation.

Increased competition between gas producers

- 9.10 The sale of Project gas into the eastern Australian market will exert a competitive pressure on gas supplied from other existing and developing eastern Australian basins, which ACIL estimates will result in a lower price for gas in eastern Australia. In particular, the Project will facilitate increased interbasin competition through an expansion in gas pipeline infrastructure and interconnectivity. As the Productivity Commission noted in its Review of the Gas Access Regime, the benefits of greater gas interconnectivity include:

- facilitation of competition in upstream and downstream markets;
- reduced barriers to entry and increased contestability of customers;
- improved allocative efficiency by enabling gas to be transported to where it is most highly valued; and
- enhanced security of supply.⁸¹

- 9.11 The MCE has also noted the benefits of greater interconnectivity of gas supply:

The progressive integration of Australian gas markets provides substantial public benefits in terms of greater competition and more reliable supply through access to multiple sources of gas. Greater regulatory certainty and consistency will encourage investment by lowering barriers to entry and reducing the regulatory overheads and risk borne by market participants.⁸²

- 9.12 Once the Project is established, other potential PNG gas producers with interests in PNG gas reserves may be able to develop those reserves by making use of the Project infrastructure including the Australian Pipeline. Those parties could then market and supply gas in Australia in competition with the Project. Similarly, the Project may facilitate the development or expansion of gas reserves in Queensland through the construction of spur lines to the Australian pipeline. In this way, the Project is likely to result in the introduction of not one, but a number, of new gas supply sources into Australia.

- 9.13 This is the source of a significant public benefit, including because:

⁷⁹ ACIL Report, section 7.1.

⁸⁰ Parer Report at 117.

⁸¹ Productivity Commission, *Review of the Gas Access Regime*, No.31, 11 June 2004 at 52-55.

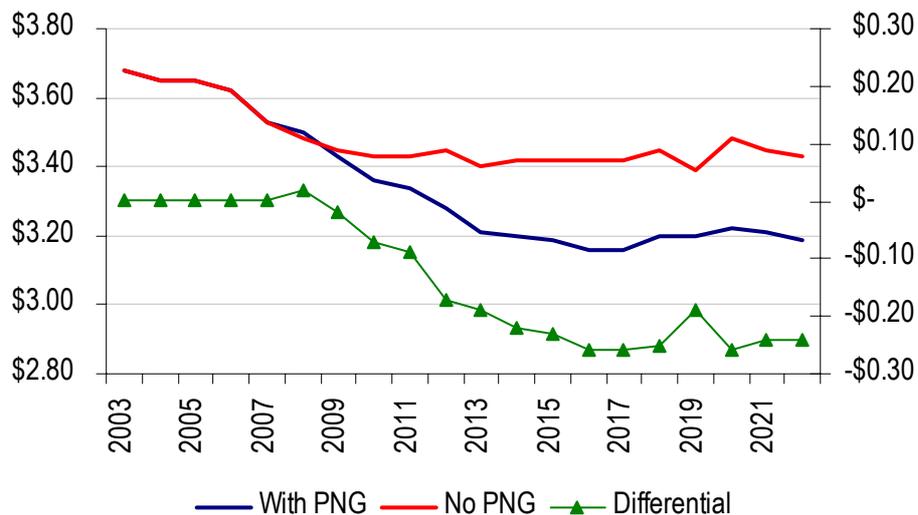
⁸² MCE Standing Committee of Officials, *Draft Gas Market Principles: Consultation Paper*, August 2004 at 5.

- it will assist in achieving the wider penetration of natural gas, which the MCE has stated to be 'a key priority'⁸³; and
- it will also facilitate the MCE's objective of increasing penetration of natural gas to lower energy costs and improve energy services, particularly in regional Australia.⁸⁴

9.14 The ACIL Report concludes that, at the end of the modelling period, the average delivered wholesale price of gas in Queensland is estimated to be \$0.25/GJ (in real terms) below the prices expected in the absence of Project gas.⁸⁵

Figure 4 illustrates ACIL's estimate of the impact of the Project gas on average delivered wholesale gas prices in Queensland.

Figure 4: Differential impacts of PNG Gas Project on wholesale gas prices in Queensland⁸⁶



9.15 The ACIL Report also concludes that the Project impacts on average prices in other eastern Australian states, principally because PNG Gas enables gas supply to be maintained to some less-price-tolerant demand that might not otherwise acquire supply. The ACIL Report concludes that, at the end of the modelling period, the average delivered wholesale price of gas in eastern Australia is estimated to be \$0.15 to \$0.20/GJ (in real terms) below the prices expected in the absence of Project gas.⁸⁷

⁸³ MCE Supplement Report at 1.

⁸⁴ MCE Report to COAG at 4.

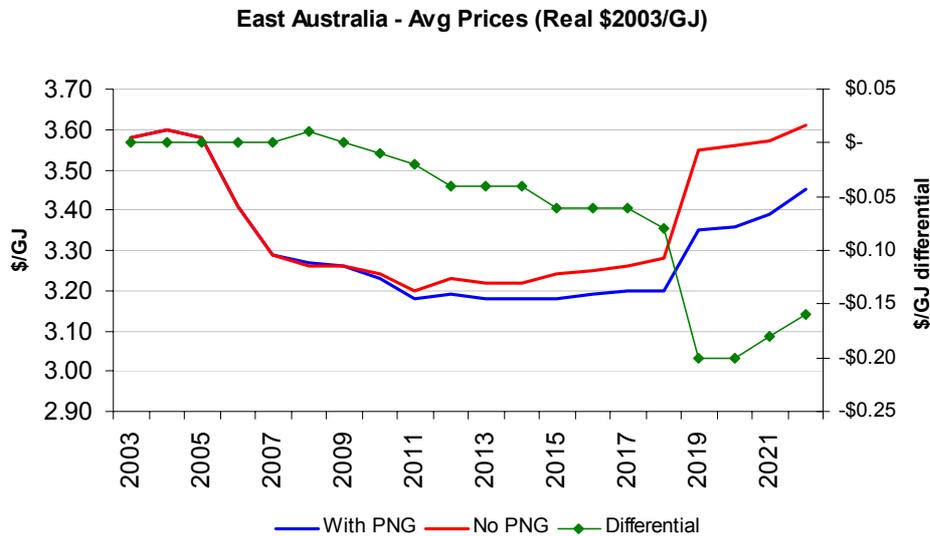
⁸⁵ ACIL Economic Report, at section 2.3.2

⁸⁶ ACIL Report, Figure 5.

⁸⁷ ACIL Economic Report, at page 2.3.1

9.16 Figure 5 illustrates ACIL’s estimate of the impact of the Project gas on average delivered wholesale gas prices in eastern Australia.

Figure 5: Differential impacts of PNG Gas Project on wholesale gas prices in Eastern Australia⁸⁸



9.17 Since Project gas will be priced to compete with domestically produced gas, its introduction will have a direct impact on fields that are currently producing gas in eastern Australia.

9.18 The reduction in gas prices in eastern Australia, and the substitution of lower priced PNG gas for domestically produced gas, is clearly in the interests of consumers and the Australian economy.

Promotion of competition in energy market

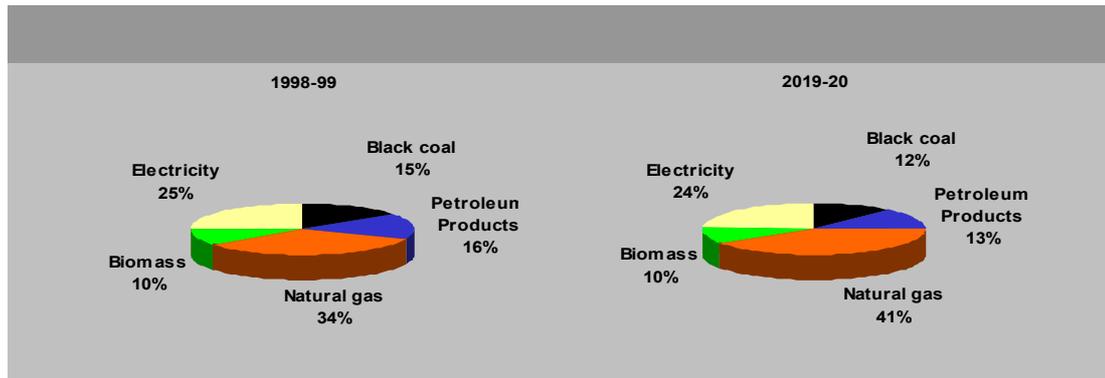
9.19 As discussed above, the entry of Project gas into the eastern Australian market will exert a competitive pressure on existing and developing gas projects, resulting in a lower price for gas. This will in turn create greater competition between gas and other energy sources and will lead to industry substituting gas for other types of primary energy, such as electricity or oil.

9.20 Figure 6 graphs ABARE’s projected increase (in the absence of new sources of gas) in the share of gas in the fuel mix in manufacturing. The ACIL Report’s projected reduction in the price of gas in eastern Australia as a result of the Project, and the forecast substitution of gas for other fuel types, will further increase the use of gas in manufacturing.

Figure 6: Final energy consumption in manufacturing, by fuel⁸⁹

⁸⁸ ACIL Report, Figure 4.

⁸⁹ ABARE Gas Supply and Demand Balance Report at 31. Note, ABARE’s projections do not include PNG gas. They are based on the assumption that there are sufficient resources available to service forecast demand for gas in Australia. See p 20.



- 9.21 In particular, the ACIL Report's projected lower price of gas will have an impact in the generation of electricity. Gas is used as a fuel for a number of electricity generation and co-generation plants in eastern Australia. Those plants are listed in Annexure 6. A reduction in the price of gas will increase the amount of electricity generated in gas fired plants (and being dispatched in the NEM) and increase the ability of those plants to compete against electricity generated from coal fired generators. In addition to the economic benefits of greater competition in electricity generation, there are also significant public benefits in the form of reduced greenhouse gas emissions.
- 9.22 In addition to the impact of gas from the Project on current gas-fuelled electricity generators, a reduction in the price of gas in eastern Australia will encourage switching of fuels in generation away from coal or oil to gas.
- 9.23 In this respect the Project will deliver substantial public benefits by facilitating the objective of the COAG Energy Policy to
- continually improve Australia's national energy markets, in particular between and among jurisdictions and –recognising growing convergence between energy markets – between energy sources, and supply and demand side opportunities.⁹⁰ _

Capital investment

- 9.24 The Project will encourage capital investment. It will result in a secure supply of competitively priced gas, and electricity; it will create capacity in the eastern Australian energy market to support expansion of current operations and development of new projects. For example, gas is already used as the feedstock for fertiliser, chemical and explosives manufacturing. The availability of lower priced gas should encourage these sectors to expand.

Net economic gain

- 9.25 The ACIL Report concludes that the importation of Project gas will boost Australia's Gross Domestic Product (**GDP**) by around \$620 million and increase employment by 884 jobs, with the net present value of the GDP differences being \$2.85 billion over the period 2005-2020 (assuming a discount rate of 7 per cent). In particular, in Queensland, the Gross State Product (**GSP**) is projected to be 0.27 per cent (or \$675 million) higher by 2020 as a

⁹⁰ COAG Energy Policy Details, 'A National Energy Policy Framework', 8 June 2001 at 1.

result of the introduction of PNG Gas, with the net present value of the annual increments in GSP over the period 2005-2020 from the gas pipeline being \$2.89 billion (again assuming a discount rate of 7 per cent).

9.26 These conclusions are supported by a number of modelling exercises conducted by ACIL which essentially compare the price and availability of gas to consumers throughout eastern Australia with and without the Project. The ACIL Report estimates that the average annual gain arising from the Project is similar to the average annual gains estimated to arise from the reform of electricity transmission as outlined in the Parer Energy Market Review, and from the introduction of third party access regulation in the electricity and gas industries: see Figure 7. This comparison clearly highlights the magnitude of the economic benefits arising from the Project.

Figure 7: Comparison of NPV of GDP impacts from a range of projects analysed with Tasman-Global⁹¹

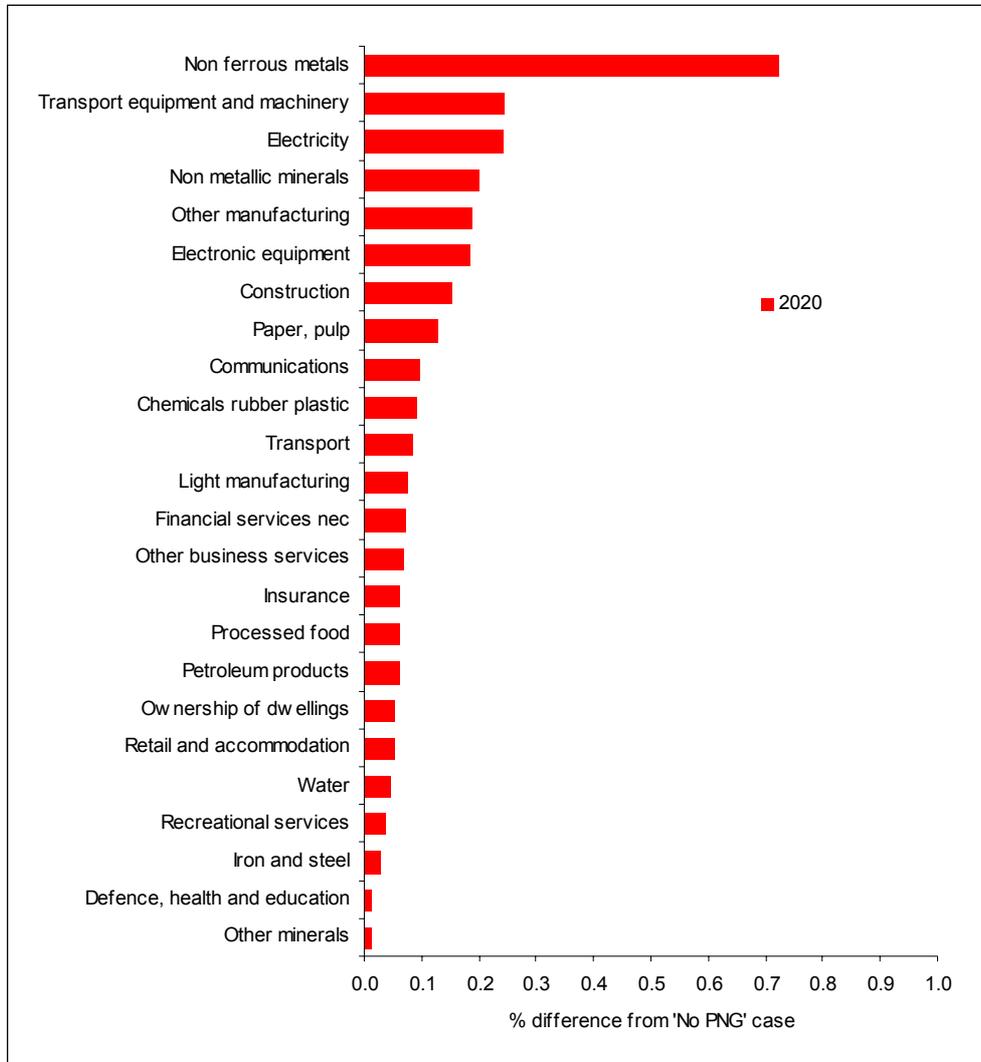
Project analysed	NPV of GDP gains (\$ million)	Period	Number of years	Average gain per year (\$ million)
1. PNG gas (GDP)	2,850	2005-2020	16	178
2. Parer Energy Market Review: Productivity growth from reform (GDP)	1,767	2005-2010	6	294
3. Parer Energy Market Review: Electricity transmission reform (GDP)	1,112	2005-2010	6	185
4. ACCC Impacts of Access Regulation: Lower Bound (electricity and gas) (GDP)	2,407	1999-2013	15	160

1. This report
 2. COAG 2002: Towards a Truly National and Efficient Energy Market
 3. COAG 2002: Towards a Truly National and Efficient Energy Market
 4. ACIL Tasman: Impacts of Access Regulation, Gas and Electricity

9.27 Indeed, the ACIL Report estimates the Project to be such a significant development that it will affect the value of output across a wide sector of industries and activities, as shown in Table 3.

⁹¹ ACIL Report, Table 5.

Table 3: Value of output in Australian industries with the PNG Gas Project – percentage differences from the 'No PNG case, 2020'⁹²



9.28 These improvements will lead to an overall reduction to business, industry and household consumers of the price of essential goods and services such as gas, electricity and fuel.

9.29 Table 3 demonstrates how widely the benefits of the Project will be distributed through Australian society. The benefits are not confined to industrialists, or business, but ‘trickle down’ and provide economic benefit to all sections of society. For example, the ACIL Report forecasts a decrease in the real price of electricity in Queensland of 0.70% by 2020.⁹³

Increased government revenue

9.30 The Project will result in significant increases in both Commonwealth and State government revenue, which is a clear public benefit. The ACIL Report shows that

⁹² ACIL Report Figure 45.

⁹³ ACIL Report, Table 11.

Commonwealth receipts will rise by around \$138 million per year by 2020. This amount is attributable to:

- \$16.1 million per year from increased GST;
- \$35.9 million per year from increased company tax; and
- \$86.5 million per year from increased personal income tax.

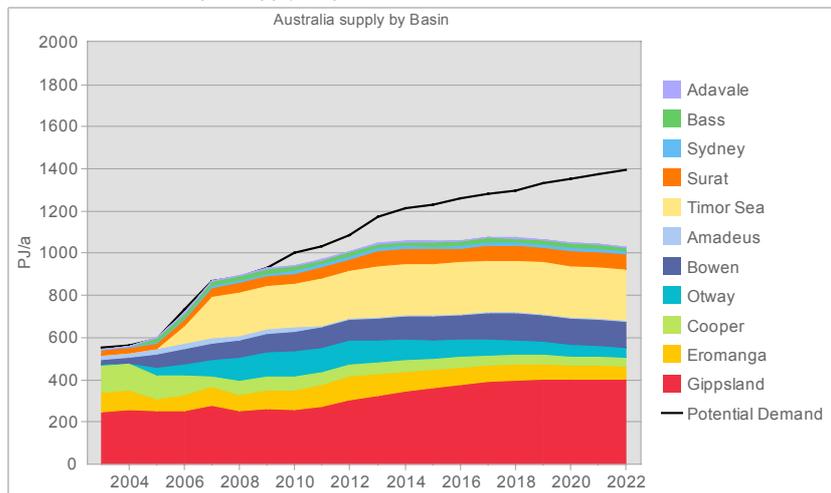
9.31 Queensland and other State government receipts are also expected to increase. For example, Queensland state government receipts could increase by approximately \$4.1 million in 2020 as a result of increased mining royalties and payroll tax.

Essential supply of gas to the eastern Australian market

9.32 The ACIL Report’s projected decrease in gas prices in eastern Australia of up to \$0.20/GJ is largely attributable to the increased level of competition that will result from the introduction of the Project gas to eastern Australia. If the Project proceeds, gas producers will be forced to respond to the increased competition. The earlier Project gas is available, the greater the competitive impact the Project will have in relation to current gas suppliers, because the Project will be competing with other basins for gas sales in an environment where gas supply exceeds demand. Such a market environment is likely to place significant price pressure on gas sales which may not occur if PNG gas does not come on stream for another decade.

9.33 Figure 8 illustrates ACIL’s modelling of the gas supply situation for eastern Australia in the absence of PNG gas.

Figure 8: Eastern Australia gas supply vs potential demand, without PNG Gas⁹⁴



Benefits to regional communities

9.34 Regional communities, including Aboriginal communities, will benefit significantly from improvements in local infrastructure, such as roads and bridges, which will be upgraded as part of the pipeline construction. As recognised in the Parer Report, new pipelines bring increased economic development to the region through which they pass.⁹⁵

⁹⁴ ACIL Report, Figure 1.

⁹⁵ Parer Report at 25.

- 9.35 The ACIL Report identifies a wide range of social and economic benefits to the people of regional Australia. For example, for traditional owner groups the potential benefits include compensation, employment, training and business opportunities and capacity building. For land owners generally, the potential benefits of the Project include improved access, business opportunities and employment and training opportunities. Regional communities will potentially benefit through reduced power generation costs, reduced LPG costs, employment opportunities, direct and indirect business opportunities, the upgrading of roads and access tracks and other infrastructure enhancements including a fibre optic cable for advanced telecommunications co-located with the Australian Pipeline.
- 9.36 The strengthening of relationships between Australia and PNG, in terms of business opportunities and employment, transport and logistics and training and education are also regional public benefits which the ACIL Report estimates will result from the Project.

Business efficiency

- 9.37 The Project will foster business efficiency. The lower price for gas will reduce costs for industries that use gas as a fuel. These lower costs, when passed on into lower prices, will stimulate sales for the gas-using industries and, in turn, their derived demand for gas and other inputs. Industry will be able to use this increased efficiency to meet world best standards and compete in a range of export and import replacement markets. According to the ACIL Report, the output effects will be greatest in the non ferrous metals industry⁹⁶ and the transport equipment and machinery industries.
- 9.38 Table 4 illustrates the ACIL Report's estimated production effects of the Project for selected industries in Queensland.

Table 4: Impacts on output from the proposed PNG Gas Project in Queensland, 2010 and 2020⁹⁷

Industry/year	2010	2020
Defence, health and education	0.04	0.06
Fishing and forestry	0.05	0.06
Other minerals	0.05	0.07
Primary agriculture	0.02	0.13
Recreational services	0.09	0.18
Coal	0.04	0.18
Water	0.16	0.27
Ownership of dwellings	0.16	0.27
Processed food	0.07	0.27
Insurance	0.08	0.27
Financial services nec	0.15	0.28

⁹⁶ The non ferrous metals industry includes the aluminium (Boyne Island) and alumina refineries (Gladstone), and the nickel refinery and zinc smelter (Townsville), all of which use large quantities of electricity and other energy in their production processes.

⁹⁷ ACIL Report, Table 12.

Retail and accommodation	0.18	0.28
Oil	0.07	0.29
Petroleum products	0.17	0.30
Other business services	0.20	0.33
Communications	0.15	0.34
Transport	0.15	0.42
Light manufacturing	0.16	0.46
Chemicals rubber plastic	0.21	0.66
Construction	0.68	0.75
Non metallic minerals	0.55	0.88
Other manufacturing	0.37	0.88
Electricity	0.36	0.98
Transport equipment and machinery	0.55	1.36
Non ferrous metals	0.58	2.16

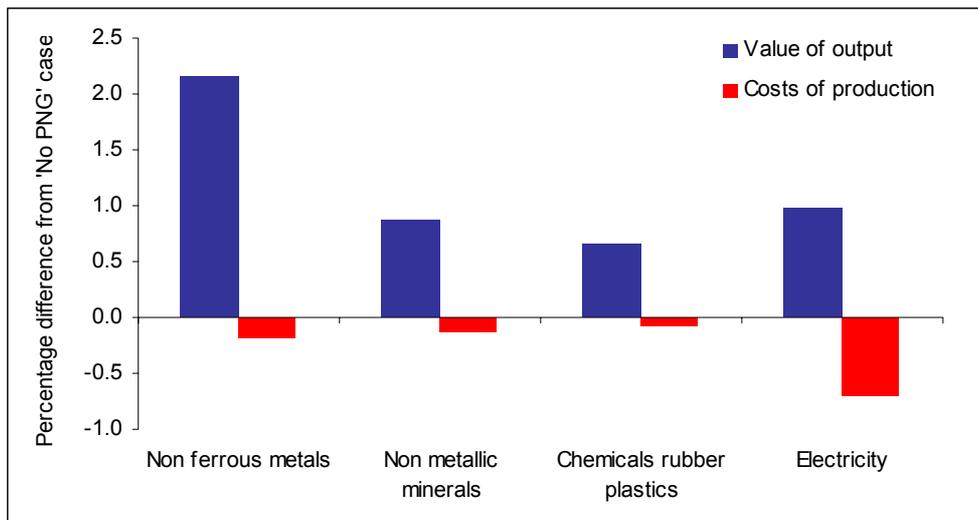
Source: ACIL Tasman modelling

Reduction in production costs for industry

9.39 Because the introduction of gas from the Project into eastern Australia will reduce, according to the ACIL Report, the price of gas to business by on average \$0.15 to \$0.20/GJ by 2020, it will lower production costs (particularly for those industries where gas accounts for a significant proportion of production costs).

9.40 Figure 9 graphs the impacts of the Project on value of output and costs of production for selected Queensland mining, energy and minerals processing industries.

Figure 9: Percent change in value of output and costs impacts in Queensland – Mining, Energy and Processing Sector⁹⁸



⁹⁸ Source: ACIL Report, Figure 50.

9.41 The Participants, either independently or in conjunction with their related companies, have internationally recognised skills and knowledge which have been enhanced through the exploration stage of the Project. By continuing the joint venture relationship into the development and marketing phase of the Project, the technical expertise and skills will be further enhanced.

Expansion of employment, or prevention of unemployment

9.42 The Project will result in increased employment in the following ways:

- increased employment to construct the pipeline and oversee the Australian set up;
- a smaller number of permanent positions in Queensland to oversee the operation and maintenance of the pipeline;
- expansion of employment in the gas sector, as well as in manufacturing, electricity, and water industries, by fostering growth of facilities which currently use gas and by encouraging new projects; and
- increased employment in downstream sectors through the increased availability and lower prices of gas.

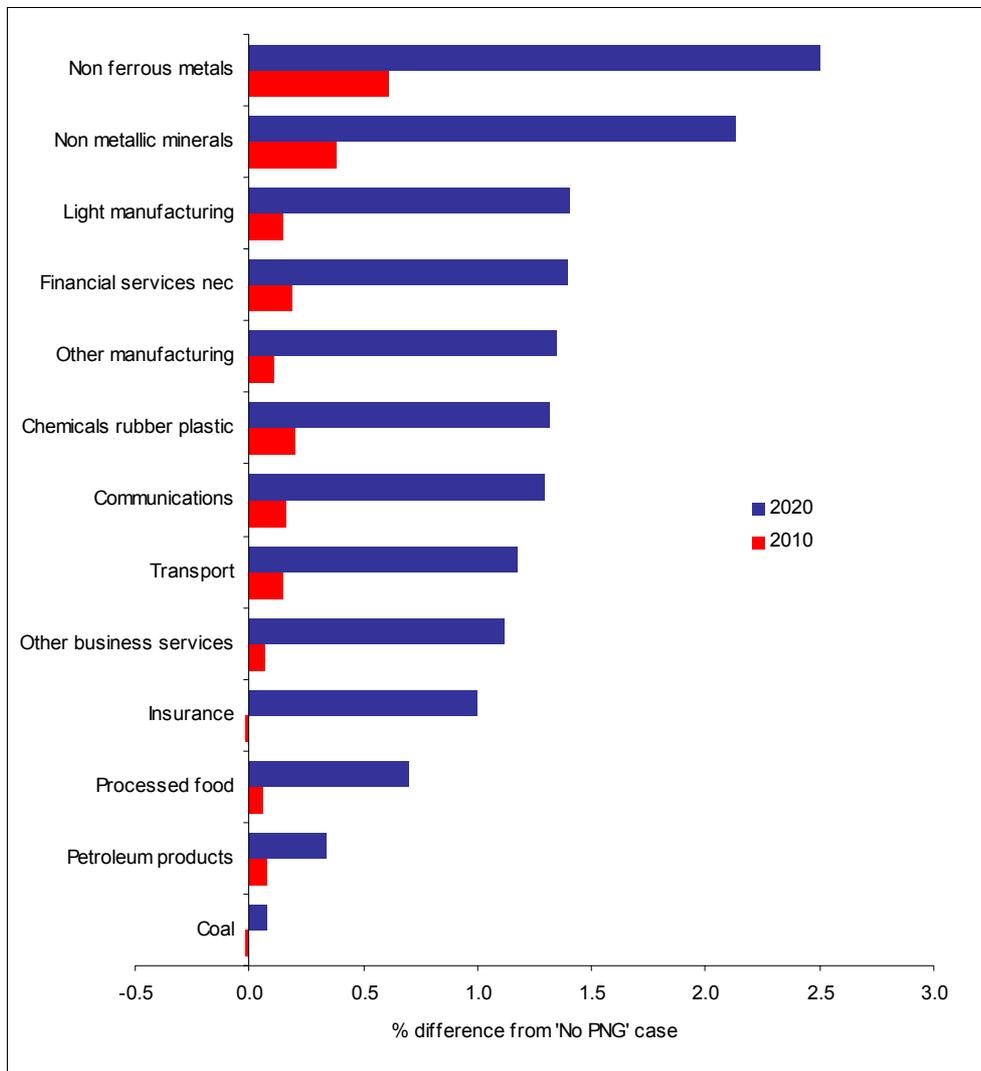
9.43 The ACIL Report estimates that, by 2020, employment will increase in eastern Australia by 884 jobs in total as a result of the Project. In particular, the ACIL Report forecasts that employment is likely to increase by 838 full time equivalent jobs in Queensland over this period. Short-term job increases are expected to be considerably higher due to the initial construction of the pipeline and the commencement of new gas-based projects.

Development of import replacements and growth in export markets

9.44 The Project will create capacity for new customers and projects, and it will facilitate new and existing operations to compete at world-standard levels of efficiency. The national importance of these developments in terms of increased exports and import replacement, as well as the direct benefits enjoyed by the businesses and communities concerned, are likely to be significant.

9.45 Figure 10 illustrates the ACIL Report's estimated increase in exports of the main Queensland export commodities as a result of the Project.

Figure 10: Impacts on exports from proposed PNG Gas Project in Queensland, 2010 and 2020, percentage difference from the 'No PNG' case⁹⁹



9.46 In relation to the export/import replacement significance of joint marketing as an integral element of the Project, the Participants support the ACCC’s approach to this issue as demonstrated in *Fletcher Challenge Limited* (1988) ATPR (Com) 50-077 at 57, 393, *Pasminco Limited Australasian Mining & Smelting Limited* (1988) ATPR (Com) 50-082 at 57, 452, and, more recently, in *Du Pont (Australia) Limited and others* (1996) ATPR (Com) 50-231 at 56, 533. As in those cases, the Project’s potential to increase the capacity of local industry to produce will increase exports of the goods produced, or replace imports or both. The Project therefore has the potential to improve Australia’s external balance of payments. This is a clear public benefit.

Environmental benefits

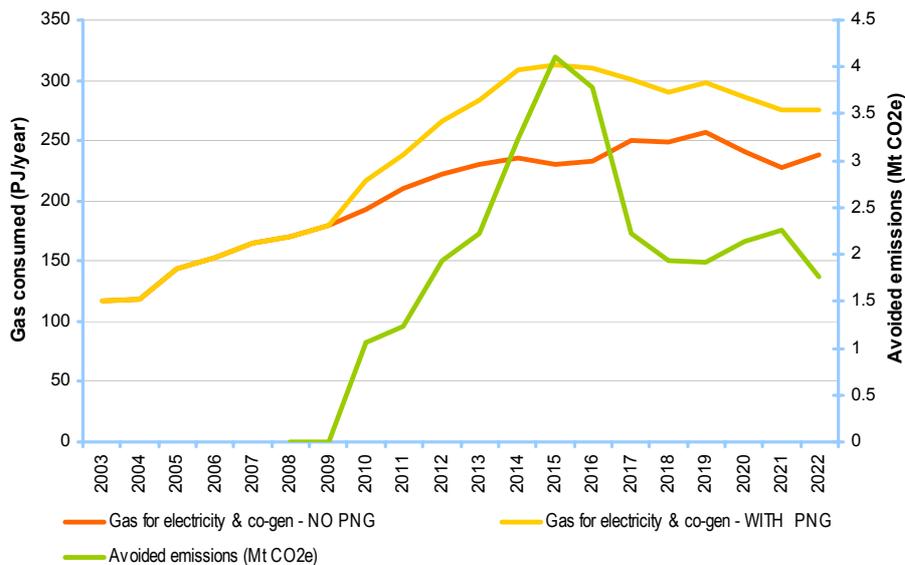
9.47 Electricity generation is a dominant source of greenhouse gas emissions largely due to the use of fossil fuels, primarily coal, as the main fuel source for generation.¹⁰⁰

⁹⁹ Source: ACIL Report, Figure 48.

9.48 As demonstrated in section 5, the introduction of the Project gas into the eastern Australian market will prompt a significant switch from coal to gas as a fuel for electricity generation. Further, there will be a significant switch from electricity as an industrial feedstock to gas, again reducing the consumption of coal-fired electricity.

9.49 The following forecasts in Figure 11 demonstrate the reduction in CO₂ emissions.

Figure 11: Impact of PNG gas project on gas consumption for power generation and co-generativ and avoided GHG emissions.¹⁰¹



9.50 This reduction in greenhouse gas emission represents a clear benefit in terms of the government’s greenhouse policy.¹⁰²

Australia-PNG relationship

9.51 In 2002 the Project commissioned ACIL to prepare a report on the benefits of the Project to PNG (**ACIL PNG Report**).¹⁰³ A copy of the ACIL PNG Report is in Annexure 12. The

¹⁰⁰ Electricity generation accounts for 32.7% of national greenhouse emissions. See Australian Greenhouse Office, *Australia’s Third National Communication on Climate Change: A Report Under the United Nations Framework Convention on Climate Change*, 2002. For a copy of this report, see: <http://www.greenhouse.gov.au/international/third-comm/index.html>.

¹⁰¹ Source: ACIL Report, Figure 55.

¹⁰² Australian Greenhouse Office, National Greenhouse Strategy. Strategic Framework for Advancing Australia’s Greenhouse Response, 26 November 1998. For a copy of this strategy see: <http://www.greenhouse.gov.au/pubs/ngs/pubs/ngs.pdf>.

See also the COAG Energy Policy Details, ‘A National Energy Policy Framework’, 8 June 2001 at 1 which states that Australian energy policies should ‘encourage the efficient economic development and increased application of less carbon-intensive (including renewable) energy sources and technologies, including exploring opportunities for appropriate inter-fuel substitution.’

¹⁰³ ACIL Tasman, ‘The PNG Gas Project: Implications for the Economy of Papua New Guinea. A Report to PNG Gas Project’, November 2002. Although there have been some changes to the Project since the ACIL PNG Report was prepared, the Participants believe that its conclusions are still representative of the significant benefits that will accrue to PNG as a result of the Project.

ACIL PNG Report clearly demonstrates the significant economic, social and political benefit the Project will bring to PNG.

- 9.52 The Project has very important implications for the economic welfare of PNG which, in turn, will give rise to benefits for Australia and its relationship with PNG. The Project will result in a very substantial injection of capital into the PNG economy, which will bolster both its economic and political stability. Specifically, the economic benefits to PNG will result from:
- direct capital investment in production and support facilities, raw gas and product pipelines and other infrastructure, both in the construction phase and over the life of the Project;
 - exports of the gas and other products produced by the Project. In the absence of the Project, energy and mining exports from PNG will drop as the existing oil fields and major mining projects are depleted;
 - significant employment opportunities presented by the Project both during the construction phase and through a large number of full time jobs being maintained directly by the operation of the Project;
 - increased revenue to the PNG Government. The Project will contribute to the PNG Government's revenue through payments such as taxes, levies and royalties and also through the equity participation of the PNG Government in the Project;
 - increased exploration and production activity in PNG. The ACIL PNG Report examines the experience of other countries that have hosted major exploration and production projects, and states that the Project has the potential to boost exploration and production activity on the part of other projects in PNG. The Project will contribute significant infrastructure and economic development, which will make PNG more attractive to other multi-national companies considering large scale investments. This increased activity will in turn stimulate the PNG economy further, and act as further incentive for investment.
- 9.53 These economic benefits will be spread across the entire economy as the PNG Government invests money in infrastructure, essential services and social programs. The improvements to PNG's economic, social and political wellbeing will directly benefit Australia in a number of important ways, including in particular through an improvement in regional stability and security.

10. Conclusion – benefits versus detriments

- 10.1 The Participants are seeking long term authorisation to negotiate the common terms and conditions (including price) under which gas produced by the Project will be offered for sale and jointly market that gas to a common buyer or common buyers. Although, for the reasons discussed in this submission, the Participants do not consider that joint marketing would contravene the TPA, in order to proceed with the Project each Participant requires the legal certainty of authorisation. The commercial and regulatory certainty of a long term authorisation is required to overcome the substantial investment risks and other risks associated with the Project.

- 10.2 It is clear that the ACCC should grant the authorisation sought. For the reasons set out in section 8 above, the Project is overwhelmingly pro-competitive. It will provide a new, competitively priced source of gas to the energy market in eastern Australia.
- 10.3 In addition, the Project will bring significant, long term benefits to the Australian public. These public benefits include:
- economic development including the encouragement of capital investment, increased inter-basin and inter-fuel competition and the provision of an essential supply of gas to eastern Australia;
 - fostering regional economic development;
 - fostering business efficiency, especially where this results in improved international competitiveness;
 - the expansion of employment or prevention of unemployment in efficient industries and the growth of employment in particular regions;
 - development of import replacements;
 - growth in export markets; and
 - promotion of environmental protection.
- 10.4 Even if the ACCC did not accept the Participants' analysis, and believed there to be a lessening of competition resulting from the joint marketing arrangements, the public benefits flowing from the Project would significantly outweigh any detriment to the public.
- 10.5 Joint marketing over the life of the Project is imperative to the delivery of the full complement of public benefits achievable under the Project and is an integral element of the Project. The Participants will not be able to progress the Project beyond FEED without an authorisation which provides long term security to the Participants to dispose of their gas entitlements by joint marketing. A short term authorisation would not provide the Participants with sufficient opportunity to secure sufficient customer commitments to underwrite their investment in the Project, nor would it provide the security of anticipated revenues necessary to meet development and ongoing operational costs over the life of the Project. This is particularly so given that the Project's implementation is likely to occur in a number of phases over the life of the Project. Accordingly, the public benefits attributable to the Project overall represent the public benefits from the conduct for which authorisation is sought, namely the joint marketing of gas over the life of the Project.
- 10.6 In light of the pro-competitive impact of the Project, and the considerable public benefits that will arise as a result of the Project, the 'future with and without test' is clearly satisfied and the ACCC should grant authorisation for joint marketing on the terms requested.

Glossary

ACCC means the Australian Consumer and Competition Commission.

Access Arrangements third party access arrangements as approved by the relevant regulator.

ACIL means ACIL Tasman.

AGA means the Australian Gas Association.

AGL means the Australian Gas Light Company.

AGL Petronas Consortium means a joint venture organisation formed by AGL Pipelines Investments (Qld) Pty Limited and Petronas Australia Pty Limited.

COAG means the Council of Australian Governments.

Esso Highlands means Esso Highlands Limited.

ExxonMobil means Esso Highlands, Ampolex (Highlands) Limited, Ampolex (PNG Petroleum) Inc. and Merlin Pacific Oil Company Limited.

Gas means dry natural gas of pipeline quality derived from reservoirs.

GJ means Gigajoules.

HOA means the Highlands Gas Project Co-Operative Development Heads of Agreement.

Kutubu Oil Project means the Kutubu oil fields project operated by Oil Search (PNG) Limited.

LNG means liquified natural gas.

LPG means liquified petroleum gas.

Merlin means Merlin Petroleum Company.

MPP means the main processing facility.

MOA means Mobil Oil Australia Pty Ltd.

MRDC means the Mineral Resources Development Company.

NEM means National Electricity Market.

OG Act means the *Oil and Gas Act 1998* (PNG).

Oil Search means Oil Search Limited.

Oil Search Group means Oil Search and its subsidiaries Oil Search (Moran) Limited, Oil Search (Tumbudu) Limited, Oil Search (Kutubu) Limited, Oil Search (Gobe) Limited, Oil Search (PNG) Limited, Orogen (Exploration) Inc., Orogen Minerals (Gobe) Limited, Orogen Minerals (Kutubu) Limited).

Participants means ExxonMobil, the Oil Search group, MRDC (through Petroleum Resources Gobe Limited and Petroleum Resources Kutubu Limited), and Merlin.

PDLs means petroleum development licences.

PJ means petajoules.

PJA means petajoules per annum.

PNG means Papua New Guinea.

PNG Dry Natural Gas Pipeline means a submarine gas pipeline from the MPF to the PNG-Australian border.

PNG Infrastructure Joint Venture means a PNG infrastructure joint venture for the operation of pipelines and processing facilities (including the MPF, the PNG Wet Natural Gas Pipelines and the PNG Dry Natural Gas Pipeline to the PNG/Australian border).

PNG Wet Natural Gas Pipelines means pipelines connecting the gas fields and primary facilities to the MPF for the transportation of Project gas.

PPL means Petroleum Prospecting Licence.

PRL means Petroleum Retention Licence.

CSA means the Highlands Gas Project Co-operative Development Cost Sharing Agreement.

Project means the PNG Gas Project, a joint venture between the Participants.

Project gas means hydrocarbons (including gas) and liquids.

Santos means Santos Limited.

TPA means the *Trade Practices Act 1974* (Cth).

Tribunal means the Australian Competition Tribunal.

TXU means TXU Australia Pty Ltd.

UIWG means the Upstream Issues Working Group.

Upstream Joint Venture means an upstream Project gas production joint venture.