

CLAYTON UTZ

# Australia Pacific LNG Gladstone Pipeline Pty Limited

## Application for 15-year no coverage determination under section 151 of the National Gas Law

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**Contents**

- 1. **Executive Summary .....2**
- 2. **Compliance Checklist .....6**
- 3. **Application .....9**
- 4. **The APLNG Project .....9**
- 5. **Other Queensland LNG Projects.....15**
- 6. **The Queensland Gas Industry.....16**
- 7. **Criteria for Greenfields Exemption .....20**
- 8. **Criterion (b) - Economic to develop another Pipeline.....21**
- 9. **Criterion (a) - Promotion of Competition.....33**
- 10. **Criterion (c) - Health and Safety .....37**
- 11. **Criterion (d) - Public Interest .....37**

**Annexure 1 - Pipeline description and technical specifications**

**Annexure 2 - Diagram of the APLNG Project**

**Annexure 3 - Other LNG Projects in Queensland**

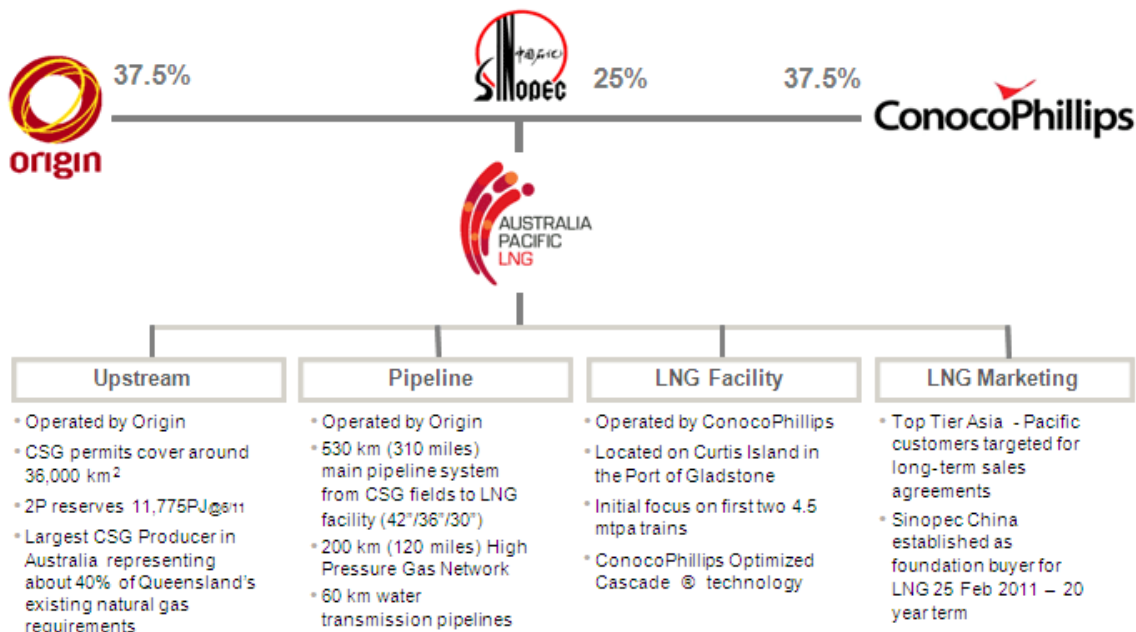
**Annexure 4 - Estimated Cost of Regulation**

**Annexure 5 - Frontier Report**

**Annexure 6 - OSD Report**

# 1. Executive Summary

1. Australia Pacific LNG Gladstone Pipeline Pty Limited (the **Applicant**), makes this application under section 151 of the National Gas (South Australia) Act 2008 (**NGL**) for a 15-year No-Coverage Determination for the APLNG Pipeline (the description of which is set out in this Application). The Applicant will be the owner of the APLNG Pipeline and it will also be the service provider of the pipeline services. The Applicant is a wholly owned subsidiary of Australia Pacific LNG Pty Limited (**APLNG**).
2. APLNG is a joint venture between Origin Energy Limited (**Origin Energy**), ConocoPhillips Australia Pacific LNG Pty Ltd (**ConocoPhillips**), and Sinopec Australia Pacific LNG Pty Limited (**Sinopec**, a subsidiary 100% owned by **Sinopec Group**).
3. APLNG plans to develop a world-scale coal seam gas (**CSG**) to liquefied natural gas (**LNG**) project in Queensland (**APLNG Project**). Origin Energy is responsible for construction and operation of the Project's gas fields and main gas transmission pipeline and has a 37.5% interest in the project; ConocoPhillips is responsible for the construction and operation of the Project's LNG facility and has a 37.5% interest in the project and Sinopec joined the Project in April 2011 as both the foundation customer and part equity owner and has a 25% interest in the project.<sup>1</sup>



4. The APLNG Project consists of producing CSG from the Walloons gas fields in the Surat and Bowen Basins, and transporting the gas via a proposed pipeline system to APLNG's proposed LNG plant at Curtis Island, near Gladstone.<sup>2</sup>

<sup>1</sup> APLNG website. Note that on 20 January 2012, APLNG and Sinopec signed agreements for further LNG supply and an increase in equity to 25% for Sinopec. The Sales Agreement increases Sinopec's purchase commitment from 4.3 Mtpa to 7.6 Mtpa of LNG. The Subscription Agreement will, on completion, increase Sinopec's ownership interest from 15% to 25%. Completion of the Subscription Agreement is subject to approvals by the Chinese Government and the Foreign Investment Review Board in Australia and is conditional on APLNG reaching a final investment decision on the second train.

<sup>2</sup> APLNG Website

5. The Walloons gas fields are located in Queensland's Surat Basin on the Western Downs. They cover an area of approximately 570,000 hectares (ha). The gas fields are located in the three regional council areas of Maranoa, Toowoomba and Western Downs. The nearest townships are Roma, Wallumbilla, Wandoan, Miles, Condamine, Chinchilla, Kogan and Millmerran.<sup>3</sup> The APLNG Project will also involve other regional council areas including Gladstone Regional Council; Central Highlands Regional Council; North Burnett Regional Council and South Burnett Regional Council.
6. The APLNG Project includes the construction of the main gas pipeline which will be approximately 360km in length beginning east of Wandoan at the APLNG Hub, being the junction with the Condabri and Woleebee lateral pipelines (described below), and ending at Curtis Island in the north, and includes the marine crossing of the Narrows at Port Curtis (**APLNG Pipeline**), refer to **Annexure 2**. In addition, there will be a lateral pipeline of some 76km (**Condabri Lateral**) connecting the Condabri development to the south with the main gas pipeline and a lateral pipeline of some 87km connecting the development as far west as Reedy Creek with the main gas pipeline (**Woleebee Lateral**). The Fairview to Reedy Creek Pipeline is some 95km connecting the developments of Fairview and Spring Gully to the main gas pipeline via the Woleebee Lateral.
7. The Applicant is making this application in order to provide certainty for the APLNG Project and to ensure that it has secured access to the gas transportation capacity required to underpin its investment in this new major project.
8. The APLNG Pipeline is located entirely within the State of Queensland. It is not a cross-border pipeline. The Applicant further submits that, applying the pipeline classification criterion in section 13 of the *National Gas Law (NGL)*, the APLNG Pipeline should be classified as a transmission pipeline.
9. The purpose of a 15 year no-coverage exemption regime is to create incentives for the development of pipeline projects such as the APLNG Project.
10. On receipt of a no-coverage application, the National Competition Council (**NCC**) is required to make a recommendation to the relevant Minister in respect of that application. The NCC's recommendation must be either that the pipeline:
  - (a) be exempt from being a covered pipeline for a period of 15 years; or
  - (b) not be exempt from being a covered pipeline for a period of 15 years.<sup>4</sup>
11. The effect of a no-coverage determination is that a pipeline is exempt from coverage for a period of 15 years from its commissioning.<sup>5</sup>
12. In making a no coverage recommendation the NCC must give effect to the pipeline coverage criteria (described in paragraph 92 below) and in deciding whether those criteria are satisfied the NCC must have regard to the National Gas Objective (described in paragraph 95 below).
13. Where the NCC is satisfied that all of the coverage criteria are met, the NCC must recommend against making a no-coverage determination. If the NCC is not satisfied that all of the coverage criteria are met, then the NCC must recommend in favour of making a no coverage determination.

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<sup>3</sup> APLNG Environmental Impact Statement (**APLNG EIS**) section 3.1.1

<sup>4</sup> National Gas Law, s 153(1)

<sup>5</sup> National Gas Law, s 158(1).

14. This Application is supported by two independent experts' reports. Frontier Economics has provided an expert economic report in relation to criteria (a) and (b) and OSD Pipelines has provided a report on the likely costs of looping the APLNG Pipeline. The Applicant notes that for the purposes of reviewing these experts' reports references to "APLNG" should be understood as a general and generic reference which includes the Applicant.

**Criterion (b)**

15. In its Final Recommendation dated 5 May 2010, in response to the no-coverage application by Queensland Curtis Liquefied Natural Gas Pipeline Limited (**QCLNG**) for its proposed QCLNG Pipeline, the NCC examined whether the foreseeable demand could be satisfied by a theoretical, optimally sized pipeline rather than examining whether the foreseeable demand could be satisfied by the services to be provided by means of the QCLNG Pipeline. In the Applicant's view, this approach does not accord sufficient weight to the words of criterion (b) which are directed to "the services provided by **the pipeline**" (emphasis added) and is inconsistent with the definition of "Pipeline" as contained in the NGL. The Applicant's reasons are set out in detail in section 8 below.
16. The Applicant submits that in considering whether criterion (b) is satisfied, the relevant service to be considered is the service to be provided by means of the APLNG Pipeline (and not a theoretical, optimally sized pipeline). The service to be provided by means of the APLNG Pipeline is a point to point service for the transportation of CSG which begins east of Wandoan at the APLNG Hub and ends at APLNG's Curtis Island LNG facility near Gladstone.
17. Since the QCLNG application obtained its no-coverage determination, the Full Federal Court of Australia has delivered a decision in *Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* [2011] FCAFC 58 (**Pilbara Decision**). That decision related to three matters which were before the Court arising from the determination of the Australian Competition Tribunal in the matter of *Fortescue Metals Group Limited* [2010] ACompT 2.
18. While the Full Federal Court's decision related to the interpretation of s 44H(4)(b) under Part IIIA of the *Competition and Consumer Act 2010 (CCA)*, the interpretation of that provision bears directly on the interpretation of criterion (b) for the purposes of APLNG's application to the NCC for a no coverage determination for the APLNG Pipeline.
19. Prior to the Full Federal Court's decision, in the Applicant's view the relevant test to be applied in relation to criterion (b) was "... *whether for a likely range of reasonably foreseeable demand for the services provided by means of the pipeline, it would be more efficient, in terms of costs and benefits to the community as a whole, for one pipeline to provide those services rather than more than one*": *Re Duke Eastern Gas Pipeline Pty Limited* [2001] ACompT 2 at [137].
20. However, the Full Federal Court has held at [85] that, "*In so far as the natural monopoly test applied by the Tribunal or the net social benefit test applied by the Tribunal in earlier cases, depends on the making of an evaluative judgement about efficiency in terms of costs and benefits, that approach is inconsistent with the intention evident from the text and context of Pt IIIA that access should not be available merely because it would be convenient to some parties, or indeed to society according to the evaluation of a regulator*".
21. The Full Federal Court has instead interpreted criterion (b) at [100] as follows:  
  
*"In our opinion, the intention of the regulator was that, if it is economically feasible for someone in the market place to develop an alternative to the facility in dispute, then criterion (b) will not be satisfied"*.
22. Adopting this approach, there can be no doubt that the APLNG Pipeline would not satisfy criterion (b). There are a number of other CSG pipeline projects variously at advanced stages of planning which would suggest that it is likely to be economically feasible for others in the

market place to develop an alternative to the APLNG Pipeline. Those projects include the QCLNG Project and the Santos Project which are described more fully below.

23. At the time of preparing this application, the Applicant is aware that the interpretation of criterion (b) was the subject of a Full Court hearing in the High Court of Australia in March 2012 and the Applicant understands that after submissions close in April 2012, the High Court will reserve its decision.
24. If it were the case that the Full Federal Court's interpretation did not apply and instead it was appropriate to apply the previous test as set out in paragraph 19 above, then adopting that approach together with the Applicant's interpretation of "Pipeline" and having regard to forecasted demand volumes, the APLNG Pipeline will not have sufficient capacity to satisfy the reasonably foreseeable demand for the pipeline services.
25. The Applicant therefore submits that it would be economic to develop another pipeline to provide the pipeline services to be supplied by means of the APLNG Pipeline and, as a result, criterion (b) is not met.

***Criterion (a)***

26. Coverage criterion (a) addresses whether access (or increased access) to the pipeline services provided by means of the pipeline would promote a material increase in competition in at least one market other than the market for the pipeline services (i.e. the dependent market).
27. In the Applicant's view (which is supported by a Report prepared by independent expert, Frontier Economics (at **Annexure 5** to this application)), consistent with the NCC's Final Recommendation regarding the QCLNG application and the Minister's determination dated 15 June 2010:
  - (a) the relevant upstream market is the market for the exploration and production of CSG within the scope of feasible interconnection to the APLNG Hub from approximately as far north as Fairview to as far south as Gilbert Gully; and
  - (b) the relevant downstream market is the market for domestic gas sales within the scope of feasible interconnection with the APLNG pipeline, encompassing consumers in Gladstone, Rockhampton and the Wide Bay area and the worldwide market for LNG.
28. Having regard to those markets and based on the reasoning set out in section 9 below, the Applicant submits that access to the pipeline services provided by means of the APLNG Pipeline will not promote a material increase in competition in the relevant upstream or downstream markets.

***Criterion (c)***

29. The Applicant does not consider that access to the services to be provided by means of the APLNG Pipeline would result in undue risk to human health or safety. Criterion (c) is therefore met.

***Criterion (d)***

30. The Applicant submits that access would not be in the public interest because it believes that access:
  - (a) would reduce the likelihood that the APLNG project would realise the environmental, economic and resource development benefits that will flow from

Australia's CSG and LNG industries if access to the APLNG Pipeline discourages further investment; and

- (a) would detrimentally affect the APLNG Project by reason of the costs of regulation, including financial costs to the Applicant.
31. The Applicant submits that access to the APLNG Pipeline would not promote a material increase in competition in any dependent market. In the absence of a material promotion of competition in any market and having regard to the costs that would result if the APLNG Pipeline was covered, the Applicant submits that the detrimental effects which would flow from granting access to the APLNG Pipeline outweigh any potential benefits to the public in terms of the promotion of competition and economic efficiency.
32. The Applicant submits that access to the APLNG Pipeline would be contrary to the public interest and that, as a result, criterion (d) is not satisfied.

**Conclusion**

33. For these reasons, the Applicant submits that the NCC should recommend to The Hon. Martin Ferguson MP, Minister for Resources, Energy and Tourism, that the APLNG Pipeline be exempted from being a covered pipeline for a period of 15 years.

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**2. Compliance Checklist**

34. The following table summarises the information required by rules 121 and 122 of the National Gas Rules (NGR) and the location in this Application where further information can be found.

**Table 1: Summary pursuant to rules 121 and 122 of the NGR**

<b>Rule</b>	<b>Summary</b>	<b>Location</b>
121(1)(a)	The APLNG Pipeline is a pipeline which begins east of Wandoan at the APLNG Hub, being the junction with the Condabri and Woleebee lateral pipelines, and ends at Curtis Island in the north, and includes the marine crossing of The Narrows at Port Curtis as shown in <b>Annexure 2</b> .	Annexures 1 and 2
121(1)(b)	The trunk of the pipeline will end at Curtis Island.	Annexures 1 and 2
121(1)(c)	The following laterals form part of the APLNG Project but are not the subject of the no-coverage application:  (a) the Condabri Lateral pipeline of some 76km connecting the Condabri development to the south with the main gas pipeline;  (b) the Woleebee Lateral pipeline of some 87km connecting the development as far west as Reedy Creek with the main gas pipeline; and  (c) the Fairview to Reedy Creek Pipeline of some 95km connecting the developments of Fairview and Spring Gully to the main gas pipeline via the Woleebee Lateral.	Annexures 1 and 2
121(1)(d)	The APLNG Pipeline will have a diameter of DN 1050 (42"). The Woleebee and Condabri laterals will have a diameter of DN 750 (30") and DN 900 (36") respectively.	Annexure 1
122(1)(a)	The Applicant is Australia Pacific LNG Gladstone	Section 3.2

	Pipeline Pty Limited and the Applicant's contact details are set out in section 3.2.	
122(1)(b)	The pipeline and its route are described above. A map of the route is attached as <b>Annexure 2</b> to this Application.	Annexures 1 and 2
122(1)(c)	The APLNG Pipeline is a greenfields pipeline project as it is a project for the construction of a new pipeline that will be structurally separate from any existing pipeline. The APLNG Pipeline will be a dedicated CSG pipeline, transporting gas from the Walloons gas fields in the Surat and Bowen Basins directly to APLNG's proposed LNG plant at Curtis Island, near Gladstone.	Annexure 1
122(1)(d)	As of 1 March 2012, project development and construction costs with respect to the APLNG Pipeline will have been incurred of approximately Commercial-In-Confidence ( <b>C-I-C</b> ).  At the date of this application, the estimated remaining costs on the APLNG Pipeline is <b>C-I-C</b> . These estimated costs are based on internal modelling estimates developed by industry experts under the direction of APLNG for a pipeline system designed to Australia/International industry standards and specifications. Note that these estimates may change after completion of assessment processes related to the APLNG Project.	Annexure 1
122(1)(e)	The APLNG Pipeline's free flow capacity at commissioning will be approximately 1,560 TJ/day. In addition to free flow, the capacity on the APLNG Pipeline can be expanded by compression to achieve a maximum of 3,350 TJ/day (assuming 163 megawatts installed compression distributed at 4 locations along the pipeline). The entire free flow capacity of the APLNG Pipeline will be used by APLNG in FID 1 and FID 2. Utilisation of the compressed capacity is subject to future development or future investment activity.	Annexure 1
122(1)(f)	The Applicant will supply Australia Pacific LNG Marketing Pty Limited (wholly owned subsidiary of APLNG) with gas transportation services from the receipt points at the APLNG Hub to the delivery point at the LNG Plant.	Annexure 1
122(1)(g)	The APLNG Pipeline will connect CSG fields in the Surat and Bowen Basins to Curtis Island. Other sources of natural gas available to consumers at Curtis Island and in the nearby Gladstone area are:  (a) producers in the Surat and Bowen basins (who supply via the Queensland Gas Pipeline and, if necessary, the Roma to Brisbane Pipeline and Dawson Valley Gas Pipeline); and  (b) producers in other production areas (such as the Cooper/Eromanga Basin) connected to the Queensland Gas Pipeline via the South West Queensland Pipeline, QSN Link and the Moomba hub.  The Applicant also notes the proposed Moranbah to	Annexure 1

	<p>Gladstone Pipeline (also known as the Arrow Bowen pipeline) which will connect gas producers in the Northern Bowen Basin to consumers in the Gladstone area.</p> <p>The Applicant further notes a number of proposed Surat Basin to Gladstone pipelines, as outlined in section 5 below.</p>	
122(1)(h)	The existing gas transmission pipelines serving areas within 100 km of the Surat and Bowen Basins are the Queensland Gas Pipeline and the Wide Bay Pipeline. In the future, the Gladstone area may also be served by the proposed Moranbah to Gladstone Pipeline, the APLNG Pipeline and export pipelines that are proposed as part of other LNG projects (these are described in section 5 of this Application).	Section 5 and Annexure 3 (note that Annexure 3 does not detail the Moranbah to Gladstone pipeline).
122(1)(i)	Estimates of reserves in the Surat and Bowen Basins are located in section 6.1 of this application and in the report by Frontier Economics (Annexure 5).	Section 6; Annexure 5
122(1)(j)	The expected demand associated with LNG production at Curtis Island and surrounding areas is outlined in sections 6 and 8 of this application. Global LNG demand is estimated to reach between 245 and just under 300 Mtpa by 2015. A description of the customer base and expected revenue is also provided in section 6.	Sections 5, 6 and 8 and Annexure 1.
122(1)(k)	The APLNG Pipeline will be owned by the Applicant who will provide the pipeline services to Australia Pacific LNG Marketing Pty Limited (a wholly owned subsidiary of APLNG).	Annexure 1
122(1)(l)(i)	The Applicant is a wholly owned subsidiary of Australia Pacific LNG Pty Ltd.	N/A
122(1)(l)(ii)	Australia Pacific LNG Marketing Pty Limited (a wholly owned subsidiary of APLNG) will acquire gas transportation services from the Applicant. CSG transported down the APLNG Pipeline to the LNG facility will be consumed by subsidiaries of APLNG for the purposes of LNG production.	Annexure 1
122(1)(l)(iii)	APLNG has entered into an agreement with BG Group subsidiary QGC to jointly develop CSG tenements located in South East Queensland which include a conditional Gas Sales Agreement to support the development of the APLNG Project and the QCLNG Project. These arrangements concern the development of CSG fields and sale of CSG. <sup>6</sup> These agreements do not relate to the transportation of CSG from the gas fields to the LNG Plants.	
122(1)(m)	The free-flowing capacity of the APLNG Pipeline is estimated to be 1,560 TJ per day. It is possible to expand the capacity through compression (163 MW distributed over 4 locations) to 3,350 TJ per day.	Section 8.10; Annexure 1; OSD Report Annexure 6.

<sup>6</sup> Origin Energy ASX Media Release 25 February 2010, "Australia Pacific LNG and QGC agree joint development plan and gas sales agreements for ATP648P and ATP620P"

	The capacity of the APLNG Pipeline can be further expanded through looping, although it is estimated that looping the APLNG Pipeline would result in an increase in construction costs of at least 17% above the cost of the initial APLNG Pipeline. Alternatively, increasing the design pressure of the APLNG Pipeline from 13.5MPag to 15.3MPag would result in additional costs in the order of \$69 million. Finally, the costs associated with the development of a stand-alone independent pipeline in the same corridor as the APLNG Pipeline would be in the order of 7% above that of the APLNG Pipeline.	
122(1)(n)	The estimated cost of full regulation is approximately \$336,000 to \$406,000 over a 5 year period.	Section 11.3 and Annexure 4.

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### 3. Application

#### 3.1 Application for a 15-year no-coverage determination

35. The Applicant applies to the NCC under section 151 of the NGL for a 15-year no-coverage determination for the proposed APLNG Pipeline.
36. The pipeline description, as required by section 151(3) of the NGL and Rule 122 of the NGR, can be found in **Annexure 1** to this Application.
37. A project overview map, which illustrates the locations of the elements of the proposed APLNG Project, is provided in **Annexure 2**. The pipeline for which the no-coverage determination is sought is depicted in blue and labelled APLNG Main Pipeline in **Annexure 2**.

#### 3.2 Applicant's contact details

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### 4. The APLNG Project

#### 4.1 Overview

38. APLNG proposes to develop an integrated CSG to LNG project in Queensland, known as the APLNG Project.
39. The APLNG Project involves:
- (a) Further development of APLNG's existing CSG fields at Walloons in the Surat Basin, located in south central Queensland;
  - (b) The construction and operation of the APLNG Pipeline, which will be a gas transmission pipeline used to transport dehydrated and compressed CSG from the Walloons CSG fields in the Surat Basin to APLNG's proposed LNG plant at Curtis Island near Gladstone; and

- (c) Development of an LNG processing facility with the first two gas production trains processing 9 million tonnes per annum (**Mtpa**) of LNG on Curtis Island adjacent to Laird Point, within the Curtis Island Industry Precinct of the Gladstone State Development Area.<sup>7</sup>

## 4.2 Project Rationale

40. Governments world-wide are supporting the use of gas as a transitional fuel to meet energy needs as the world moves towards a carbon-constrained economy. Demand for gas is expected to rise in both domestic and international markets. In particular, the demand for, and acceptance of, CSG as a significant and viable long-term resource in Australia has undergone a dramatic shift in recent years due to:
- (a) The Queensland Gas Scheme, whereby the Queensland Government mandated that Queensland electricity retailers are required to source a percentage of their electricity from gas-fired generation;
  - (b) The acceptance of gas as the key transitional fuel to a lower carbon intensity economy;
  - (c) Growth in domestic demand for gas, particularly through the development of gas-fired power stations;
  - (d) The scale and economic viability of the CSG resource becoming more apparent as ongoing drilling programs have demonstrated substantial increases in reserves and identified other resources, particularly in Queensland;
  - (e) The success of Australian companies in the development of CSG resources has led to significant financial investments by major international energy companies including ConocoPhillips, Santos, Petronas, BG Group and Shell; and
  - (f) Rising global energy demand has opened up the potential for development of an LNG export industry from Queensland using CSG as the feedstock.
41. The APLNG Project, by utilising APLNG's CSG resources in south central Queensland and ConocoPhillips' LNG technology and CSG production experience, will facilitate the creation of a world-scale export industry in Queensland, diversify the State's economic base and generate jobs and further investment in Queensland.
42. In particular, the APLNG Project will involve a significant capital investment and will generate significant benefits at regional, state and national levels, including:
- (a) Capital investment of approximately \$35 billion through to 2020;
  - (b) Creation of a new, long-term gas processing and export industry in Queensland;
  - (c) Creation of up to 5,000 direct jobs during the peak construction phase which includes the gas fields, gas pipeline and LNG facility;
  - (d) Creation of 1,000 jobs during the operation of the APLNG Project;
  - (e) Opportunities to increase local skills capacity via apprenticeships, scholarships and vocational training; and

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<sup>7</sup> APLNG Website: [www.aplng.com.au/about-project/about-project](http://www.aplng.com.au/about-project/about-project).

- (f) Expenditures in regional economies through the purchase and use of local goods and services, where practicable, for the construction and operation of the plant.<sup>8</sup>

### 4.3 Description of APLNG Project

43. The APLNG Project comprises the further development of CSG fields and the construction of a gas pipeline, an LNG facility and associated facilities to export the gas to international markets. It is the largest CSG to LNG project under consideration in Australia, with the LNG facility expected to produce approximately 18 Mtpa when all four LNG production trains ('trains') have been constructed.
44. Gas will be delivered to an LNG facility located on Curtis Island near Gladstone via a gas pipeline, where it will be liquefied prior to export in LNG tankers to international markets.

### 4.4 Greenfields Pipeline

45. Section 149 of the NGL defines a "greenfields pipeline project" as follows:

*"greenfields pipeline project" means a project for the construction of -*

- (a) *a pipeline that is to be structurally separate from any existing pipeline (whether or not it is to traverse a route different from the route of an existing pipeline); or*
- (b) *a major extension to an existing pipeline that is not a covered pipeline; or*
- (c) *a major extension to a covered pipeline by means of which light regulation services are provided if that extension is exempted by the AER under section 19."*
46. The no-coverage determination is sought for the main gas pipeline of some 360km which begins east of Wandoan at the APLNG Hub, being the junction with the Condabri and Woleebee lateral pipelines, and ends at Curtis Island in the north of Queensland which, the Applicant submits falls within the meaning of section 149(a) of the NGL, that is, a pipeline that is to be structurally separate from any existing pipeline.

### 4.5 Pipeline and services description

47. The service to be provided by means of the APLNG Pipeline is a point to point service for the transportation of dehydrated and compressed CSG from a point which begins east of Wandoan at the APLNG Hub (being the junction with the Condabri and Woleebee lateral pipelines), and ends at APLNG's Curtis Island LNG facility near Gladstone.
48. The APLNG Pipeline will be approximately 360km long and will have a diameter of 42". The specifications of the APLNG Pipeline are set out in **Table 2** below.
49. The diameter of a pipeline is affected by a number of factors including: the equipment available to construct the pipeline; the assessment of long term demand and the timing of that demand relative to the start of the pipeline and the relative capital cost of pipeline installation and compression.

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<sup>8</sup> Queensland Government Minister for Infrastructure and Planning, "5000 Jobs Proposed in LNG Project" (Media Release, 8 April 2009).

50. At DN 1050 (42") the APLNG Pipeline will (together with the QCLNG pipeline proposed by QCLNG Pipeline Pty Ltd, a subsidiary of BG Group / QGC Limited) be the largest diameter pipeline constructed in Australia.
51. There are a range of capital and operational considerations relevant to an assessment of what diameter of pipeline to construct. Once a range of potential flow rates are established that are supported by the market potential, a narrow band of conventional line pipe diameters are evaluated for their costs, with trade offs for capital (larger diameter) versus operational costs (primarily fuel use) being considered. The DN 1050 line size was selected because it provides the best balance of lower cost while allowing for significant expansion of the pipeline to accommodate future volumes.
52. The laterals that are to be constructed (but are not the subject of this Application) are:
- (a) The Condabri Lateral pipeline of some 76km connecting the Condabri development to the south with the main gas pipeline (diameter of DN 900 (36"));
  - (b) The Woleebee Lateral pipeline of some 87km connecting the development as far west as Reedy Creek with the main gas pipeline (diameter of DN 750 (30")); and
  - (c) The Fairview to Reedy Creek Pipeline of some 95km connecting the developments of Fairview and Spring Gully to the main gas pipeline via the Woleebee Lateral.

The relevant specifications are outlined below in **Table 2**.

**Table 2: APLNG Pipeline Design Basis**

Parameter	Specification			
	Condabri lateral	Woleebee lateral	Main pipeline	The Narrows Crossing
Length	76km	87km	354km	6km
Design temperature	Maximum 60°C Minimum 10°C			
Design life	50 years			
Normal diameter	36"/ 914.4mm	30" / 762.0mm	42"/ 1066.8mm	42"/ 1066.8mm
Design factor	0.8 (meaning 80% of the Specified Minimum Yield Stress is applied to pressure containment)			

53. The APLNG Pipeline has been designed to meet the capacity of the APLNG plant and will comply with applicable Australian and industry standards including AS2885 – Pipelines – Gas and liquid petroleum. The construction phase of the APLNG Pipeline commenced in January 2012 and construction is expected to take 24 months.<sup>9</sup> With stand down for rainy season, it is anticipated the line will be complete in late 2013.
54. The capacity of the APLNG Pipeline under various augmentation scenarios is summarised

<sup>9</sup> APLNG Media Release, "Construction phase of Australia Pacific LNG gas pipeline set to begin with arrival of first pipe", dated 23 January 2012.

below in **Table 3**.

**Table 3: The capacity of the APLNG Pipeline**

Level of augmentation of the APLNG Pipeline	Capacity (TJ/day)
Free flow capacity of the Export Pipeline	1560
Capacity of the Export Pipeline with a single 21 megawatt compressor at 65% nominal efficiency	2300
Maximum capacity of the Export Pipeline with compression (163 MW of Power distributed via 4 compressor stations along the line)	3350
Capacity of the Export Pipeline if fully looped (without compression)	3120
Maximum capacity of the Export Pipeline if fully looped and fully compressed (total of 325 MW required power at 65% nominal efficiency)	6700

*Power figures represent actual power – installed power is a function of sparing philosophy*

#### 4.6 Pipeline Classification

55. The APLNG Pipeline is located entirely in the State of Queensland and is not therefore a cross-border pipeline. Applying the pipeline classification criterion in section 13 of the NGL, the APLNG Pipeline should be classified as a **transmission** pipeline.

56. The pipeline classification criterion in section 13(1) of the NGL is:

*"whether the primary function of the pipeline is to:*

*(a) reticulate gas within a market (which is the primary function of a distribution pipeline); or*

*(b) convey gas to a market (which is the primary function of a transmission pipeline)."*

57. In determining the primary function of a pipeline, the NCC must have regard to the factors set out in section 13(2) of the NGL. Those factors are set out below:

*"(2) Without limiting subsection (1), in determining the primary function of the pipeline, regard must also be had to whether the characteristics of the pipeline are those of a transmission pipeline or a distribution pipeline having regard to -*

- (a) the characteristics and classification of, as the case requires, an old scheme transmission pipeline or an old scheme distribution pipeline;*
- (b) the characteristics of, as the case requires, a transmission pipeline or a distribution pipeline classified under this law;*
- (c) the characteristics and classification of pipelines specified in the Rules (if any);*
- (d) the diameter of the pipeline;*
- (e) the pressure at which the pipeline is or will be designed to operate;*
- (f) the number of points at which gas can or will be injected into the pipeline;*

- (g) *the extent of the area served or to be served by the pipeline;*
- (h) *the pipeline's linear or dendritic configuration."*

58. The Applicant submits that the APLNG Pipeline should be classified as a transmission pipeline for the following reasons:

- (a) the primary purpose of the APLNG Pipeline is to convey gas from upstream production wells to the proposed LNG production plant at Curtis Island for conversion to a form of LNG capable of being sold in the global market for LNG. No part of the APLNG Pipeline will be used to reticulate gas within a market;
- (b) the APLNG Pipeline has no classification status under the NGL;
- (c) the diameter and capacity of the APLNG Pipeline is larger than the largest existing diameter pipelines in Australia and much larger than the diameter of distribution pipelines;
- (d) the maximum operating pressure of the APLNG Pipeline of 13.5MPag is in a higher range than many other transmission pipelines and is much higher than the pressure at which distribution pipelines operate;
- (e) the APLNG Pipeline will convey gas from the Walloons gas fields in the Surat and Bowen Basins to the LNG Plant at Curtis Island. APLNG itself is intending to construct high pressure pipelines to the APLNG hub from as far north as Fairview and as far south as Gilbert Gully; and
- (f) the APLNG pipeline will have a diameter of DN 1050 (42 inches) and (together with the QCLNG pipeline proposed by QCLNG Pipeline Pty Ltd, a subsidiary of BG Group / QGC Limited) will be one of the largest pipelines constructed in Australia. This sized pipeline operating at pressures of 13.5MPag is consistent only with transmission pipelines. For example, the maximum the QGP pipeline at 13 inches and the SWQP at >15 inches are both classified as transmission pipelines. The NCC has classified the QCLNG pipeline as a transmission pipeline and it will have a comparable diameter and operating pressure as the APLNG Pipeline.

59. Consistent with the NCC's classification decision regarding the QCLNG Pipeline, the Applicant submits that the APLNG Pipeline should be classified as a transmission pipeline.

#### **4.7 Status of the Project**

60. In November 2010, APLNG sought the approval from the Queensland Coordinator-General for its CSG to LNG project. Approval, subject to the conditions outlined in the Coordinator-General's report, has been granted for the development of the gas field occurring progressively over a 30-year period; the construction of the transmission pipeline; and an LNG facility on Curtis Island.<sup>10</sup>

61. The Queensland Coordinator-General's report was provided to the Commonwealth Government for further consideration and approval. On 22 February 2011, the Federal

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<sup>10</sup> APLNG, *Australia Pacific LNG project gains Queensland Government approval for its Environmental Impact Statement* (Media Release, 9 November 2010)

Minister for Sustainability; Environment; Water; Population and Communities granted APLNG Federal environmental approval for the project to proceed.<sup>11</sup>

62. In April 2011, APLNG and Sinopec signed a Sale and Purchase Agreement for the supply of up to 4.3 million tonnes per annum of LNG for 20 years from 2015.<sup>12</sup>
63. On 28 July 2011, the board of Australia Pacific LNG announced that it had approved the development of the LNG export project. The Final Investment Decision (**FID**) 1 is for the initial train and the common facilities of a two train, 9 million tonnes per annum (Mtpa), CSG to LNG project.
64. On 20 January 2012, APLNG and Sinopec signed a Sales Agreement increasing Sinopec's purchase commitment from 4.3 Mtpa to 7.6 Mtpa of LNG.<sup>13</sup>
65. On 17 November 2011, APLNG and The Kansai Electric Power Company signed a binding Heads of Agreement for the sale and purchase of approximately 1 million tonnes of LNG per year for 20 years from mid-2016.<sup>14</sup>
66. Development of the pipelines, including planning engineering, procurement and securing right of way began in 2009. Construction of the pipelines is due to commence in 2012 and will take approximately 18 months. Construction of the Narrows Crossing started in September 2011.

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## 5. Other Queensland LNG Projects

67. The discovery and continued expansion of CSG reserves in South East Queensland has the potential to create a new LNG production industry centred on Gladstone which, in turn, would be extremely significant for the Queensland gas market.
68. In addition to APLNG's Project, there are presently three LNG projects proposed in Queensland that have been the subject of significant announcement and commercial discussion. Those project are:
  - (a) QCLNG, a wholly owned subsidiary of BG Group, proposes expanding QGC's existing CSG operations in the Surat Basin and transporting gas via the QCLNG Pipeline to a gas liquefaction and export facility on Curtis Island at Gladstone where gas will be liquefied for export to LNG markets in the Asia Pacific region and around the world.<sup>15</sup>

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<sup>11</sup> APLNG, *Australia Pacific LNG project gains Queensland Government approval for its Environmental Impact Statement* (Media Release, 9 November 2010)

<sup>12</sup> Media Release dated 21 April 2011, "Australia Pacific LNG and Sinopec sign binding agreements for LNG supply and 15% equity interest", ([http://www.aplng.com.au/pdf/APLNG\\_Sinopec\\_sign\\_binding\\_agreement.pdf](http://www.aplng.com.au/pdf/APLNG_Sinopec_sign_binding_agreement.pdf)). These agreements are subject to approvals by the Chinese Government and in Australia, the Foreign Investment Review Board and are conditional on APLNG reaching a final investment decision.

<sup>13</sup> APLNG, *Australia Pacific LNG and Sinopec sign binding agreements for further LNG supply and an increase in equity to 25%* (Media Release, 20 January 2012).

<sup>14</sup> APLNG, *Australia Pacific LNG and Kansai Electric sign 20 year agreement for LNG supply* (Media Release 17 November 2011).

<sup>15</sup> QCLNG Application for 15 year no coverage determination under section 151 of the National Gas Law, January 2010 (**QCLNG Application**) p 5.

- (b) Santos and Petronas together with Total and KOGAS, under a joint venture arrangement, propose to construct the Gladstone LNG Project comprising a 435 kilometre transmission pipeline from a location east of Injune in the Surat Basin to a proposed LNG Plant on Curtis Island at Gladstone;<sup>16</sup>
- (c) Arrow Energy's proposal which includes construction of a 467 kilometre transmission pipeline from near Dalby in the Surat Basin to transport gas to its proposed LNG plant at Fisherman's Landing at Gladstone and to a proposed Shell Australia LNG plant on Curtis Island at Gladstone.<sup>17</sup>
69. Further detail of these proposed projects including the locations of proposed pipelines (based on public announcements by proponents) is contained in **Annexure 3**.
70. Having regard to these projects, it is reasonable to expect that a substantial LNG production industry will be developed at Gladstone.
71. The Applicant's estimates of the likely size of this industry, and its associated demand for pipeline services, is set out in sections 6.2 and 8.9 below.

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## **6. The Queensland Gas Industry**

### **6.1 CSG in Queensland**

72. Demand for natural gas in Queensland is met through conventional gas and CSG reserves. Both are natural gas, but there are differences in the way the gas is extracted and the location of the reserves in Queensland.<sup>18</sup>
73. Conventional gas is drawn from fields covering the Cooper and Eromanga basins in the south and south-west of Queensland with most production being completed at Ballera and Roma. Small quantities of conventional gas are continuing to be extracted from the Surat Basin, Queensland's initial source of natural gas. CSG is drawn from the Bowen and Surat Basins, with exploration activity also occurring in the Galilee Basin.<sup>19</sup>
74. As at 30 June 2009, Queensland had over 18,000 petajoules of proved and probable (2P) CSG reserves, with a further 494 petajoules of conventional 2P reserves. The vast majority of gas produced in Queensland is from CSG reserves.<sup>20</sup> As at 31 December 2010, the published data shows a significant increase in the 2P CSG reserves in Queensland: the Surat and Bowen

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<sup>16</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.37]

<sup>17</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.37]

<sup>18</sup> Queensland Government, Department of Mines and Energy, [http://www.dme.qld.gov.au/Energy/gas\\_in\\_queensland.cfm](http://www.dme.qld.gov.au/Energy/gas_in_queensland.cfm)

<sup>19</sup> Queensland Government, Department of Mines and Energy, [http://www.dme.qld.gov.au/Energy/gas\\_in\\_queensland.cfm](http://www.dme.qld.gov.au/Energy/gas_in_queensland.cfm)

<sup>20</sup> Queensland Government, Department of Mines and Energy, [http://www.dme.qld.gov.au/Energy/gas\\_in\\_queensland.cfm](http://www.dme.qld.gov.au/Energy/gas_in_queensland.cfm)

basins in Queensland had over 32,000 petajoules of 2P CSG reserves<sup>21</sup> and 110 petajoules of conventional 2P reserves.<sup>22</sup>

75. Despite these differences between conventional gas and CSG, the NCC concluded that the two forms of gas are sufficiently close substitutes and in any event, given that the vast majority of gas produced in Queensland is from CSG reserves, the effect of any distinction is immaterial.<sup>23</sup>
76. The feed gas for the APLNG facilities will not be designed to substitute other forms of gas for CSG in the manufacture of LNG at APLNG's Curtis Island Facility. From that technical perspective, substitutability is limited. However, APLNG accepts that conventional gas and CSG are sufficiently close economic substitutes for the purposes of competitive market analysis and agrees that the effect of any difference between what might be termed "technical" substitutes and "economic" substitutes and therefore the product dimension of the market is minimal.
77. There are a range of active competitors, of different sizes, involved in the upstream production of gas in Queensland. The proponents of the major LNG Projects are identified in paragraph 68 above. The other upstream gas producers include Molopo; WestSide; Senex (Don Juan); Bow Energy; Blue Energy; Icon Energy; AGL (Galilee Gas Project) and Comet Ridge (Gunn Project Area). Those upstream gas producers and their current or proposed gas production capability as well as the gas transportation alternatives available to them are identified and discussed in the report prepared by Frontier Economics (**Annexure 5**, at section 3.3.1 of that report).

## **6.2 Demand Projections for the Services associated with the APLNG Pipeline - Global Demand**

78. The global increase in energy demand, particularly for LNG, underlies the development of an LNG export industry from Queensland with CSG as the feedstock. Nations are looking for secure energy supplies, produced in a stable political and economic environment. This growth trend is forecast to continue, with LNG seen as safe, flexible, reliable, economic and environmentally desirable. This is particularly the case in the context of climate change, and the growing acceptance of gas as a transition fuel to a less carbon dependent economy.
79. The Queensland Government has reported that global demand for LNG fell by approximately 2% in 2009 due to the global financial crisis, however, gas demand has rebounded and is on the rise according to energy outlook projections by the International Energy Agency and others.<sup>24</sup> International demand for LNG is being driven by the increasing use of gas for electricity generation in preference to coal.<sup>25</sup> The Queensland Government has identified 3 broad regions of LNG importers being Asia, Europe and the Americas: the growth region being found in Asia. Demand for gas in China is projected to increase annually by an average

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<sup>21</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 78 table 6-2 available from [www.deedi.qld.gov.au](http://www.deedi.qld.gov.au)

<sup>22</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 78 table 6-2 available from [www.deedi.qld.gov.au](http://www.deedi.qld.gov.au)

<sup>23</sup> NCC, Final Recommendation on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010) [6.16]

<sup>24</sup> Department of Employment, Economic Development and Innovation, 2011 Gas Market Review Queensland at pp 12

<sup>25</sup> Department of Employment, Economic Development and Innovation, 2011 Gas Market Review Queensland at pp 12

of 6-7%, with demand from India expected to grow by 4-5% per year. Brazil and the Middle East are also forecast to grow by 5-4% per year.<sup>26</sup>

80. In its 2008 Report, MMA stated that<sup>27</sup>:

*"LNG is not only the most attractive market for gas in price terms, it is also growing rapidly and is projected to continue to do so, at between 5% and 10% per annum. From a base in 2007 of 165 Mtpa (approximately 9,075 PJ), forecasts are for global LNG demand to reach between 245 and 340 Mtpa by 2015. Demand in the Asian market most accessible to Australian LNG is forecast to grow from 108 Mtpa to between 140 and 180 Mtpa.*

*Existing LNG capacity plus capacity under construction will meet projected demand until about 2015".*

MMA also reported in its 2008 Report that demand is expected to increase up to 380 Mtpa by 2020.<sup>28</sup>

81. In its 2011 Report, MMA has included revised global demand figures. Extracted from its report and set out below is Figure 5-1 from SKM MMA's 2011 Report<sup>29</sup> which shows Global LNG Demand Projections from various public sources. Those estimated global demand figures show that forecasts are for global LNG demand to reach between 250 and just under 300 Mtpa by 2015. SKM MMA has also suggested that global LNG demand will continue to enjoy growth rates of approximately 4.5% pa over coming decades and notes that some forecasters project growth rates of approximately 6% and none project growth rates of less than 4%.<sup>30</sup>

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<sup>26</sup> Department of Employment, Economic Development and Innovation, 2011 Gas Market Review Queensland at pp 12

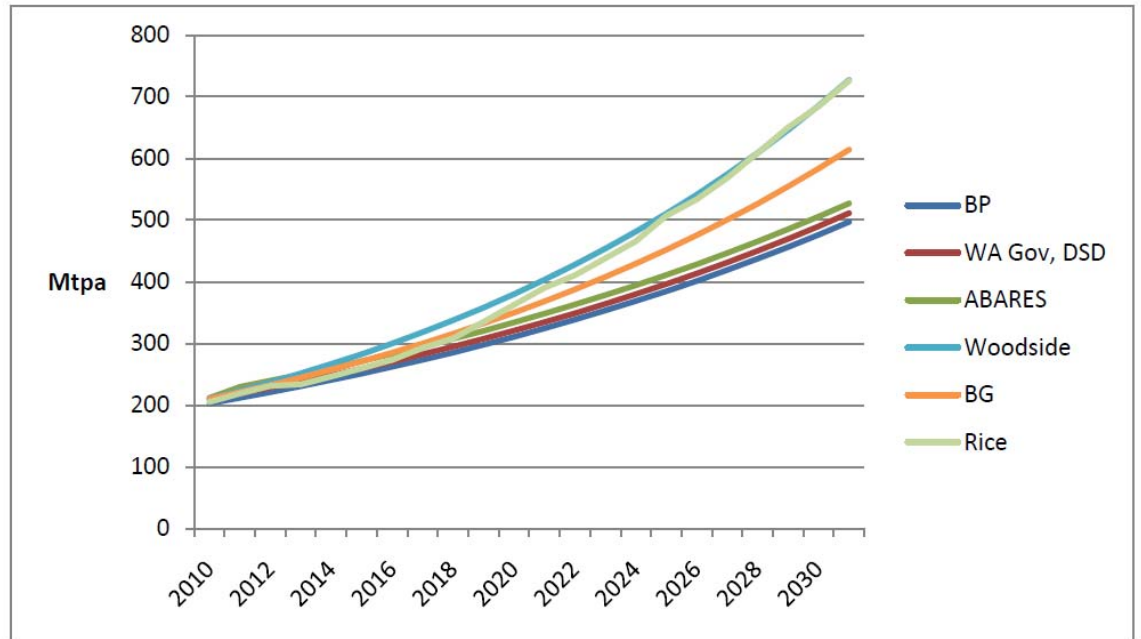
<sup>27</sup> MMA, '*Queensland LNG Industry Viability and Economic Impact Study*', Final Report to Queensland Department of Infrastructure and Planning (2008), vi.

<sup>28</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.62].

<sup>29</sup> Figure 5-1 Global LNG Demand Projections - public sources extracted from SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 64 available from [www.deedi.qld.gov.au](http://www.deedi.qld.gov.au)

<sup>30</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 63

■ **Figure 5-1 Global LNG Demand Projections – public sources**



Source: BP Energy Outlook 2030, WA DSD Northern Energy Arc, ABARES Australian Commodities March 2011, Woodside Annual Report 2010, BG Q4 2010 Full Year Results and Annual Strategy Update, Rice University Shale Gas and Emerging Market Dynamics

82. The 2011 SKM MMA report suggests that currently contracted capacity global will meet projected demand out to 2012 or a little beyond and that further contracted capacity is required to meet projected demand beyond this.<sup>31</sup>

### 6.3 Servicing global demand

83. The SKM MMA Report provides that according to the IEA and other sources, there is approximately 250 Mtpa of LNG capacity in planning in Eastern Australia that is capable of delivery between 2015 and 2020.<sup>32</sup>

84. The strong demand for Australian LNG will be underpinned by economic growth in Australia's main export markets (particularly China), as well as anticipated climate change policies and uncertainty over nuclear electricity generation which will see many economies switch from using coal and oil for electricity generation to using the more cost effective, lower emissions source of natural gas.

85. ABARE has estimated the ultimate potential CSG resource in Eastern Australia could be 250 trillion cubic feet (approximately 250,000 petajoules). This is more than sufficient to meet domestic demand and to supply an economically viable export industry.

86. The Australian Government's draft Energy White Paper seeks to deliver energy security to Australia, while at the same time realising Australia's potential to become a global energy

<sup>31</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 67

<sup>32</sup> Although the Report notes that much of that capacity is in projects that have been in planning for a prolonged period and do not seem able to reach commitment. SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 68.

producer in the 21st Century. APLNG, with its reserves position, is well-placed to respond to such policy platforms and the growing demand for gas.

87. As an integral component of the APLNG Project, the proposed pipeline and associated infrastructure facility will contribute to enabling a substantial proportion of emerging world LNG demand needs (described in section 6.2 above) to be met via the utilisation of CSG reserves in Queensland. This will enable the financial and economic benefits associated with the development of LNG projects to be generated for Australia, Queensland and the Mackay-Fitzroy-Central West and Darling Downs-South West regions of Queensland. That is, benefits that may otherwise not be secured as market demand is taken up by suppliers operating in other regions with gas reserves around the world.

#### **6.4 APLNG pipeline capacity**

88. The APLNG Pipeline capacity and capacity under different augmentation scenarios is described in **Table 3** above.

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## **7. Criteria for Greenfields Exemption**

### **7.1 Overview**

89. When an applicant makes a 15-year no-coverage application, the NCC is required to make a recommendation to the relevant Minister. The NCC's recommendation must be either that the pipeline:

- (a) be exempt from being a covered pipeline for a period of 15 years, or
- (b) not be exempt from being a covered pipeline for a period of 15 years.

90. In making a no coverage recommendation the NCC must give effect to the pipeline coverage criteria and in deciding whether those criteria are satisfied the NCC must have regard to the National Gas Objective. This is set out in section 154 of the NGL as follows:

***"154 - Principles governing the making of a no-coverage recommendation***

*(1) In making a no-coverage recommendation, the NCC -*

*(a) must give effect to the pipeline coverage criteria; and*

*(b) in deciding whether or not the pipeline coverage criteria are satisfied must have regard to the national gas objective.*

*(2) The NCC gives effect to the pipeline coverage criteria as follows:*

*(a) if the NCC is satisfied that all the pipeline coverage criteria are satisfied in relation to the pipeline - the recommendation must be against making a 15-year no-coverage determination;*

*(b) if the NCC is not satisfied that all the pipeline coverage criteria are satisfied in relation to the pipeline - the recommendation must be in favour of making a 15-year no-coverage determination."*

91. The pipeline coverage criteria are described in section 7.2 below and the National Gas Objective is described in section 7.3 below.

## 7.2 Application of the coverage criteria

92. Section 15 of the NGL sets out the pipeline coverage criteria as follows:

### *"15 Pipeline coverage criteria*

*The pipeline coverage criteria are -*

*(a) that access (or increased access) to pipeline services provided by means of the pipeline would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the pipeline services provided by means of the pipeline;*

*(b) that it would be uneconomic for anyone to develop another pipeline to provide the pipeline services provided by means of the pipeline;*

*(c) that access (or increased access) to the pipeline services provided by means of the pipeline can be provided without undue risk to human health or safety;*

*(d) that access (or increased access) to the pipeline services provided by means of the pipeline would not be contrary to the public interest."*

93. In applying the pipeline coverage criteria, the NCC typically considers criterion (b) before considering criterion (a). This is because criterion (b) involves the identification and consideration of relevant services, which, for the purpose of criterion (a), informs the identification of the markets that are dependent on these services and whether the pipeline operator can exercise market power.<sup>33</sup> The Applicant adopts the same approach in this Application.

## 7.3 National Gas Objective

94. Section 154(1)(b) of the NGL requires the NCC to have regard to the National Gas Objective in deciding whether each of the coverage criteria are satisfied.

95. The National Gas Objective, contained in section 23 of the NGL, provides that:

*"The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas."*

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## 8. Criterion (b) - Economic to develop another Pipeline

### 8.1 Statutory Test

96. Section 15 of the NGL provides that the NCC must recommend that the exemption be granted if it is not satisfied:

*"that it would be uneconomic for anyone to develop another pipeline to provide the pipeline services provided by means of the pipeline."*

### 8.2 Approach to criterion (b)

97. Prior to the Full Federal Court's Pilbara Decision, the assessment of criterion (b) centred on identifying whether a pipeline exhibits "natural monopoly" characteristics, such that a single

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<sup>33</sup> QCLNG Application

pipeline is capable of meeting likely demand at lower cost than two or more pipelines. If the pipeline exhibits "natural monopoly" characteristics, it would be uneconomic to duplicate the pipeline, and society's resources would be most efficiently used and costs minimised if additional pipelines were not developed.<sup>34</sup>

98. The NCC has also recognised the need to consider whether the services provided by means of the relevant pipeline could be provided by using an existing pipeline or developing a new or existing pipeline to provide the services.<sup>35</sup> For example, if the relevant pipeline cannot satisfy reasonably foreseeable demand, the NCC would need to consider whether reasonably foreseeable demand could be met, at lower cost, by modifying or augmenting an existing pipeline. Where this is the case, criterion (b) is unlikely to be satisfied.<sup>36</sup>
99. The NCC has also stated that, in its view, the National Gas Objective requires that the term, "uneconomic" in criterion (b) should be given a broad social (national interest) construction.<sup>37</sup>
100. However, the Pilbara Decision has given a new and different construction to criterion (b), in particular to the construction of the words, "uneconomical for anyone to develop another facility to provide the service".
101. In the Pilbara Decision, Full Federal Court has held at [85] that, *"In so far as the natural monopoly test applied by the Tribunal or the net social benefit test applied by the Tribunal in earlier cases, depends on the making of an evaluative judgement about efficiency in terms of costs and benefits, that approach is inconsistent with the intention evident from the text and context of Pt IIIA that access should not be available merely because it would be convenient to some parties, or indeed to society according to the evaluation of a regulator"*.
102. The Full Federal Court has instead interpreted criterion (b) at [100] as follows:  
  
*"In our opinion, the intention of the regulator was that, if it is economically feasible for someone in the market place to develop an alternative to the facility in dispute, then criterion (b) will not be satisfied"*.
103. Adopting this approach, there can be no doubt that the APLNG Pipeline would not satisfy criterion (b). There are a number of other CSG pipeline projects variously at advanced stages of planning which would suggest that it is likely to be economically feasible for others in the market place to develop an alternative to the APLNG Pipeline. These pipeline projects are described in detail at **Annexure 3**.
104. At the time of preparing this Application, the Applicant is aware that the interpretation of criterion (b) will be determined by the High Court later this year. For this reason, in making this Application, the Applicant has applied criterion (b) according to its new interpretation following the Pilbara Decision as well as in accordance with the position as it stood prior to the Pilbara Decision. In the Applicant's submission, both interpretations of criterion (b) produce the same result, that it would be economic to develop another pipeline to provide the pipeline services to be supplied by means of the APLNG Pipeline.

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<sup>34</sup> NCC 2010, A Guide to the Functions and Powers of the National Competition Council under the National Gas Law, Part B - Coverage, revocation of coverage and classification of pipelines, (**Coverage Guide**), Paragraph 5.98

<sup>35</sup> Coverage Guide, paragraphs 5.123-5.125

<sup>36</sup> Coverage Guide, paragraph 5.127-5.128.

<sup>37</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline March 2010, [6.57].

### 8.3 NCC's approach to criterion (b) in Final Determination on QCLNG's no-coverage application

105. In the Applicant's view, the NCC has taken an unusual approach to criterion (b) in its Final Determination of QCLNG's no coverage application. At [6.60], the NCC concludes that, *"When considering criterion (b) in the context of a no coverage determination it appears to the Council that it may be appropriate to address criterion (b) on the basis of whether an optimally sized and specified pipeline could meet foreseeable demand at less cost than more than one pipeline, rather than to confine that consideration to the pipeline proposed by the Applicant"*.
106. The Applicant submits that the NCC's conclusion that it is appropriate to take into consideration a theoretical, optimally sized pipeline that can satisfy all reasonable demand in its approach to criterion (b), as it did in its QCLNG recommendation, is:
- (a) inconsistent with long established principles of statutory interpretation; and
  - (b) inconsistent with its own previously published guides on the approach to criterion (b) in a Greenfields context and different to the approach that the NCC has taken to this test prior to the QCLNG Pipeline application.
107. The Applicant submits that the words, "the pipeline" as used in criterion (b) should be interpreted to mean the pipeline as proposed by the Applicant for which the no coverage determination is sought.
108. In addition, while the Applicant's application proceeds on the basis that the relevant test in the application of criterion (b) is a social test rather than a private commercial interest/market entry test, the Applicant notes that the correct approach to criterion (b) has been put in issue in the decision to designate rail services in the Pilbara region of Western Australia under Part IIIA of the CCA. This is discussed further below.
109. The Applicant deals with each of these matters below.

### 8.4 Principles of statutory interpretation

110. In the Applicant's submission, based on the law as it stood prior to the Full Federal Court's Pilbara Decision, the proper approach to criterion (b) requires the NCC:
- (a) to make a determination as to the reasonably foreseeable demand for the services to be provided by means of **the** pipeline (or the services to provided by the facility in a Part IIIA context);
  - (b) to consider whether **the** pipeline (or facility) can meet that reasonably foreseeable demand with or without expansion; and
  - (c) to consider, when (a) and (b) are tested, whether it is economic to develop another pipeline (or facility) to provide the services provided by that pipeline (or facility).
111. The approach outlined in 110 above is the approach which has consistently been adopted by the Australian Competition Tribunal (**Tribunal**) under Part IIIA of the CCA<sup>38</sup> and in the following NCC determinations:

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<sup>38</sup> *Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2 at [137] - [143]

- (a) NCC, Final Recommendation re Application for revocation of coverage of the Moomba to Adelaide Gas Pipeline System under the National Gas Access Regime (14 December 2005): see paragraphs 5.28 to 5.58;<sup>39</sup>
  - (b) NCC, Final Recommendation re Application for coverage of the Dawson Valley Pipeline (August 2005): see paragraphs 5.1 to 6.50;<sup>40</sup> and
  - (c) NCC Final Recommendation re Application for revocation of coverage of the Tubridgi Pipeline System under the National Gas Access Regime (27 February 2006): see paragraphs 4.1 - 4.41.<sup>41</sup>
112. The Applicant submits that absent the Full Federal Court's Pilbara Decision, there is no reason to depart from the approach described in 110 above in the context of a Greenfields pipeline project. Moreover, the Applicant submits that the legislature has provided no scope for the NCC to depart from that approach.
113. The word "pipeline" as used in the NGL is defined to mean:
- "(a) *A pipe or system of pipes for the haulage of natural gas, and any tanks, reservoirs, machinery or equipment directly attached to that pipe or system of pipes; or*
  - (b) ***A proposed pipe** or system of pipes for the haulage of natural gas, and any proposed tanks, reservoirs, machinery or equipment proposed to be directly attached to the proposed pipe or system of pipes; or*
  - (c) *A part of a pipe or system of pipes or proposed pipe or system of pipes referred to in paragraph (a) or (b) ..."*
- [Emphasis added].**
114. It appears to the Applicant that Parliament intended that the word "pipeline" as used in criterion (b) was meant to include a proposed pipe or system of pipes for the haulage of natural gas.
115. Further, it is a general principle of statutory interpretation that words are assumed to be used consistently throughout any statutes, given:
- "... it is a fundamental rule of construction that any document should be construed as far as possible so as to give the same meaning to the same words wherever those words occur in that document, and that that applies especially to an Act of Parliament, and with especial force to words contained in the same section of an Act. There ought to be very strong reasons present before Courts hold that words in one part of a section have a different meaning from the same words appearing in another part of the same section."<sup>42</sup>*

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<sup>39</sup> NCC 2005, Application for Revocation of Coverage of the Moomba to Adelaide Gas Pipeline under the National Gas Access Regime, Final Recommendation, Melbourne

<sup>40</sup> NCC 2005, Dawson Valley Pipeline: Coverage Application under the National Gas Code, Final Recommendation

<sup>41</sup> NCC 2006, Application for Revocation of Coverage of the Tubridgi Pipeline System under the National gas Access Regime, Final Recommendation, Melbourne

<sup>42</sup> *Craig, Williamson Pty Ltd v Barrowcliff* [1915] VLR 450 by Hodges J at 452

116. The words, "the pipeline", as used in criterion (b) includes a proposed pipeline and consequently for the purposes of this Greenfields project, the pipeline proposed by the Applicant. It is inconsistent with the NGL and inconsistent with applicable and long standing principles of statutory interpretation to interpret the words, "the pipeline" as used in criterion (b) to mean any optimally sized pipeline conceived by the NCC.
117. The Applicant submits that such a reading is consistent with the National Gas Objective, and that its proposed LNG Project does represent efficient investment in and use of natural gas services for the long term interests of consumers of natural gas.
118. Finally, the Applicant disagrees that interpreting criterion (b) in this manner in relation to a Greenfields pipeline would produce perverse outcomes. This is addressed in the attached report prepared by Frontier Economics (**Annexure 5**, at section 2.4.2 of that report).

## 8.5 NCC's Guidelines on criterion (b)

119. The NCC's Guide to the Functions and Powers of the Council under the National Gas Law, Part D - Greenfields pipeline incentives (**Greenfields Guide**) provides that the analysis of criterion (b) for new pipeline projects is likely to be most similar for a Greenfields pipeline project as for an existing pipeline. Specifically, both in paragraph 4.26 of the Greenfields Guide and paragraph 5.91 of the Guide to the Functions and Powers of the National Competition Council under the National Gas Law, Part B - Coverage, revocation of coverage and classification of pipelines (**Coverage Guide**), the NCC states:

*"Criterion (b) of s 15 of the NGL mirrors s 44G(2)(b) of the TPA and provides that 'it would be uneconomic for anyone to develop another facility to provide the service'. While s 44G(2)(b) of the TPA uses the word 'uneconomical' and the NGL 'uneconomic', in Re Duke Eastern Gas Pipeline Pty Ltd [2001] ACompT 2 (4 May 2001) the Tribunal stated in relation to the Gas Code that 'nothing turns upon this difference in language'. Accordingly, the case law concerning criterion (b) in Part IIIA of the TPA is relevant to the interpretation of this criterion."*

120. The NCC describes the test for assessing whether criterion (b) is met as a social interest test. At paragraph 4.27 of the Greenfields Guide and paragraph 5.92 of the Coverage Guide, the NCC states:

*"Criterion (b) is concerned with Australia's national interest not the private interests of any particular parties. The Council and the Tribunal have consistently found that the appropriate test for assessing whether criterion (b) is met is a social test and that the term 'uneconomic' should be construed in a social cost benefit sense rather than in terms of private commercial interests..."*

121. However, the Pilbara Decision has called this into question. In the Tribunal decision which led to the Pilbara Decision, the Tribunal found that the correct approach to criterion (b) is to apply a natural monopoly approach rather than a social benefit approach, which has been adopted in previous Tribunal decisions and the private investment approach contended for by Rio Tinto and BHP.<sup>43</sup>
122. The application of criterion (b) was strongly contested during proceedings in the Tribunal. The Tribunal rejected the "private investment approach" contended for by BHP and Rio Tinto and found in favour of the natural monopoly test. In determining whether a facility is a natural monopoly, the Tribunal found:

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<sup>43</sup> In the matter of Fortescue Metals Group Limited [2010] ACompT 2 at [838].

*"it is necessary first, to determine the reasonably foreseeable potential demand for the facility (strictly the service provided by the facility), and then compare the capital and operating costs of a shared facility to the sum of the capital and operating costs of an existing facility (or an expanded existing facility) and a new facility".<sup>44</sup>*

123. Review was sought of the Tribunal decision and the Full Federal Court has now adopted a privately profitable approach to criterion (b). The Full Federal Court has interpreted criterion (b) at [100] as follows:

*"In our opinion, the intention of the regulator was that, if it is economically feasible for someone in the market place to develop an alternative to the facility in dispute, then criterion (b) will not be satisfied".*

124. Having regard to that approach, it is clear that criterion (b) would not be satisfied in relation to the APLNG Pipeline. It is both commercially and technically feasible to develop another pipeline to provide the services that will be supplied by means of the APLNG Pipeline. The Applicant notes the presence of a number of other proposed LNG projects, as outlined at section 5 of this Application. These projects propose to duplicate the Applicant's proposed pipeline on the basis that it is economic to do so from a private investment viewpoint.

125. The NCC further states at paragraph 5.98 of its Coverage Guide as follows:

*"The assessment of criterion (b) centres on identifying whether a pipeline exhibits "natural monopoly" characteristics, such that a single pipeline is capable of meeting likely demand at lower cost than two or more pipelines. Therefore, it is uneconomic to duplicate **the** pipeline, and society's resources are most efficiently used and costs minimised if additional pipelines are not developed. In the Duke EGP decision, the Tribunal stated:*

*[the] test is whether for a likely range of reasonably foreseeable demand for the services provided by means of **the** pipeline, it would be more efficient, in terms of costs and benefits to the community as a whole, for one pipeline to provide those services rather than more than one." [Emphasis added]*

126. The NCC clarifies that "the" pipeline which is relevant in applying this social interest test is the pipeline which is the subject of the coverage application. The Applicant notes paragraphs 5.95 and 5.125 of the Coverage Guide, which provide respectively as follows:

*"The test focuses attention on the pipeline services provide by means of **the pipeline which is the subject of the coverage application.***

...

*In assessing criterion (b), therefore, the Council must consider whether it would be uneconomic to develop either new or existing pipelines to provide the pipelines services of the **pipeline the subject of an application for coverage.**" [Emphasis added]*

127. The NCC's approach in its QCLNG Final Recommendation to apply the social test against a hypothetical optimal pipeline, which is of a size and scope formulated by the NCC (rather than an actual applicant), is inconsistent with the statements in the NCC's own guidelines. These guidelines, as outlined above, provide that the appropriate test of whether the pipeline is uneconomic to duplicate (which the NCC has found to be a social interest test) is clearly intended to be applied to the pipeline which is proposed by the applicant. This approach

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<sup>44</sup> In the matter of Fortescue Metals Group Limited at [855]

clearly considers social interests, but does so against a proposed, rather than hypothetical, pipeline.

## **8.6 Minister's approach to criterion (b)**

128. The Hon Martin Ferguson AM MP, Minister for Resources and Energy and Minister for Tourism determined to grant a 15-year no-coverage determination to QCLNG for its proposed QCLNG Pipeline. In his statement of reasons, the Minister found, contrary to the NCC, that he was not satisfied that criterion (b) was met. In his published reasons dated 15 June 2010, Minister Ferguson assessed criterion (b),

*"...based on the parameters and specifications of the proposed investment by the Applicant. I have considered the proposed "pipeline services provided by means of the pipeline", rather than the pipeline services that could be provided by a pipeline that is "larger than the Applicant proposes to construct"<sup>45</sup>.*

129. Minister Ferguson stated that *"When assessed against the proposed capacity provided by the Applicant, the NCC notes that, 'it appears likely that it would be necessary, or at least costly, to develop an additional pipeline'".<sup>46</sup>* Minister Ferguson also recognised that there are a number of other pipelines proposed and found that he was therefore not satisfied that it is uneconomic to develop another pipeline to provide the pipeline services provided by means of the pipeline.

## **8.7 APLNG's Approach to criterion (b) prior to the Full Federal Court's decision**

130. Prior to the Full Federal Court's decision, in the Applicant's submission in applying criterion (b) to the APLNG Pipeline, the NCC was required to consider the following questions:<sup>47</sup>

- (a) what is the service to be provided by means of the APLNG Pipeline?
- (b) what is the level of likely demand for this service over the period for which the exemption is sought?
- (c) what is the maximum achievable capacity of the APLNG Pipeline?
- (d) what configuration of pipeline infrastructure (including any augmentations to the APLNG pipeline and other pipelines) will satisfy the likely demand for the relevant service at least cost?

131. This approach to criterion (b) is consistent with principles of statutory interpretation; the body of law that has developed in this area including the Australian Competition Tribunal's decision in re Fortescue Metals Group Limited and it is consistent with the National Gas Objective.

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<sup>45</sup> The Hon Martin Ferguson AM MP, Commonwealth Minister for Resources and Energy, Statement of Reasons in support of 15 year No-Coverage Determination for the QCLNG Pipeline (15 June 2010) (**Statement of Reasons**) p 4

<sup>46</sup> Statement of Reasons p 5

<sup>47</sup> These are the same questions contained in the QCLNG Application at paragraph [6.8].

## **8.8 Identification of the pipeline service to be supplied by means of the APLNG Pipeline**

132. For the purposes of criterion (b), it is submitted that the APLNG Pipeline is capable of supplying pipeline services for the transportation of gas (subject to relevant gas specifications applicable to the APLNG Pipeline which are detailed in **Annexure 1** of this application) produced in the Surat and Bowen Basins, via the proposed pipeline system, to APLNG's proposed LNG plant at Curtis Island.
133. The upstream "point" for the services cannot be geographically confined to a precise location. The APLNG Pipeline will commence from the region of the Surat Basin and will be capable of transporting gas from other production fields spread within the Surat and Bowen Basins.
134. The downstream point is focussed on LNG production at APLNG's proposed plant at Curtis Island.
135. In the case of the APLNG Pipeline, the services to be provided by means of the pipeline would include the transportation of gas to APLNG's production plant at Curtis Island from possible points of interconnection along the route of the APLNG Pipeline.

## **8.9 Level of reasonably foreseeable demand**

136. The 2008 MMA report suggests that global demand for LNG is growing rapidly and is projected to continue to do so, at between 5% and 10% per annum. From a base in 2007 of 165 Mtpa (approximately 9,075 PJ), forecasts are for global LNG demand to reach between 245 and 340 Mtpa by 2015. Demand in the Asian market most accessible to APLNG is forecast to grow from 108 Mtpa to between 140 and 180 Mtpa.<sup>48</sup>
137. In 2011, SKM MMA issued a revised forecast. SKM MMA reported that forecasts are for global LNG demand to reach between 250 and just under 300 Mtpa by 2015. SKM MMA has also suggested that global LNG demand will continue to enjoy growth rates of approximately 4.5% pa over coming decades and notes that some forecasters project growth rates of approximately 6% and none project growth rates of less than 4%.<sup>49</sup>
138. The 2011 SKM MMA report also reports that:
- (a) currently contracted capacity (global) will meet projected demand out to 2012 or a little beyond and that further capacity is required to be constructed to meet projected demand beyond this.<sup>50</sup>
  - (b) according to the IEA and other sources, there is approximately 250 Mtpa of LNG capacity in planning in Eastern Australia that is capable of delivery between 2015 and 2020.<sup>51</sup>

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<sup>48</sup> MMA, *'Queensland LNG Industry Viability and Economic Impact Study'*, Final Report to Queensland Department of Infrastructure and Planning (2008), vi.

<sup>49</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 63

<sup>50</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 67

<sup>51</sup> SKM MMA 2011 *Gas Market Modelling for the Queensland Gas Market Review*, Final Report 29 July 2011 at pp 68

139. In its Final Recommendation on the QCLNG application, the NCC noted that MMA's growth scenario (contained in its 2008 Report) of about 28 Mtpa of LNG production by 2021 was a "feasible" growth scenario for the Queensland LNG industry.<sup>52</sup> The NCC calculated that this was equivalent to about 4,819 TJ per day of gas<sup>53</sup> and accepted QCLNG's submission that domestic demand in the Wide Bay area was about 181 TJ per day. The NCC therefore agreed that the sum of LNG and domestic demand for gas is about 5,000 TJ per day by 2021 which is approximately 1,876 PJ per annum.<sup>54</sup>
140. This section proceeds on the basis that the sum of LNG and domestic demand for gas will be approximately 5,000 TJ per day or 1,876 PJ per annum by 2021.

### **8.10 Maximum achievable capacity of the APLNG Pipeline**

141. The free-flowing capacity of the APLNG Pipeline is 1,560 TJ per day, which is well below the approximate 5,000 TJ per day of demand estimated by 2021.
142. If fully compressed (using 163 megawatt of power distributed via 4 compressor stations), the APLNG Pipeline would be capable of transporting 3,350 TJ per day. This still falls short of the estimated demand by 2021.
143. An independent report prepared by OSD Pipelines (copy attached **Annexure 6**) examines:
- (a) the indicative percentage change in construction costs for duplication of the APLNG Pipeline along its entire length using an identical pipeline;
  - (b) additional costs to pre-invest in a pipeline with an MPag of 15.3; and
  - (c) costs associated with the development of a stand-alone independent pipeline in the same corridor as the APLNG Pipeline and for the purposes of OSD's report this corridor is assumed as not being over populated with other pipelines making the construction of a standalone pipeline reasonably straightforward.
144. The report prepared by OSD concludes:
- (a) That the indicative percentage change in construction costs for duplication of the APLNG Pipeline along its entire length using an identical pipeline would be in the order of 17% above the cost of the initial APLNG Pipeline. However, this cost does not include the Narrows and Curtis Island crossings. The costs that make up the additional 17% include:<sup>55</sup>
    - (i) initial cost variations (in the order of \$20.7 million);
    - (ii) extra working width (in the order of \$2.2 million);
    - (iii) additional earthworks (in the order of \$16 million);

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<sup>52</sup> MMA, *'Queensland LNG Industry Viability and Economic Impact Study'*, Final Report to Queensland Department of Infrastructure and Planning (2008), [6.63 - 6.64].

<sup>53</sup> MMA, *'Queensland LNG Industry Viability and Economic Impact Study'*, Final Report to Queensland Department of Infrastructure and Planning (2008), [6.64].

<sup>54</sup> MMA, *'Queensland LNG Industry Viability and Economic Impact Study'*, Final Report to Queensland Department of Infrastructure and Planning (2008), [6.66].

<sup>55</sup> OSD Report, **Annexure 6** to this Application

- (iv) route changes (in the order of \$35 million); and
  - (v) Management time, APLNG Pipeline Operating Representatives (in the order of \$4 million).
- (b) The APLNG Pipeline is designed to an optimised pipeline design pressure of 13.5MPag. Additional costs in the order of \$69 million would be incurred to construct a pipeline with an operating pressure of 15.3MPag and would only marginally increase pipeline flow rate and would also require additional compression facilities near the gas field. Estimated capacity increases would be in the order of 12.5% for this option.
- (c) The costs associated with the development of a stand-alone independent pipeline in the same corridor as the APLNG Pipeline would be in the order of 7% above that of the APLNG Pipeline. The costs that make up the additional 7% include:
- (i) trenching and blasting in the Callide Ranges (in the order of \$6.4 million costs assumed to be equally applicable to the stand alone pipeline and the looped pipeline);
  - (ii) special crossings (\$6.25 million - costs assumed to be half of the looped pipeline due to greater separation from the initial APLNG Pipeline);
  - (iii) extra working width - no additional costs above the initial APLNG Pipeline;
  - (iv) Additional earthworks - not applicable as alignment options within the corridor is anticipated to result in the same quantities as the initial APLNG Pipeline;
  - (v) route changes - \$17 million;
  - (vi) environmental and cultural heritage - no additional cost above the initial APLNG Pipeline; and
  - (vii) operating costs - (\$1 million based on a reduction in resources from APLNG operations as compared to the looped pipeline).

145. In summary, the OSD Report concludes that the construction cost estimates associated with looping the APLNG Pipeline would be approximately 17% more than the construction costs of the APLNG Pipeline. The construction cost estimates for the development of a stand-alone independent pipeline in the same corridor as the APLNG Pipeline would be in the order of 7% above that of the APLNG Pipeline constructing a new pipeline.

146. Based on the work done by OSD, in circumstances where the reasonably foreseeable demand exceeds the maximum compressed capacity of the APLNG Pipeline, and the costs of looping the pipeline exceed the costs of duplicating the pipeline, it will be less costly to satisfy reasonably foreseeable demand by developing another pipeline to provide the services to be provided by means of the APLNG Pipeline.

147. For completeness, OSD also investigated the feasibility of adding capacity to the APLNG pipeline by way of a number of partial looping sections. The purpose of this investigation was to identify partial looping options that may allow incremental increases to the capacity of the APLNG Pipeline and to give consideration to the factors that would impact on the costs associated with those partial looping options.

148. OSD has not costed those partial looping options or costs required for compression to achieve a maximum gas flow for a given configuration of looping. However, OSD has concluded that overall construction costs per km would be higher for partial looping compared with complete looping. By comparison with complete looping, OSD has concluded that there would be inefficiencies resulting in higher overall mobilisation/demobilisation costs if the pipeline duplication occurs in multiple separate stages compared with duplication occurring in a single operation.<sup>56</sup> In addition, there would be higher costs associated with hydrostatic testing if the pipeline duplication occurs in multiple separate stages compared with duplication occurring in a single operation.<sup>57</sup>

### **8.11 Satisfying reasonably foreseeable demand at least cost**

149. The free-flowing capacity of the APLNG Pipeline is 1,560 TJ per day, which is well below the approximate 5,000 TJ per day of demand estimated by 2021. Even fully compressed (using 163 megawatt of power distributed via 4 compressor stations), the APLNG Pipeline would be capable of transporting 3,350 TJ per day. This still falls short of the estimated demand by 2021.

150. Consequently, it would be necessary either to augment the APLNG Pipeline or to develop another pipeline to meet the reasonably foreseeable demand for gas transportation from the Surat and Bowen Basins to Gladstone.

151. The report prepared by OSD Pipelines has costed out, within an accuracy range of  $\pm 35\%$  the options of fully looping the APLNG Pipeline; increasing capacity by constructing the initial pipeline to a design pressure of 15.3MPag; and developing a standalone pipeline within the same corridor as the initial APLNG Pipeline and which would deliver the same point to point service. Those costs are described in section 8.10 above.

152. The OSD Report shows that looping the APLNG pipeline would result in an increase in construction costs of at least 17% above the cost of the initial APLNG Pipeline. Compared with the costs of constructing a standalone pipeline within the same corridor as the APLNG Pipeline, (approximately 7% above the initial APLNG Pipeline cost) it appears to the Applicant that it would not be uneconomic to develop another pipeline to provide the services provided by means of the pipeline. Further, the option of increasing MPag from 13.5 to 15.3 would cost in the range of \$69 million and would only result in a capacity increase of 12.5% which is still short of the estimated 2021 demand.

### **8.12 Conclusion**

153. The Applicant submits that in applying criterion (b) to the APLNG Pipeline, the NCC must consider the following questions<sup>58</sup>:

- (a) what is the service to be provided by means of the APLNG Pipeline?
- (b) what is the level of likely demand for this service over the period for which the exemption is sought?
- (c) what is the maximum achievable capacity of the APLNG Pipeline?

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<sup>56</sup> OSD Report, section 7.1.1

<sup>57</sup> OSD Report, section 7.1.2

<sup>58</sup> These are the same questions contained in the QCLNG Application at paragraph [6.8].

- (d) what configuration of pipeline infrastructure (including any augmentations to the APLNG pipeline and other pipelines) will satisfy the likely demand for the relevant service at least cost?
154. The Applicant submits that the service to be provided by means of the APLNG Pipeline is a service for the transportation of gas from the Surat and Bowen Basins to Gladstone.
155. The Applicant believes that the APLNG Pipeline will not have sufficient capacity to satisfy the reasonably foreseeable demand for the pipeline services. The free-flowing capacity of the APLNG Pipeline is 1,560 TJ per day, which is well below the approximate 5,000 TJ per day of demand estimated by 2021. Even fully compressed (using 163 megawatt of power distributed via 4 compressor stations), the APLNG Pipeline would be capable of transporting 3,350 TJ per day. This still falls short of the estimated demand by 2021.
156. The OSD Report shows that looping the APLNG Pipeline would result in an increase in construction costs of at least 17% above the cost of the initial APLNG Pipeline. Compared with the costs of constructing a standalone pipeline within the same corridor as the APLNG Pipeline, (approximately 7% above the initial APLNG Pipeline cost) it appears to the Applicant that it would not be uneconomic to develop another pipeline to provide the services provided by means of the APLNG Pipeline. Further, the option of increasing MPag from 13.5 to 15.3 would cost in the range of \$69 million and would only result in a capacity increase of 12.5% which is still short of the estimated 2021 demand.
157. The Applicant therefore submits that it would be economic to develop another pipeline to provide the pipeline services to be supplied by means of the APLNG Pipeline and, as a result, criterion (b) is not met.

### **8.13 Criterion (b) - Based on the Pilbara Decision**

158. The Pilbara Decision has given a new and different construction to criterion (b), in particular to the construction of the words, "uneconomical for anyone to develop another facility to provide the service".
159. While the Full Federal Court's decision related to the interpretation of s 44H(4)(b) under Part IIIA of the CCA, the interpretation of that provision bears directly on the interpretation of criterion (b) for the purposes of this application to the NCC for a no coverage determination for the APLNG Pipeline.
160. The Full Federal Court has held that criterion (b) asks whether, "...it is economically feasible for someone in the market place to develop an alternative facility to the facility in dispute" [100]. If there is such a person, then criterion (b) would not be satisfied.
161. As outlined in section 5 above, in addition to the APLNG Project, there are presently three additional LNG projects proposed in Queensland that have been the subject of significant announcement and commercial discussion. Those projects are:
- (a) QCLNG proposes expanding QGC's existing CSG operations in the Surat Basin and transporting gas via the QCLNG Pipeline to a gas liquefaction and export facility on Curtis Island at Gladstone where gas will be liquefied for export to LNG markets in the Asia Pacific region and around the world;<sup>59</sup>
- (b) Santos and Petronas together with Total and KOGAS, under a joint venture arrangement, propose to construct the Gladstone LNG Project comprising a 435

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<sup>59</sup> QCLNG Application, p. 5

kilometre transmission pipeline from a location east of Injune in the Surat Basin to a proposed LNG Plant on Curtis Island at Gladstone;<sup>60</sup>

- (c) Arrow Energy's proposal which includes the construction of a 467 kilometre transmission pipeline from near Dalby in the Surat Basin to transport gas to its proposed LNG plant at Fisherman's Landing at Gladstone and to a proposed Shell Australia LNG plant on Curtis Island at Gladstone.<sup>61</sup>

162. Further details of these proposed projects including the locations of proposed pipelines (based on public announcements by proponents) are contained in **Annexure 3**.
163. Adopting the "privately profitable" construction as required by the Pilbara Decision, there can be no doubt that the APLNG Pipeline would not satisfy criterion (b). There are a number of other CSG pipeline projects variously at advanced stages of planning which would suggest that it is likely to be economically feasible for others in the market place to develop an alternative to the APLNG Pipeline.

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## **9. Criterion (a) - Promotion of Competition**

### **9.1 Statutory Test**

164. Section 15 of the NGL provides that the NCC must recommend that the exemption be granted if it is not satisfied:

*"that access (or increased access) to pipeline services provided by means of the pipeline would promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the pipeline services provided by means of the pipeline."*

### **9.2 Approach to criterion (a)**

165. Coverage criterion (a) addresses whether access (or increased access) to the pipeline services provided by means of the pipeline would promote a material increase in competition in at least one market other than the market for the pipeline service (dependent market).<sup>62</sup>
166. The issue is whether access would improve the opportunities and environment for competition in dependent markets so as to promote materially more competitive outcomes. The assessment is concerned with the process of competition rather than the particular commercial interests or pursuits of any party. If a dependent market is already effectively competitive, then it would be unlikely that access would improve the competitive environment such that criterion (a) is satisfied.<sup>63</sup>

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<sup>60</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.37]

<sup>61</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.37]

<sup>62</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.2]

<sup>63</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.3]

167. In assessing criterion (a), the NCC:<sup>64</sup>

- (a) identifies the relevant dependent (upstream or downstream) markets;
- (b) considers whether the identified dependent market(s) is separate from the market for the pipeline service; and
- (c) assesses whether access (or increased access) would be likely to promote a materially more competitive environment in the dependent market(s).

168. This approach, with which the Applicant agrees, was adopted by the NCC in the Final Determination on QCLNG's no-coverage application. In adopting this approach, the NCC is guided by the following principles:

- (a) Access is unlikely to materially promote competition in the dependent market(s) if the service provider does not have the ability and incentive to exercise market power to adversely affect competition in the dependent market(s).<sup>65</sup>
- (b) The NCC may use a 'future with and without approach', that is:  
  
*"... a comparison of the future state of competition in the dependent market with a right or ability to use [the] service and the future state of competition in the dependent market without any right or ability or with a restricted right or ability to use the service".<sup>66</sup>*
- (c) Reference to 'competition' in criterion (a) is a reference to effective competition rather than to any theoretical concept of perfect competition. Hence, when a dependent market is effectively competitive, the NCC's view is that access is unlikely to promote a material increase in competition and an application for coverage that seeks to add to competition in such a dependent market is unlikely to satisfy criterion (a).<sup>67</sup>
- (d) An analysis of whether a service provider has both the ability and incentive to exercise market power therefore requires a competitive effects analysis focussed on the factors most relevant to the question in issue. There is no hard or fast rule in conducting such an analysis. Rather, a range of factors may be considered, including barriers to entry, economies of scale, availability of substitute services, the existence and extent of countervailing power, the risk of co-ordinated conduct, the degree of vertical integration and the commercial incentives of the service provider.
- (e) The NCC observes that, in conducting this analysis, the Tribunal has made it clear that promotion of competition should not be gauged in terms of either the effect of

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<sup>64</sup> Paragraph 4.22 of the *Guide to the Functions and Powers of the Council under the National Gas Law, Part D - Greenfields pipeline incentives (Greenfields Guide)*

<sup>65</sup> Coverage Guide, paragraph 5.68

<sup>66</sup> Coverage Guide, paragraph 5.48, quoting *Sydney Airport Corporation v Australian Competition Tribunal* [2006] FCAFC 146 at [83].

<sup>67</sup> Coverage Guide, paragraphs 5.58-5.59; also see *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2 at [1068]

access on particular competitors (rather it should be focussed on the competitive environment generally) or on the delivery of efficient outcomes.<sup>68</sup>

### 9.3 Identification of dependent markets

169. The first step in applying criterion (a) is to define the market(s) in which competition may be promoted as a result of the APLNG Pipeline being covered and to determine that this dependent market(s) is separate from the market for the services provided by the APLNG Pipeline. Typically, the dependent market(s) will either be upstream or downstream from the market for the pipeline services. A report by Frontier Economics describes the relevant dependent market(s) for the purposes of this application.
170. The Applicant submits that the relevant dependent markets are:
- (a) An upstream gas production market within the scope of feasible interconnection using existing or proposed transmission pipelines with the APLNG Pipeline;
  - (b) A downstream gas sales market centred on the Gladstone/Rockhampton/Wide Bay areas; and
  - (c) A downstream global LNG market.
171. These dependent markets are economically separate and distinct from the market for the pipeline services to which the application for a no-coverage determination relates. These markets are consistent with the markets found by the NCC in the QCLNG application.
172. The Applicant agrees with the NCC's market definition in relation to QCLNG's application and submits that that market definition applies equally in the context of its own no coverage application.

### 9.4 Promotion of competition in upstream production market

173. As noted in section 6.1 above, the Applicant considers that the relevant product dimension of the market includes the market for CSG.
174. Consistent with the NCC's position and as described in further detail in the Frontier Report at **Annexure 5** the upstream dependent market should include CSG producers within the scope of feasible interconnection with the APLNG hub. The intention is to construct high pressure pipelines to the APLNG hub from as far north as Fairview and as far south as Gilbert Gully. As such, the Applicant believes that these areas should also fall within the scope of the upstream market.
175. The upstream dependent market in this application is very similar to the upstream dependent market accepted by the NCC in its Final Recommendation on the QCLNG application.
176. Therefore the current and potential alternative pipelines that the NCC identified in the QCLNG application are equally potential alternative pipelines that could be used to service the upstream gas production market identified for the purposes of this Application. Those current pipelines include:
- (a) Queensland Gas Pipeline (**QGP**); and
  - (b) Roma to Brisbane Pipeline (**RBP**).

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<sup>68</sup> Coverage Guide, paragraphs 5.69 - 5.71.

177. The potential pipelines include:
- (a) QCLNG proposed pipeline (BG proposed LNG pipeline);
  - (b) GLNG proposed pipeline (Santos proposed LNG pipeline);
  - (c) Arrow Energy LNG proposed pipeline.
178. The NCC noted in its Final Recommendation for the QCLNG Pipeline, that the APLNG Pipeline; the GLNG proposed pipeline and the Arrow Energy LNG proposed pipeline, "will potentially offer additional alternatives to the QCLNG Pipeline for transporting gas from the Surat Basin to Gladstone".<sup>69</sup>
179. Given the number of alternatives to the APLNG pipeline for upstream CSG producers, it is unlikely that the Applicant would have the ability or incentive to materially influence competitive outcomes in the upstream CSG production market and therefore, access to the APLNG Pipeline would be unlikely to promote a material increase in competition in the upstream market (**Annexure 5**, section 3.3.1 of Frontier Report).
180. This outcome would be no different if the relevant upstream market were a wider market that included producers of conventional natural gas.

## **9.5 Promotion of competition in downstream domestic gas sales market**

181. The downstream domestic gas sales market defined in this Application is the same as the market defined by the NCC in its Final Recommendation on the QCLNG application.
182. In that Final Recommendation, the NCC accepted that in addition to the QGP and the RBP, the number of proposed CSG-related pipeline projects planned between the Surat Basin and Gladstone offered potentially alternative means of transporting CSG from the Surat or Bowen basins to consumers in the Gladstone; Rockhampton and Wide Bay areas.<sup>70</sup>
183. Even if the other proposed CSG-related pipelines did not proceed, gas consumers have the option to obtain gas supply from the QGP as an alternative to the APLNG Pipeline.
184. Access to the APLNG Pipeline is unlikely to promote a material increase in competition in the relevant downstream gas sales market.

## **9.6 Promotion of competition in downstream LNG market**

185. In the NCC's Final Recommendation to the QCLNG application, it found the downstream LNG market is already a competitive international market and that access to the QCLNG pipeline would therefore not promote a material increase in the downstream LNG market.
186. The Applicant agrees with the NCC's findings in that matter and, there being no material change in market conditions in the period between the QCLNG assessment and this application, the NCC's findings apply equally to the APLNG Pipeline.
187. Therefore, access to the APLNG Pipeline would not promote a material increase in competition in the downstream LNG market.

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<sup>69</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.36]

<sup>70</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.45]

## 9.7 Conclusion

188. In applying criterion (a) the NCC, consistent with its stated approach, must:

- (a) identify the relevant dependent markets which are economically separate and distinct from the market for the pipeline services to which the application for a no-coverage determination relates; and
- (b) assess whether access (or increased access) would be likely to promote a materially more competitive environment in the dependent market(s).

189. Access is unlikely to materially promote competition in the dependent market(s) if the service provider does not have the ability and incentive to exercise market power to adversely affect competition in the dependent market(s).<sup>71</sup>

190. The APLNG Pipeline will not have the ability or incentive to exercise market power because:

- (a) for the gas production market and the gas sales market competitive transport options are available; and
- (b) for the global LNG market, it is effectively competitive.

191. For these reasons, the Applicant submits that the NCC cannot be satisfied that access to the APLNG Pipeline would promote a material increase in competition in any dependent market and therefore the NCC cannot be satisfied that coverage criterion (a) is satisfied.

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## 10. Criterion (c) - Health and Safety

### 10.1 Statutory test

192. Section 15 of the NGL provides that the NCC must recommend that the exemption be granted if it is not satisfied:

*"that access (or increased access) to the pipeline services provided by means of the pipeline can be provided without undue risk to human health or safety."*

193. Coverage criterion (c) requires consideration of whether access to the pipeline services can be provided without undue risk to health and safety.

### 10.2 Application of criterion (c) to the APLNG Pipeline

194. The Applicant does not consider that access to the services to be provided by means of the APLNG Pipeline would result in undue risk to human health or safety.

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## 11. Criterion (d) - Public Interest

### 11.1 Statutory test

195. Section 15 of the NGL provides that the NCC must recommend that the exemption be granted if it is not satisfied:

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<sup>71</sup> Coverage Guide, paragraph 5.68

*"that access (or increased access) to the pipeline services provided by means of the pipeline would not be contrary to the public interest."*

## **11.2 Approach to criterion (d)**

196. The NCC has stated that coverage criterion (d) requires that access (or increased access) would not be contrary to the public interest.<sup>72</sup>
197. This involves a broad view of the overall costs and benefits of coverage of a pipeline and the consideration of other public interest issues which do not fall within the other coverage criteria. Criterion (d) is cast in the negative and a conclusion that access is contrary to the public interest would require that any costs of access outweigh any benefits (including the benefits of increased competition in one or more dependent markets where coverage criterion (a) has been satisfied).<sup>73</sup>
198. In considering this criterion, the NCC has recognised that public interest factors may include:<sup>74</sup>
- (a) ecologically sustainable development;
  - (b) social welfare and equity considerations, including community service obligations;
  - (c) government legislation and policies relating to matters such as occupational health and safety, industrial relations, access and equity;
  - (d) economic and regional development, including employment and investment growth;
  - (e) the interests of consumers generally or of a class of consumers;
  - (f) the competitiveness of Australian businesses;
  - (g) the efficient allocation of resources;
  - (a) efficiency losses resulting from coverage;
  - (b) regulatory costs;
  - (c) disruption costs; and
  - (h) impact on incentives to invest.<sup>75</sup>

## **11.3 Public interest considerations affecting the APLNG Pipeline**

199. The extent of any benefit from access depends on the likely effects of competition in dependent markets (criterion (a)) and the extent to which it would be economic to develop another pipeline (criterion (b)).

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<sup>72</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline March 2010, [6.91].

<sup>73</sup> Ibid

<sup>74</sup> Coverage Guide, paragraph 5.145.

<sup>75</sup> Coverage Guide, paragraphs 5.150-5.171.

200. The Applicant submits that criteria (a) and (b) would not be satisfied with respect to the APLNG Pipeline. For these reasons alone, the Applicant submits that the application for a 15-year no-coverage exemption must be granted.
201. However, even if the NCC were to find that criteria (a) and (b) were met, the Applicant submits that there are a range of other public interest considerations and benefits which will result from the APLNG Project and which outweigh the benefits to the public which might be said to result from access to the APLNG Pipeline.
202. Those public benefits include:
- (a) capital investment of approximately \$35 billion through to 2020;
  - (b) creation of a new, long-term gas processing and export industry in Queensland;
  - (c) creation of up to 5,000 direct jobs during the peak construction phase which includes the gas fields, gas pipeline and LNG facility;
  - (d) creation of 1,000 jobs during the operation of the APLNG Project;
  - (e) opportunities to increase local skills capacity via apprenticeships, scholarships and vocational training; and
  - (f) expenditure in regional economies through the purchase and use of local goods and services, where practicable, for the construction and operation of the plant.
203. Furthermore, there are other factors which would mean that the cost of access would exceed any benefit of access such that criterion (d) would not be met. These other factors are:
- (a) access regulation costs that would be incurred (should the APLNG Project proceed) in the absence of a no-coverage determination; and
  - (b) reduced incentives to invest in the APLNG Project and more broadly in Australia's CSG and LNG sectors.
204. Paragraph 5.158 of the Coverage Guide and paragraph 6.97 of the NCC's Final Determination on QCLNG's no coverage application respectively recognise that the costs of regulation may outweigh the benefits of access.
205. On the assumption that the APLNG Project proceeds in the absence of a 15-year no-coverage exemption and is subject to full regulation, the Applicant estimates that the costs of regulation will be approximately as follows:
- (a) preparation of 5 year access arrangement: \$280,000 to \$330,000;
  - (b) staff, reporting and accounting (per annum): \$181,000 to \$231,000; and
  - (c) other costs (per annum): \$31,000 to \$35,000.
206. As the free-flowing capacity of the APLNG Pipeline is 1,560 TJ per day, and the capacity of the APLNG Pipeline with a single megawatt compressor at 65% normal efficiency is 2,300 TJ per day, there would be no or very limited free-flowing capacity available to third party access seekers unless the APLNG Pipeline is augmented. The costs of augmenting the pipeline exceed the costs of duplicating the pipeline.
207. The added costs of access must be weighed against the limited transportation services that might potentially be supplied to third party access seekers through the APLNG Pipeline and the cheaper alternative transportation options available to smaller producers.

208. The Applicant submits that in practical terms, any benefits to the public that could possibly be said to result from access to the APLNG Pipeline (in terms of promoting competition in dependent markets and the efficient utilisation of infrastructure) will inevitably be extremely limited, and outweighed by the factors identified in this section.
209. In the Applicant's view, reduced incentives to invest in the APLNG Project and more broadly in Australia's CSG and LNG sectors will result from requiring access to the APLNG Pipeline. Such increased regulation is likely to lead to regulatory uncertainty and disincentives to building additional and expandable capacity into other pipeline projects to meet the potential future demand which is estimated to be approximately 5,000 TJ per day by 2021. When weighed against these factors, the costs and reduced incentives that would result from regulation support the view that access to the APLNG Pipeline would not be in the public interest.
210. The NCC noted in the QGC application that, "*The key purpose of the no coverage regime in the NGL is to improve regulatory certainty for proposed investments that are efficient from a national perspective*".<sup>76</sup> If criterion (b) is not met, as the Applicant submits is the case here, then the concerns about inefficient investment which are referred to by the NCC do not arise.
211. Once criterion (b) is not met, then the NCC must be satisfied that the investment is efficient and against that finding, the investment incentives the Applicant faces are directly relevant to the public interest. It is in that context, that taking into account a successful no coverage determination is properly to be considered by the NCC in assessing the public interest in the context of criterion (d).

#### **11.4 Conclusion**

212. The Applicant submits that, consistent with the NCC's approach, criterion (d) requires the NCC to determine whether access to the pipeline would be contrary to the public interest.
213. The NCC has recognised that there are a range of factors relevant to this assessment.
214. The Applicant submits that access would not be in the public interest because it believes that access:
- (a) would reduce the likelihood that the APLNG Project would realise the environmental, economic and resource development benefits that will flow from Australia's CSG and LNG industries if access to the APLNG Pipeline discourages further investment; and
  - (a) would detrimentally affect the APLNG Project by reason of the costs of regulation, including financial costs to the Applicant.
215. Further, consistent with the approach taken by the NCC in its Final Determination of QGC's application,<sup>77</sup> the extent of any benefit from access depends on likely effects on competition in dependent markets (criterion (a)). The Applicant considers that for the reasons set out above, criterion (a) is not met, that is, access to the APLNG Pipeline would not promote a material increase in competition in any dependent market. In the absence of a material promotion of competition in any market and having regard to the costs that would result if the APLNG

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<sup>76</sup>NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.102].

<sup>77</sup> NCC, Final Determination on Application for a 15 year no coverage determination for the proposed QCLNG Pipeline (5 May 2010), [6.97]

Pipeline was covered, the Applicant submits that the detrimental effects which would flow from granting access to the APLNG Pipeline outweigh any potential benefits to the public in terms of the promotion of competition and economic efficiency.

216. The Applicant submits that access to the APLNG Pipeline would be contrary to the public interest and that, as a result, criterion (d) is not satisfied.

## Annexure 1 - Pipeline description and technical specifications

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### 1. Pipeline Description

#### 1.1 The APLNG Pipeline

The APLNG Pipeline for which the no-coverage determination is sought is a gas transmission pipeline of some 360km and having a diameter of 42 inches.

#### 1.2 Route and end points

The APLNG Pipeline begins east of Wandoan at the APLNG Hub, being the junction with the Condabri and Woleebee lateral pipelines, and ends at Curtis Island in the north of Queensland.

#### 1.3 Diameters of the principal pipes

The APLNG Pipeline will have a diameter of 42 inches.

#### 1.4 Map of the proposed pipeline route

The expected route of the APLNG Pipeline is shown in the diagram at **Annexure 2**.

#### 1.5 Basis on which the pipeline is a greenfields pipeline project

The APLNG Pipeline falls within the meaning of section 149(a) of the NGL as it is a new pipeline that is to be structurally separate from any existing pipeline.

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## 2. Relationship between the Applicant and other relevant entities

It is intended that the APLNG Pipeline will be owned by Australia Pacific LNG Gladstone Pipeline Pty Ltd who will provide pipeline services to Australia Pacific LNG Marketing Pty Limited. Both of these companies are wholly owned APLNG subsidiaries.

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## 3. Capacity of the APLNG pipeline

Level of augmentation of the APLNG Pipeline	Capacity (TJ/day)
Free flow capacity of the Export Pipeline	1560
Capacity of the Export Pipeline with a single 21 megawatt compressor at 65% nominal efficiency	2300
Maximum capacity of the Export Pipeline with compression (163 MW of Power distributed via 4 compressor stations along the line)	3350
Capacity of the Export Pipeline if fully looped (without compression)	3120
Maximum capacity of the Export Pipeline if fully looped and fully compressed (total of 325 MW required power at 65% nominal efficiency)	6700

*Power figures represent actual power – installed power is a function of sparing philosophy*

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## 4. Services to be provided by means of the pipeline

The service to be provided by means of the APLNG Pipeline is a point to point service for the transportation of CSG which begins east of Wandoan at the APLNG Hub and ends at APLNG's Curtis Island LNG facility near Gladstone.

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## 5. Location to be served by the pipeline and other sources of natural gas

The APLNG Project consists of producing CSG from the Walloons gas fields in the Surat and Bowen Basins, and transporting the gas via a proposed pipeline system to APLNG's proposed LNG plant at Curtis Island, near Gladstone.<sup>78</sup>

The Walloons gas fields are located in Queensland's Surat Basin on the Western Downs. They cover an area of approximately 570,000 hectares (ha). The gas fields are located in the three regional council areas of Maranoa, Toowoomba and Western Downs. The nearest townships are Roma, Wallumbilla, Wandoan, Miles, Condamine, Chinchilla, Kogan and Millmerran.<sup>79</sup>

The APLNG Pipeline will begin east of Wandoan at the APLNG Hub, being the junction with the Condabri and Woleebee lateral pipelines (described below), and ending at Curtis Island in the north, and includes the marine crossing of the Narrows at Port Curtis (**APLNG Pipeline**).

In addition there will be a lateral pipeline of some 76km (**Condabri Lateral**) connecting the Condabri development to the south with the main gas pipeline and a lateral pipeline of some 87km connecting the development as far west as Reedy Creek with the main gas pipeline (**Woleebee**). The Fairview to Reedy Creek Pipeline is some 95km connecting the developments of Fairview and Spring Gully to the main gas pipeline via the Woleebee Lateral. These laterals are not part of this no coverage application.

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## 6. Expected demand at downstream locations, expected customer base and expected revenue

### 6.1 Expected demand and customer base

Refer to sections 4.2 and 6 in the application above.

### 6.2 Expected revenue

While there will be some internal transfer pricing between the user and operator of the APLNG Pipeline, the APLNG Pipeline itself is not expected at this stage to be revenue generating in its own right and therefore at this stage there is no expected revenue to be derived from the APLNG Pipeline itself.

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## 7. Utilisation of the pipeline

Australia Pacific LNG Gladstone Pipeline Pty Ltd will provide pipeline services in a minimum of two and possibly 3 or more levels of production.

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<sup>78</sup> APLNG Website

<sup>79</sup> APLNG Environmental Impact Statement (**APLNG EIS**) section 3.1.1

The entire free flow capacity of the APLNG Pipeline will be used by APLNG in FID 1 and FID 2. Utilisation of the compressed capacity is subject to future development or future investment activity.

FID 1 – will consist of an annual maximum quantity of approximately 285PJ. This will be sufficient to support one LNG train at the Curtis Island LNG Plant, with maximum line pack of approximately 993 TJ above minimum working requirements.

FID 2 – will consist of an (incremental) annual maximum quantity of approximately 285PJ. This will be sufficient to support one additional LNG train at the Curtis Island LNG Plant, with maximum line pack of approximately 775 TJ above minimum working requirements.

Future investment decisions will bring on additional annual capacity in increments of 285PJ, with little or no incremental capacity for line pack, as compression will be required to add incremental compression beyond FID 2.

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## **8. Estimated cost of construction, operating and expanding the APLNG pipeline<sup>80</sup>**

### **8.1 Expenditure to date**

As of 1 March 2012, project development and construction costs incurred with respect to the APLNG Pipeline are approximately C-I-C.

### **8.2 As commissioned**

At the date of this Application, the estimated remaining cost of the APLNG Pipeline is C-I-C.

### **8.3 Costs of compression**

The free-flowing capacity of the APLNG Pipeline is estimated to be 1,560 TJ per day. It is possible to expand the capacity through compression (163 MW of power distributed over 4 compressor locations) to 3,350 TJ per day.

The Applicant notes that:

- (a) Free flow condition exists for the volumes associated with FID 1 & 2, therefore no additional compression exists on the pipeline at these flow rates.
- (b) Where future decisions justify additional LNG trains and thus additional production, compression will be added as follows.
  - (i) For a third additional train, compression would be installed at the APLNG Hub and mid-point locations. Given the sparing capacity of APLNG (3-50% units) 40 MW would be required at the APLNG Hub and 50 MW would be required at the mid-point station. At an (industry average ) cost of AUD \$5 million per MW, this is a total investment of approximately AUD \$450 million (2011).
  - (ii) For a fourth additional train, compression would be installed at the main line valve 1 and the main line valve 2 locations. Given the APLNG

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<sup>80</sup> These estimated costs are based on internal modelling estimates developed by industry experts under the direction of APLNG for a pipeline system designed to Australia/International industry standards and specifications. Note that these estimates may change after assessment processes related to the APLNG Project are completed.

sparing philosophy, 50MW would be required at the main line value 1 location and 35MW at the main line value 2 location. At an industry average Cost of AUD \$5 million per MW the cost of this compression would be approximately AUD \$425 million (2011).

#### **8.4 Costs of looping**

The capacity of the APLNG Pipeline can be further expanded through looping, although it is estimated that looping the APLNG Pipeline would result in an increase in construction costs of at least 17% above the cost of the initial APLNG Pipeline.

Alternatively, increasing the design pressure of the pipeline from 13.5MPag to 15.3MPag would result in additional costs in the order of \$69 million.

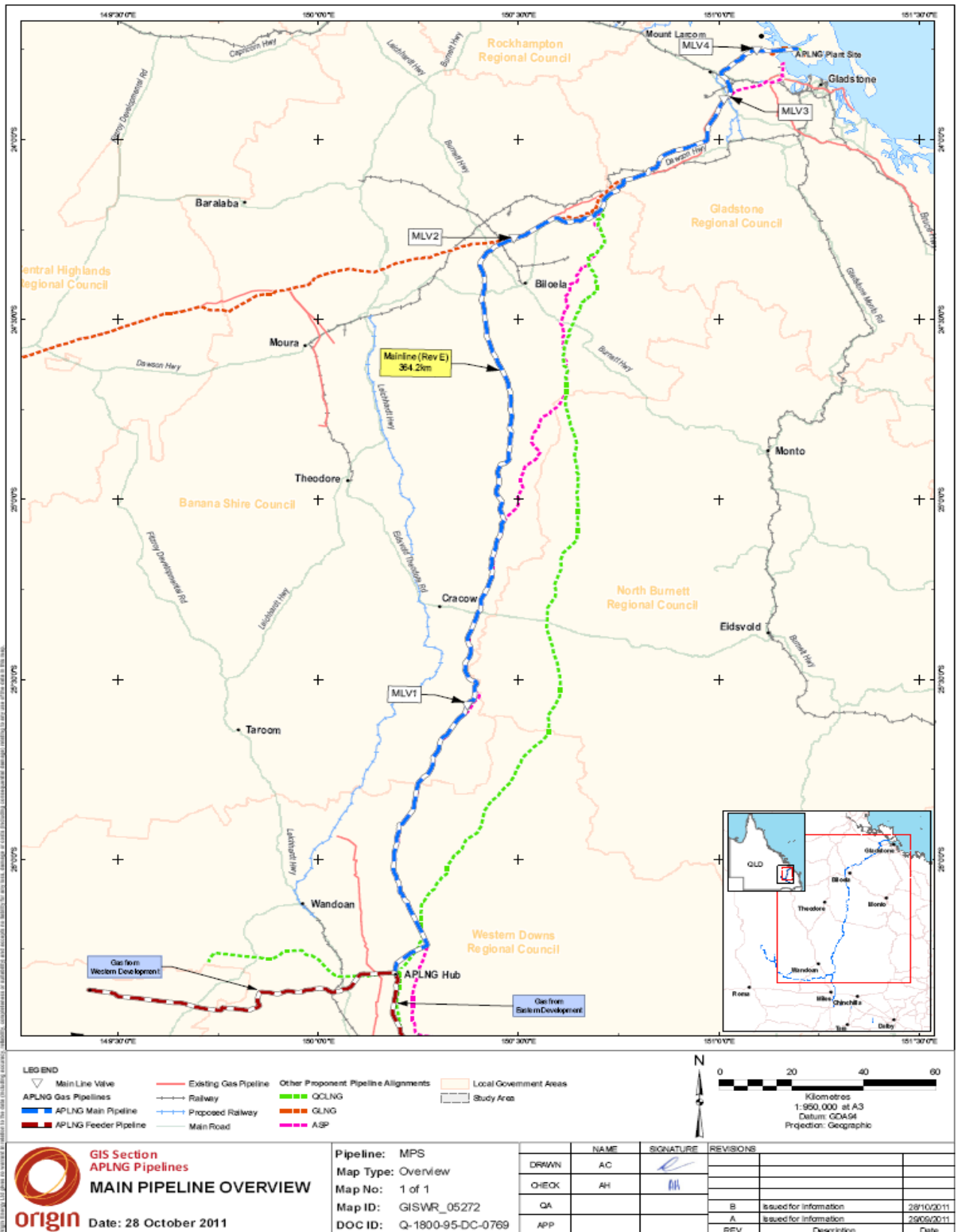
Finally, the costs associated with the development of a stand-alone independent pipeline in the same corridor as the APLNG Pipeline would be in the order of 7% above that of the APLNG Pipeline.

#### **8.5 Pipeline Route**

Refer to **Annexure 2**.

# Annexure 2 - APLNG Project

## APLNG Project overview map and APLNG Pipeline route



## Annexure 3 - Other LNG Projects in Queensland

Annexure 3 Figure 1 showing proposed pipelines in southeast Queensland

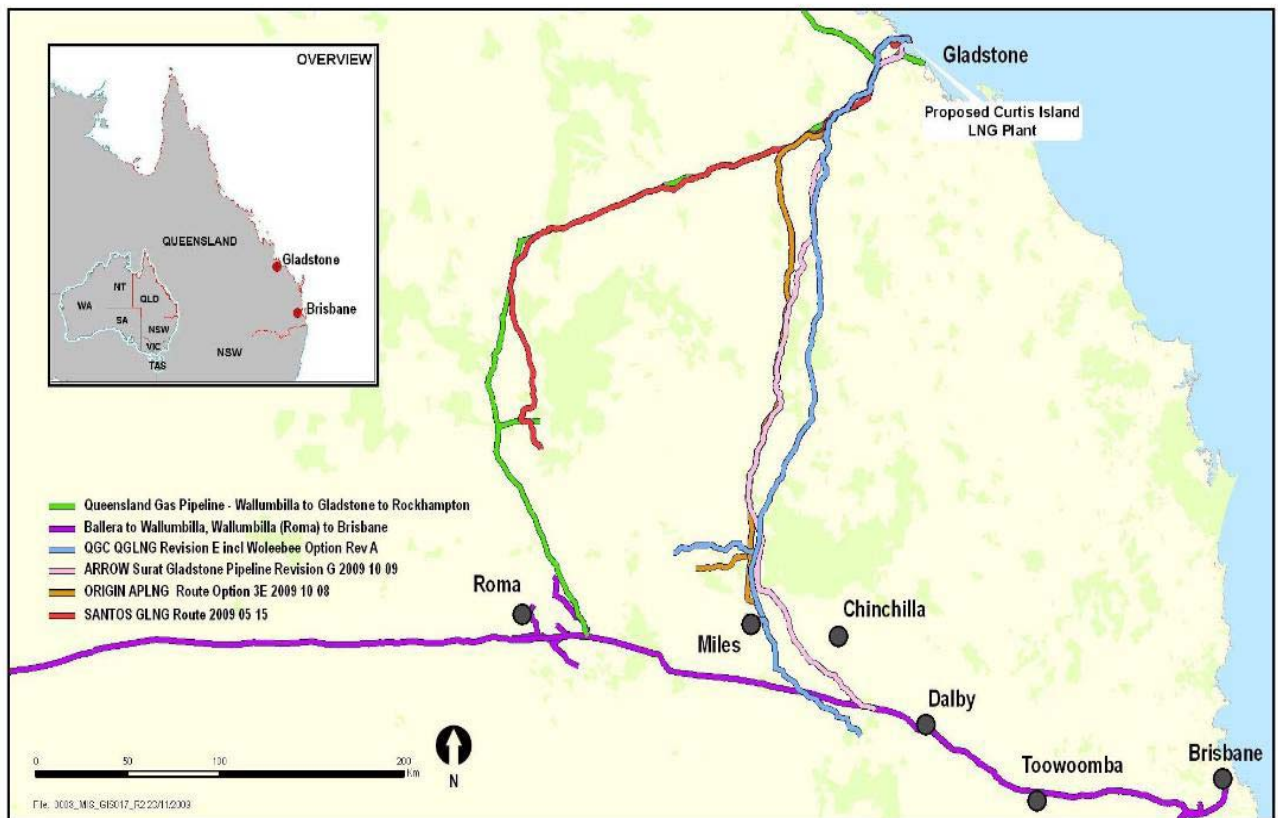
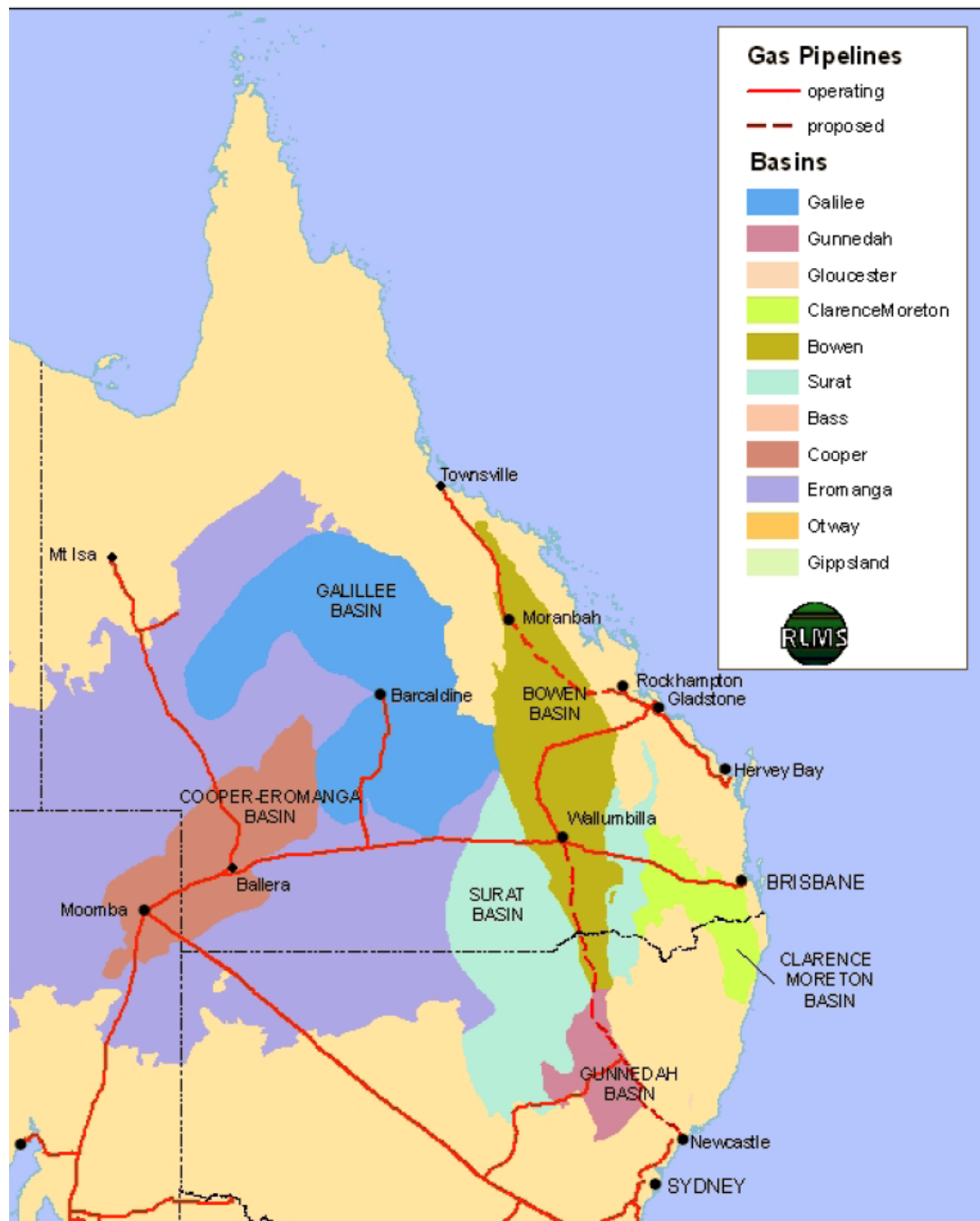


Figure shows proposed pipelines in southeast Queensland (with existing RBP, QGP and SWQP)

[Source: NCC Final No Coverage Determination for QCLNG Pipeline at pp 41; original source, No Coverage Application for QCLNG Pipeline, p. 24]

## Annexure 3

Annexure 3 Figure 2 showing South East Queensland Map



## Summary of other LNG Projects<sup>81</sup>

**Table : Summary of proposed LNG Projects**

Project	Number of Trains	Anticipated LNG Production (Mtpa)	Anticipated Start Date
APLNG (Origin-ConocoPhillips - Sinopec)	1 – 4 (4.5 Mtpa per train for first two trains per FID 1)	4.5 – 18	First LNG production 2015
QCLNG (BG Group-QGC)	1 – 3 (each train ≈ 4 Mtpa)	4 - 12	2014
GLNG (Santos-Petronas Total and KOGAS)	1 - 3 (train 1 = 3 – 4 Mtpa; trains 1 + 2 = 6 – 7 Mtpa; trains 1 + 2 + 3 = 10 Mtpa)	3 – 10	First cargoes scheduled to be exported from 2015. <sup>82</sup>
Gladstone LNG Project	1 – 2 (each train ≈ 1.5 Mtpa)	1.5 – 3	First LNG 2014/1015. <sup>83</sup>
Arrow Energy LNG (formerly Shell Australia LNG)	1 – 4 (each train = 3 - 4 Mtpa)	3 – 16	Construction of the Arrow Surat pipeline will start in 2015/16, with first gas supplied two to three years after that. <sup>84</sup>

*Note: This table is a summary of published information which, in relation to QCLNG; GLNG, Gladstone LNG Project and Arrow Energy LNG is set out in more detail below. This information is based upon information publicly available to the Applicant up to and including December 2011 unless otherwise specifically stated*

### 9. QCLNG Project

The QCLNG Project consists of producing CSG from QGC's gas fields located in the Surat Basin and transporting the gas via a pipeline system to the LNG liquefaction plant at Curtis Island, near Gladstone.<sup>85</sup>

The QCLNG project comprises of the following major components:

<sup>81</sup> This section is based upon information publicly available to the Applicant up to and including December 2011 unless otherwise specifically stated.

<sup>82</sup> <http://www.glng.com.au/Content.aspx?p=55>

<sup>83</sup> <http://www.lnglimited.com.au/IRM/Company/ShowPage.aspx/PDFs/1710-41938000/CompanyPresentation>

<sup>84</sup> [http://www.arrowenergy.com.au/page/Projects/Surat\\_Gladstone\\_Pipeline/](http://www.arrowenergy.com.au/page/Projects/Surat_Gladstone_Pipeline/)

<sup>85</sup> QGC, 'QCLNG Project' URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=5](http://www.qgc.com.au/01_cms/details.asp?ID=5)

- (a) expansion of QGC's existing coal seam gas production in the Surat Basin in southern Queensland;
- (b) a 540 km buried natural gas pipeline network linking the gas fields to Gladstone; and
- (c) construction of a natural gas liquefaction plant on Curtis Island, near Gladstone, where the gas will be converted to LNG for export.<sup>86</sup>

## 9.1 Gas Fields

The QCLNG Project will involve the expansion of QGC's coal seam gas operations in the Surat Basin. The gas field component of the project comprises:

- (a) approximately 6,000 gas production wells over the life of the project with initially 1,000 to 1,500 wells across the gas field by mid-2014. The remaining wells will be phased in over the life of the project, expected to be 20-30 years to replace declining wells;
- (b) gas and water-gathering systems and gas processing and compression infrastructure;
- (c) associated surface equipment, such as wellhead separators, telemetry devices and metering stations; and
- (d) field infrastructure such as access tracks, warehouses, camps (both construction and operations), office and telecommunications.<sup>87</sup>

## 9.2 Pipeline

As part of the QCLNG project, a 540 km buried natural gas pipeline network will be constructed, linking the gas fields to Gladstone. The main pipeline for the project comprises an export pipeline and a collection header for the transportation of gas linking the gas fields to the plant.<sup>88</sup>

The export pipeline, constructed from 42-inch diameter steel pipe, will commence near Wandoan in the Surat Basin of southern Queensland and transport gas underground for about 340 km to the north east of Gladstone. The pipeline will then transport the gas to Curtis Island, where it will be processed into LNG.<sup>89</sup>

The collection header, which is approximately 200 km in length, will consist of:

- (a) the northern collection header, starting from near the Woleebee Creek gas fields and following an easterly route to the start point of the export pipeline near Wandoan; and

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<sup>86</sup> QCLNG Project, 'The Queensland Curtis LNG Project', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=5](http://www.qgc.com.au/01_cms/details.asp?ID=5)

<sup>87</sup> QCLNG EIS, Volume 2: Chapter 3, 3.1 (p 1).

<sup>88</sup> QCLNG Project, 'Pipeline', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=386](http://www.qgc.com.au/01_cms/details.asp?ID=386).

<sup>89</sup> QCLNG Project, 'Pipeline', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=386](http://www.qgc.com.au/01_cms/details.asp?ID=386).

- (b) the southern collection header, which will commence from near the Ruby gas fields area, will follow a north-westerly route to the start point of the export pipeline.<sup>90</sup>

The QCLNG project will also involve the laying of gas and water gathering pipelines connecting the gas fields to the processing facilities which in turn will connect to the collection header.<sup>91</sup>

### 9.3 LNG Plant

The QCLNG Project involves the construction of a natural gas liquefaction plant on Curtis Island, near Gladstone, where the gas will be converted to LNG for export.<sup>92</sup>

The project's first stage will comprise two LNG trains which will have a design life of at least 20 years and will produce a combined 8.5 million tonnes of LNG per year.<sup>93</sup>

The LNG facility will comprise of the following key components:

- (a) gas refrigeration and liquefaction units for production trains;
- (b) three full containment LNG storage tanks with up to 180,000 m<sup>3</sup> capacity each;
- (c) a full containment propane storage tank with approximately 100,000 m<sup>3</sup> capacity;
- (d) jetty and docking facilities with turning basin for the loading of LNG carriers and unloading of propane ships to storage; and
- (e) a material offloading facility for ferry transportation and construction material receiving.<sup>94</sup>

### 9.4 Current status

QGC received Queensland Government approval for the QCLNG Project in June 2010 following the Queensland Coordinator-General's review of the Environmental Impact Summary.<sup>95</sup>

BG Group took a final investment decision on the QCLNG Project in October 2010 after receiving Federal Government approvals.<sup>96</sup> The QCLNG Pipeline obtained a 15 year no-coverage determination on 15 June 2010.

The first LNG delivery is expected in 2014.<sup>97</sup>

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<sup>90</sup> QCLNG Project, 'Pipeline', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=386](http://www.qgc.com.au/01_cms/details.asp?ID=386).

<sup>91</sup> QCLNG Project, 'Pipeline', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=386](http://www.qgc.com.au/01_cms/details.asp?ID=386).

<sup>92</sup> QCLNG EIS, Volume 2: Chapter 3, 3.1 (p 2).

<sup>93</sup> [http://www.qgc.com.au/01\\_cms/details.asp?ID=5](http://www.qgc.com.au/01_cms/details.asp?ID=5)

<sup>94</sup> QCLNG EIS, Volume 2: Chapter 3, 3.1 (p 2).

<sup>95</sup> QCLNG Project, 'Assessment process', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=385](http://www.qgc.com.au/01_cms/details.asp?ID=385).

<sup>96</sup> QCLNG Project, 'Assessment process', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=385](http://www.qgc.com.au/01_cms/details.asp?ID=385).

<sup>97</sup> QCLNG Project, 'The Queensland Curtis LNG Project', URL: [http://www.qgc.com.au/01\\_cms/details.asp?ID=5](http://www.qgc.com.au/01_cms/details.asp?ID=5)

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## 10. GLNG (Santos, Petronas, Total and KOGAS)

The GLNG project is a joint venture between Santos (30%) and three of the world's largest LNG companies, PETRONAS (27.5%), Total (27.5%) and KOGAS (15%).<sup>98</sup> The joint venture is proposing to develop their Queensland coal seam gas resources in the Bowen and Surat Basins in the area between Roma and Emerald as feed gas for a liquefied natural gas liquefaction and export facility on Curtis Island, near Gladstone, Queensland.<sup>99</sup> The LNG facility is expected to have an initial capacity of 3 to 4 Mtpa, however it will have the potential for later expansion to a nominal capacity of 10 Mtpa.<sup>100</sup>

The major components of the GLNG project are:

- (a) the exploration and production of CSG in the Surat and Bowen Basin gas fields;
- (b) the construction and operation of a 435 kilometre gas pipeline from the gas fields to Gladstone; and
- (c) the construction and operation of an LNG plant on Curtis Island.<sup>101</sup>

Santos is the designated proponent of the GLNG and the operator of the CSG fields on behalf of the tenement owners.<sup>102</sup> The project has a gross capital cost of US\$16 billion from final investment decision until the end of 2015, when the second train is expected to be ready for start-up.<sup>103</sup>

### 10.1 Gas Fields

As part of the GLNG project, CSG field development will occur in tenements in Roma, Fairview, Arcadia Valley and part of the Comet Ridge.<sup>104</sup> Santos proposes to drill and complete enough wells here to supply about 5,300 PJ (140 billion cubic metres) of gas. This will likely require up to 1,200 wells before 2015 and up to 1,450 wells after 2015 (excluding exploration wells). Santos states that the number of wells will be influenced by the results of exploration programs, production techniques and other factors.<sup>105</sup>

The CSG fields are expected to be developed over a period of approximately 25 years and are anticipated to provide approximately 5,300 PJ of coal seam gas to the LNG facility.<sup>106</sup>

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<sup>98</sup> Santos ASX/Media Release, 'GLNG project sanctioned', URL: [http://www.glng.com.au/library/110113\\_GLNG\\_project\\_sanctioned.pdf](http://www.glng.com.au/library/110113_GLNG_project_sanctioned.pdf) (13 January 2011).

<sup>99</sup> GLNG EIS, p 1.1

<sup>100</sup> GLNG EIS, p 1.1

<sup>101</sup> GLNG EIS, p 1.1

<sup>102</sup> GLNG EIS, p 1.1

<sup>103</sup> Santos ASX/Media Release, 'GLNG project sanctioned', URL: [http://www.glng.com.au/library/110113\\_GLNG\\_project\\_sanctioned.pdf](http://www.glng.com.au/library/110113_GLNG_project_sanctioned.pdf) (13 January 2011).

<sup>104</sup> GLNG, 'GLNG Field Development', URL: [http://www.glng.com.au/library/GLNG\\_Field\\_Development.pdf](http://www.glng.com.au/library/GLNG_Field_Development.pdf).

<sup>105</sup> GLNG, 'GLNG Field Development', URL: [http://www.glng.com.au/library/GLNG\\_Field\\_Development.pdf](http://www.glng.com.au/library/GLNG_Field_Development.pdf).

<sup>106</sup> GLNG EIS, p ES.1.

## 10.2 Pipeline

The GLNG Project involves the construction of a 435 km underground pipeline, which will run from the coal seam gas fields to the gas liquefaction and export facility on Curtis Island.<sup>107</sup> The proposed gas transmission pipeline corridor is closely aligned with the existing Queensland Gas Pipeline (QGP) for much of its route with the exception of the section north of Injune where the corridor will run along the eastern side of the Arcadia Valley.<sup>108</sup>

The pipeline will approach Gladstone from the southwest entering the Gladstone State Development Area and crossing Port Curtis between Friend Point and Laird Point to Curtis Island.<sup>109</sup>

## 10.3 LNG Plant

As part of the GLNG Project, a LNG liquefaction plant will be constructed at the Hamilton Point West site which is adjacent to China Bay on Curtis Island.<sup>110</sup>

The LNG facility will consist of the following key elements (for which Santos states that approvals will be sought):

- (a) a liquefaction facility that includes on-shore gas liquefaction and storage facilities;
- (b) marine facilities which include a product loading facility for loading LNG into ships for export, and a materials offloading facility and haul road for the delivery of equipment, plant and materials to the LNG facility site;
- (c) a swing basin and access channel from the existing Targinie Channel in Port Curtis;
- (d) a dredged material placement facility; and
- (e) a maximum 2,000-person capacity accommodation facility on Curtis Island for construction workers.<sup>111</sup>

## 10.4 Current status

The GLNG Project received its environmental approval from the Queensland Government on 28 May 2010.<sup>112</sup>

On 17 December 2010 Santos executed binding agreements with KOGAS and Total which paved the way for a final investment decision in January 2011. The agreements entered into with KOGAS and Total provided for;

- (a) the sale by GLNG of 3.5 Mtpa of LNG to KOGAS;

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<sup>107</sup> GLNG EIS Stakeholder Handbook, p 5

<sup>108</sup> GLNG, 'About the Project: A quick reference guide for landholders', p 11.

<sup>109</sup> GLNG, 'About the Project: A quick reference guide for landholders', p 11.

<sup>110</sup> GLNG, 'About the Project: A quick reference guide for landholders', p 12.

<sup>111</sup> GLNG, 'About the Project: A quick reference guide for landholders', p 12.

<sup>112</sup> Santos GLNG, 'Project Overview', URL: <http://www.santos.com/exploration-acreage/development-projects/glng.aspx> (June 2011)

- (b) the sale by Santos of an aggregate 15% interest in GLNG to Total and KOGAS for A\$665 million; and
- (c) an aligned GLNG joint venture comprising Santos, PETRONAS, Total and KOGAS.<sup>113</sup>

Santos completed a \$500 million institutional placement in December 2010 as the final step in fully funding the equity required for its share of the GLNG project.<sup>114</sup>

On 13 January 2011, Santos announced that the GLNG partners had taken the final investment decision approving the development of the US\$16 billion, 7.8 mtpa GLNG project.<sup>115</sup>

The first cargoes associated with the project are scheduled to be exported from 2015.<sup>116</sup>

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## 11. Arrow Energy LNG Project (formerly Shell Australia LNG Project)

The Arrow Energy LNG Project (formerly known as the Shell Australia LNG Project) involves the development of an LNG facility on Curtis Island, which will utilise gas resources supplied from CSG developments in the Surat and Bowen basins in South East and Central Queensland.<sup>117</sup>

The major components of the Arrow LNG Plant Project are:

- (a) construction of a gas pipeline from near the Bruce Highway to Curtis Island;
- (b) construction of a liquefaction facility where coal seam gas will be converted to LNG and stored for shipment in LNG carriers to growing LNG markets;
- (c) construction of marine facilities such as jetties on the mainland;
- (d) construction of jetties, offloading facilities and an LNG Carrier Terminal on Curtis Island in the vicinity of North China Bay, Hamilton Point and Boatshed Point; and
- (e) potential localised dredging at marine facilities.<sup>118</sup>

### 11.1 Gas Fields

The proposed Arrow LNG Plant Project on Curtis Island will be supplied with coal seam gas from Arrow Energy reserves located in the Surat Basin in South East Queensland and the Bowen Basin in Central Queensland.<sup>119</sup>

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<sup>113</sup> Santos GLNG, 'Project Overview', URL: <http://www.santos.com/exploration-acreage/development-projects/glng.aspx> (June 2011)

<sup>114</sup> Santos ASX/Media Release, 'GLNG project sanctioned', URL: [http://www.glng.com.au/library/110113\\_GLNG\\_project\\_sanctioned.pdf](http://www.glng.com.au/library/110113_GLNG_project_sanctioned.pdf) (13 January 2011).

<sup>115</sup> Santos GLNG, 'Project Overview', URL: <http://www.santos.com/exploration-acreage/development-projects/glng.aspx> (June 2011)

<sup>116</sup> GLNG, 'About the project', URL: <http://www.glng.com.au/Content.aspx?p=55> (June 2011).

<sup>117</sup> Shell Australia LNG Project DIP website.

<sup>118</sup> 'Arrow LNG Plant', URL: [http://www.arrowenergy.com.au/page/Projects/Arrow\\_LNG\\_Plant\\_Project/](http://www.arrowenergy.com.au/page/Projects/Arrow_LNG_Plant_Project/)

## 11.2 Pipeline

Arrow is currently investigating two pipeline projects for transporting CSG across Port Curtis to the proposed Arrow LNG Plant.<sup>120</sup>

The Arrow Bowen Pipeline will transport CSG over 600 km from the Bowen Basin in central Queensland to Curtis Island. The steel pipeline will be buried at a minimum depth of 750mm in a 30m easement.<sup>121</sup>

The Arrow Surat Pipeline forms another part of the Arrow LNG Project and involves the planning, construction and commissioning of a buried 660 mm diameter high-pressure steel gas transmission pipeline.<sup>122</sup> From a point east of Callide, the route heads north-east and follows the Queensland natural gas pipeline for the remaining 64 km into Gladstone. It is anticipated that construction of the pipeline will start in 2015 or 2016, with first gas anticipated to be supplied two to three years after that.<sup>123</sup>

## 11.3 LNG Plant

The Arrow LNG Project will involve the construction of a liquefaction facility on Curtis Island. This facility is expected to produce up to 16 Mtpa of LNG, and will include the phased construction of up to four trains or processing plants on the site.<sup>124</sup> Stage 1 of the project will involve the construction of two trains of around 4 Mtpa of LNG each on the current Arrow site behind Boatshed Point.<sup>125</sup>

## 11.4 Current status

On 12 June 2009, the Arrow LNG Plant Project was declared a 'significant project' by the Queensland Government.<sup>126</sup> Before the project can proceed, Arrow must gain approval from the Queensland and Commonwealth Governments.

The Queensland Government released the Terms of Reference for Arrow's required Environmental Impact Statement on 22 January 2010.<sup>127</sup>

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<sup>119</sup> 'Arrow LNG Plant', URL: [http://www.arrowenergy.com.au/page/Projects/Arrow\\_LNG\\_Plant\\_Project/](http://www.arrowenergy.com.au/page/Projects/Arrow_LNG_Plant_Project/)

<sup>120</sup> Arrow Energy, 'LNG Plant Overview', URL: [http://www.arrowenergy.com.au/icms\\_docs/87306\\_Arrow\\_Energy\\_LNG\\_Project\\_Overview.pdf](http://www.arrowenergy.com.au/icms_docs/87306_Arrow_Energy_LNG_Project_Overview.pdf)

<sup>121</sup> 'Arrow Bowen Pipeline', URL: [http://www.arrowenergy.com.au/page/Projects/Arrow\\_Bowen\\_Pipeline](http://www.arrowenergy.com.au/page/Projects/Arrow_Bowen_Pipeline)

<sup>122</sup> Arrow Energy, 'LNG Plant Overview', URL: [http://www.arrowenergy.com.au/icms\\_docs/87306\\_Arrow\\_Energy\\_LNG\\_Project\\_Overview.pdf](http://www.arrowenergy.com.au/icms_docs/87306_Arrow_Energy_LNG_Project_Overview.pdf)

<sup>123</sup> 'Arrow Surat Pipeline', URL: [http://www.arrowenergy.com.au/page/Projects/Surat\\_Gladstone\\_Pipeline](http://www.arrowenergy.com.au/page/Projects/Surat_Gladstone_Pipeline)

<sup>124</sup> 'Arrow LNG Plant', URL: [http://www.arrowenergy.com.au/page/Projects/Arrow\\_LNG\\_Plant\\_Project/](http://www.arrowenergy.com.au/page/Projects/Arrow_LNG_Plant_Project/)

<sup>125</sup> Arrow Energy, 'LNG Plant Overview', URL: [http://www.arrowenergy.com.au/icms\\_docs/87306\\_Arrow\\_Energy\\_LNG\\_Project\\_Overview.pdf](http://www.arrowenergy.com.au/icms_docs/87306_Arrow_Energy_LNG_Project_Overview.pdf)

<sup>126</sup> Shell Australia Media Releases, 'Shell Australia CSG-to-LNG Project declared a significant project', URL: [http://www.shell.com.au/home/content/aus/aboutshell/media\\_centre/news\\_and\\_media\\_releases/archive/2009/lng\\_gl\\_adstone\\_120609.html](http://www.shell.com.au/home/content/aus/aboutshell/media_centre/news_and_media_releases/archive/2009/lng_gl_adstone_120609.html).

<sup>127</sup> Queensland Government, Department of Employment, Economic Development and Innovation, 'Projects', URL: <http://www.dlqp.qld.gov.au/projects/energy/gas/shell-australia-lng.html>.

On 4 April 2012,<sup>128</sup> the Environmental Impact Statement was lodged for the Arrow Bowen Pipeline.<sup>129</sup>

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## 12. Gladstone LNG Project

Arrow was also jointly involved with Liquefied Natural Gas Ltd, to develop an LNG plant at Fisherman's Landing, Gladstone. However the proposed LNG plant at Fisherman's Landing is now being pursued by Gladstone LNG Pty Ltd, which is a subsidiary of Liquefied Natural Gas Ltd.<sup>130</sup>

Gladstone LNG has currently separated the project into two stages, with the first stage consisting of operating a single processing train, which will provide a guaranteed capacity of 1.5 million tonnes of LNG per year.<sup>131</sup> A second train is expected to follow, which will double the operational capacity of the plant to a guaranteed 3.0 million tonnes of LNG per year. The expected life of the project is approximately 25 years.<sup>132</sup>

On 25 February 2011, the Queensland Government granted environmental approval for Gladstone LNG to build a 21 km gas pipeline from the Callide Infrastructure Corridor to the Company's wholly owned LNG project at Fishermans Landing.<sup>133</sup>

As at October 2011, the project is targeting first LNG export by 2015/2016.<sup>134</sup>

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<sup>128</sup> <http://www.abc.net.au/news/2012-04-04/arrow-reveals-gas-pipeline-impact-statement/3931594>

<sup>129</sup> [http://www.arrowenergy.com.au/page/Community/Project\\_Assessment\\_EIS/Bowen\\_Pipeline/](http://www.arrowenergy.com.au/page/Community/Project_Assessment_EIS/Bowen_Pipeline/)

<sup>130</sup> Liquefied Natural Gas Limited, 'Gladstone LNG Project - Fishermans Landing', URL: [http://www.lnglimited.com.au/IRM/content/project\\_australia.html](http://www.lnglimited.com.au/IRM/content/project_australia.html).

<sup>131</sup> Liquefied Natural Gas Limited, 'Gladstone LNG Project - Fishermans Landing', URL: [http://www.lnglimited.com.au/IRM/content/project\\_australia.html](http://www.lnglimited.com.au/IRM/content/project_australia.html).

<sup>132</sup> Liquefied Natural Gas Limited, 'Gladstone LNG Project - Fishermans Landing', URL: [http://www.lnglimited.com.au/IRM/content/project\\_australia.html](http://www.lnglimited.com.au/IRM/content/project_australia.html).

<sup>133</sup> Liquefied Natural Gas Limited ASX/Media Release, 'Gladstone "Fisherman's Landing" LNG Project Gas Pipeline Environmental Approval Granted', URL: <http://www.aspecthuntley.com.au/asxdata/20110225/pdf/01155202.pdf> (25 February 2011)

<sup>134</sup> <http://www.lnglimited.com.au/IRM/Company/ShowPage.aspx/PDFs/1710-41938000/CompanyPresentation>

## Annexure 4 - Estimated cost of regulation

### 13. Estimate of Annual Cost of Full Regulation

The annual estimated cost to the service provider of full regulation is \$336,000 to \$406,000 over a 5 year period. This includes:

- (a) the costs of developing and implementing the Access Arrangement and Access Arrangement Information;
- (b) the annual costs of complying with the requirements of full regulation; and
- (c) other costs incurred over the first five years of full regulation.

#### 13.1 Estimate of the initial cost of developing and implementing the Access Arrangement and Access Arrangement Information

Obligation	Description of Cost	Cost Estimate
Preparation of Access Arrangement and Access Arrangement Information	Legal costs, including in relation to: <ul style="list-style-type: none"> <li>• Addressing preliminary issues with regulator;</li> <li>• Preparation of access arrangement including capacity trading requirements, changes of receipt and delivery points, extension and expansion requirements and queuing requirements;</li> <li>• Preparation of access arrangement information, including detailed financial and operational information;</li> <li>• Preparation of confidentiality guidelines;</li> <li>• Review and preparation of submissions in relation to draft determination; and</li> <li>• Considering and responding to other party's submissions in relation to draft determination.</li> </ul>	\$200,000 to \$250,000
	Expert report regarding the appropriate reference tariff	\$50,000 to \$60,000
	Management costs, including in relation to: <ul style="list-style-type: none"> <li>• Addressing preliminary</li> </ul>	\$30,000 to \$40,000

	<ul style="list-style-type: none"> <li>• issues with regulator; and</li> <li>• Directors' time.</li> </ul>	
<b>TOTAL</b>		\$280,000 to \$330,000
<b>Initial cost amortised over the first five years of coverage</b>		\$56,000 to \$70,000

### 13.2 Estimate of the annual cost to the service provider of full regulation

Obligation	Description	Cost Estimate
Ensuring marketing staff are separate from the Associate's related businesses	The cost of hiring one and a half additional employees to carry out marketing responsibilities.	\$150,000 to \$200,000
Keeping consolidated and separate accounts	Management costs in relation to: <ul style="list-style-type: none"> <li>• Company secretarial; and</li> <li>• Maintenance of corporate records</li> </ul>	\$10,000
Annual reporting to the AER	Legal costs, including in relation to preparing the annual compliance order	\$10,000
	Management costs, including in relation to: <ul style="list-style-type: none"> <li>• Company secretarial; and</li> <li>• Directors' time</li> </ul>	\$10,000
	Management costs, including in relation to: <ul style="list-style-type: none"> <li>• Maintenance of corporate records; and</li> <li>• Directors' time</li> </ul>	\$1,000
<b>TOTAL</b>		\$181,000 to \$231,000

### 13.3 Estimate of other costs incurred over the first five years of full regulation

Obligation	Description	Cost Estimate
Annual tariff adjustment	Management costs in relation to the maintenance of corporate records	\$5,000
Access disputes/application	Management costs	\$20,000
	Legal costs, including in relation to: <ul style="list-style-type: none"> <li>• Addressing preliminary issues with the regulator;</li> </ul>	\$80,000 to \$100,000

	<ul style="list-style-type: none"> <li>• Preparing submissions;</li> <li>• Considering and responding to other party's submissions;</li> </ul> <p>Review and preparation of submissions in relation to the draft determination.</p>	
	Expert costs	\$50,000
<b>TOTAL</b>		\$155,000 to \$175,000
<b>ANNUAL COST</b>		\$31,000 to \$35,000

**Annexure 5 - Frontier Report**

**Annexure 6 - OSD Report**