APA Group

Annexure

Public Submission regarding DBNGP Revised Access Arrangement dated 18 April 2011

20 May 2011

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Introduction and Purpose of Annexure

This Annexure provides additional detail and context regarding the submission made by APA Group ("APA") titled "Public Submission regarding DBNGP Revised Access Arrangement dated 18 April 2011" dated 20 May 2011.

In April 2010, DBNGP (WA) Transmission Pty. Ltd. ("DBP"), the operator of the Dampier to Bunbury Natural Gas Pipeline ("DBNGP") lodged a revision ("the 2010 Revised AA") to the Access Arrangement applying to the DBNGP. This revision was the proposed replacement for the DBNGP's Access Arrangement approved in 2005 ("the 2005 Approved AA") and in effect[1] at the time of the writing of this submission (May 2011).

The 2010 Revised AA incorporates a single full haul Reference Service, the R1 Service, and several Non-Reference Services, including (*inter alia*) the P1 Part Haul Service and the B1 Back Haul Service.

In response to an invitation issued by the Economic Regulation Authority of Western Australia ("the ERA"), APA lodged in July 2010 a submission ("the 2010 APA Submission") which addresses selected aspects of the 2010 Revised AA. In particular, the 2010 APA Submission identifies the need for the DBNGP Access Arrangement to include additional part haul and back haul Reference Services to facilitate the development and use of the Mondarra Gas Storage Facility ("MGSF").

In March 2011 the ERA issued its Draft Decision for the 2010 Revised AA. The Draft Decision requires services providing part haul and back haul transport to be offered as Reference Services. Specifically, Amendment 3 of the Draft Decision[2] states (in full; **emphasis** added):

> The proposed revised access arrangement should be amended to include, as reference services, the T1 Service, **P1 Service** and **B1 Service** as described in the **current access arrangement**.

The "P1 Service" is a part haul service, and the "B1 Service" is a back haul service.

In response to the Draft Decision, DBP submitted a further revision to its Access Arrangement ("the 2011 Revised AA") in April 2011.

The 2011 Revised AA contains a single full haul Reference Service, the R1 Service, and several Non-Reference Services, including (*inter alia*) the P1 Part Haul Service and the B1 Back Haul Service[3].

This submission addresses the 2011 Revised AA. In particular, this submission:

- reiterates the need for DBNGP part haul and back haul services;

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[1] Subsequently revised in 2008 and January 2010.

[2] Paragraph 75, at page 32.

[3] DBP's "Submission 47: Revised Access Arrangement Proposal Date Submitted: 18 April 2011" states (at page 3; under section 2.2) that DBP's "Submission 50" will "substantiate DBP's position" regarding "Pipeline Services". At the time of writing of this Annexure, Submission 50 was not available in the public domain. Consequently, APA is unable to comment on DBP's position regarding part haul and back haul services.

- analyses selected key aspects of the Reference P1 Part Haul Service and Reference B1 Back Haul Service contained in the 2005 Approved AA and prescribed by the Draft Decision, and suggests revisions to these services;

- analyses corresponding key aspects of the Non-Reference P1 Part Haul Service and Non-Reference B1 Back Haul Service and identifies their shortcomings;

- identifies the characteristics of part haul and back haul services which may deliver more efficient outcomes to the MGSF and the prospective users of the services it provides - i.e. participants in the wider gas market.

Recap: Need for Part Haul and Back Haul Services

The 2010 APA Submission identifies and discusses inter-relationships between the MGSF and transmission pipelines carrying gas to and from it, and the need for efficient DBNGP part haul and back haul services. In the interests of convenience, selected parts of that text are reproduced below.

> The MGSF is located in close physical proximity to both the DBNGP and the Parmelia Gas Pipeline ("PGP"). As such, it is ideally situated to provide services to both pipelines. Currently shippers on the DBNGP use a part haul service to deliver gas into the MGSF and then are restricted to the use of the PGP to transport gas into the Perth area.
>
> The DBNGP transports the vast majority of gas consumed in the South West. While it is readily possible to expand the current capacity of the PGP[4], the physical configuration[5] and geographic extent[6] of the two pipelines dictates that the DBNGP will always be the dominant asset in terms of geographic reach and transport volume. Given that MGSF does not currently flow gas back into the DBNGP, the majority of the market in Perth and the South West, who either have or would seek to have haulage services on the DBNGP, do not have access to MGSF services relevant to users of MGSF services.
>
> Recognising this, the APA Group arranged for and paid DBP in April 2010 for DBP to install 2 tees off the DBNGP Stage 5B Expansion upstream of the existing Mondarra meter station. The objective is to have a capability to flow in excess of 100 TJ/d from the MGSF into the DBNGP. The APA Group contends that the DBNGP needs to provide Reference Services to enable shippers to utilise this physical capability.
>
> As such, the DBNGP has particular relevance to the MGSF.

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[4] Parmelia Gas Pipeline compression facilities installed in the 1970s and 1980s were progressively decommissioned in the 1990s as Perth Basin fields depleted. These facilities could, subject to demand, be reinstated.

[5] The DBNGP consists of a 650 millimetre (nominal) 'original' pipeline and a series of 650 millimetre (nominal) loops covering the majority of the pipeline. The Parmelia Gas Pipeline consists of a single 350 millimetre (nominal) pipeline. The Maximum Allowable Operating Pressure of the DBNGP is higher than that of the Parmelia Gas Pipeline. These differences result in the DBNGP having an order of magnitude greater energy transport capacity.

[6] The DBNGP originates at Karratha and terminates near Bunbury. The Parmelia Gas Pipeline originates near Dongara and terminates near Pinjarra. The DBNGP's northern extent is in excess of 1,000 kilometres greater than that of the Parmelia Gas Pipeline, and the DBNGP's southern extent is over 100 kilometres greater.

Utilising the MGSF in combination with the DBNGP requires:

A. efficient (bidirectional) gas transport by the DBNGP from Mondarra to the South West and vice versa to serve end users in the South West and provide access to the MGSF for potential new gas production located south of Mondarra[7]; and

B. efficient (bidirectional) gas transport by the DBNGP from gas production brought ashore in the Pilbara to Mondarra, and (via back haul) from Mondarra to end users north of Mondarra[8].

The terms and conditions of transport services as currently offered as Negotiated Services and proposed under the proposed Access Arrangement by DBP impede the operation of the MGSF. This is because users of MGSF services:

- have no certainty relating to DBNGP part haul services from points north of Mondarra to the MGSF;
- do not have access to DBNGP part haul services from Mondarra south to the Perth area and beyond;
- have no certainty relating to DBNGP back haul services from the southern part of the state north to the MGSF, and DBNGP back haul services from the MGSF to points north (including but not limited to the Goldfields Gas Pipeline ("GGP")).

The above text is subsequently followed by:

APA Group considers that with DBP offering only one Reference Service being a full haul service then DBNGP shippers who currently hold full haul capacity (i.e. capacity from the Pilbara past Mondarra to the South West) face a second, separate, full haul transport cost from Mondarra to the South West if they wish to store their gas in the MGSF - i.e., combine storage services with their existing DBNGP full haul services.

Furthermore, the APA Group also believes that for DBNGP shippers who hold or wish to hold gas in storage then full haul terms and conditions, including tariff, apply to DBNGP transport of gas from Mondarra south to the South West.

The net effect of the above is that DBNGP shippers wishing to use MGSF services in combination with DBNGP full haul services could face twice the transport cost incurred through the use of DBNGP full haul services alone.

APA Group supports asset owners earning a fair return on their assets. However an inflexible, "one size fits all" tariff structure is not an economically efficient outcome for the market and constitutes a strong impediment to the use of MGSF services. It would become a substantial restraint on the further development and expansion of the MGSF. In turn, such restraint results in Western Australia not receiving the full possible benefit from the MGSF.

[7] The Warro and Gingin gas fields are current examples; future exploration may discover new fields.
[8] For example: end users supplied via the Goldfields, Pilbara Energy, and/or Telfer Gas Pipelines.

Analysis of DBNGP Part Haul and Back Haul Services

The text below addresses both Reference and Non-Reference Part Haul and Back Haul Services offered by DBP.

The analysis of the Reference P1 Part Haul Service incorporates consideration of the Non-Reference P1 Part Haul Service.

Hence, DBP's Non-Reference Services are considered first.

DBP's Proposed Non-Reference Part Haul and Back Haul Services

The Non-Reference P1 Part Haul Service

Historically, DBP, the operator of the DBNGP, has offered a part haul service as a Non-Reference Service.

Details of the Non-Reference P1 Part Haul Service are currently not readily available[9].

However, APA holds a copy of a DBNGP "Shipper Contract - Part Haul" published in 2008. In the following text, the service described in this document is referred to as the "Non-Reference P1 Part Haul Service".

In the absence of better information, the discussion which follows assumes that this contract is a satisfactory proxy for the "P1 Service" identified by DBP as being the Non-Reference part haul service on offer. This assumption is considered to be reasonable for current purposes.

Clause 1 (Interpretation) of the Non-Reference P1 Part Haul Service contract document identifies the meaning of "Part Haul" as follows (**emphasis** added):

> ***Part Haul*** means a Gas transportation service on the DBNGP where the **Outlet Point is upstream of Compressor Station 9 on the DBNGP**, regardless of the location of the Outlet Point, but does not include Back Haul.

DBP's description[10] of the DBNGP[11] identifies (*inter alia*):

- the (existing) Mondarra outlet (connecting to the MGSF) at kilometre 1044;
- Compressor Station 9 ("CS9") at kilometre 1257;
- Pinjar, a northern outlet point in the wider Perth area[12], at kilometre 1311;

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[9] The 2011 Revised AA states (page 6) that details of the Non-Reference P1 Part Haul Service are available on the DBP website at www.dbp.net.au/access.aspx. However, at the time of writing this is not the case.

[10] DBP's documentation states distances (effectively) in metres. In the interests of convenience, the text which follows states distances rounded to the nearest kilometre.

[11] "Dampier to Bunbury Natural Gas Pipeline System: Description of the Gas Transmission System as at 22 September 2009" pp. 3 - 10, 20.

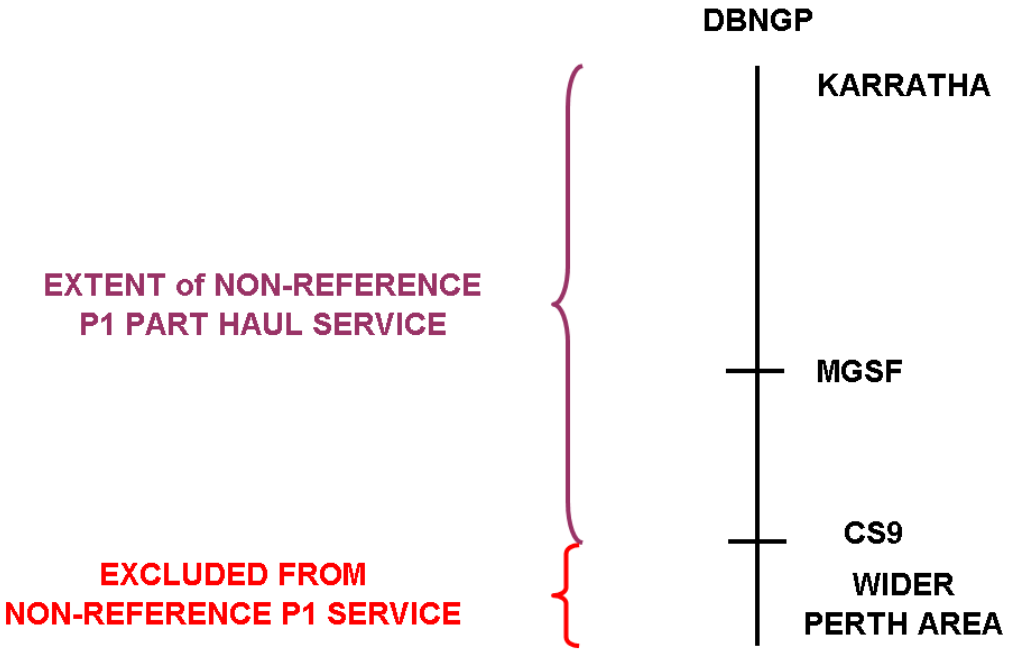
[12] Pinjar may be considered to represent the current northern extremity of major DBNGP outlets in the wider Perth area.

- Kwinana Junction, in the heart of Perth's heavy industrial area and a datum point for part haul tariffs, at kilometre 1399.

It is apparent that the Non-Reference P1 Part Haul Service does not accommodate transport of gas from the MGSF to end users of gas in the wider Perth area, as CS9 is around 50 kilometres north (i.e. upstream) of the extremity of that area.

The following figure illustrates this restriction in schematic form.

DBNGP NON-REFERENCE P1 SERVICE



Hence, users of MGSF services wishing to transport stored gas to the wider Perth area using the DBNGP must, in the absence of appropriate part haul services, use full haul services to transport gas from the MGSF to the wider Perth area.

This outcome clearly disadvantages the operation of the MGSF and the interests of users of services offered by the MGSF, and hence participants in the wider gas market.

The contract term of the Non-Reference P1 Part Haul Service is unreasonably restrictive. Clause 4.2 of its Terms and Conditions states (in full; **emphasis** added):

> (a) Subject to the terms and conditions of this Contract, including clause 16, the Capacity End Date is 08:00 hours on the date occurring **15 years after the Capacity Start Date**.
>
> (b) Subject to the terms and conditions of this Contract, this Contract ends on the last of the Capacity End Dates.

APA submits that 15 years is an unreasonably long and inflexible period, and as such the Non-Reference P1 Part Haul Service does not facilitate the efficient operation of

the MGSF and corresponding does not serve the interests of users of MGSF services and their wider stakeholders.

The Non-Reference B1 Back Haul Service

As with the Non-Reference P1 Part Haul Service, the contract term of the Non-Reference B1 Back Haul Service is unreasonably restrictive. Clause 4.2 of its Terms and Conditions states (in full; **emphasis** added):

> (a) Subject to the terms and conditions of this Contract, including clause 16, the Capacity End Date is 08:00 hours on the date occurring **15 years after the Capacity Start Date**.
>
> (b) Subject to the terms and conditions of this Contract, this Contract ends on the last of the Capacity End Dates.

APA submits that 15 years is an unreasonably long and inflexible period, and as such the Non-Reference B1 Back Haul Service does not facilitate the efficient operation of the MGSF and corresponding does not serve the interests of users of MGSF services and in turn their wider stakeholders.

The ERA's Proposed Part Haul and Back Haul Reference Services

The Draft Decision requires services providing part haul and back haul transport to be offered as DBNGP Reference Services. Specifically, Amendment 3 of the Draft Decision[13] states (in full; **emphasis** added):

> The proposed revised access arrangement should be amended to include, as reference services, the T1 Service, **P1 Service** and **B1 Service** as described in the **current access arrangement**.

The "P1 Service" is a part haul service, and the "B1 Service" is a back haul service.

It is appropriate to consider the nature of these services, and evaluate their suitability regarding MGSF operation.

The Reference P1 Part Haul Service

Nature of the Reference P1 Part Haul Service

In order to identify the nature of the Reference P1 Part Haul Service, it is necessary to first identify a Full Haul service as defined by the terms and conditions[14] applying to the 2005 Approved AA ("the 2005 Terms and Conditions"). This definition states (in full; **emphasis** added):

> **Full Haul** means a Gas transportation service on the DBNGP where the receipt point is **upstream of main line valve 31** on the DBNGP and the delivery point is **downstream of Compressor Station 9** on the DBNGP.

[13] Paragraph 75, at page 32.
[14] Section 1 "Interpretation".

Main Line Valve 31 ("MLV 31") is located in the Pilbara, and Compressor Station 9 ("CS9") is around 50 kilometres north (i.e. upstream) of the northern-most significant end users in the wider Perth area but south (i.e. downstream) of the MGSF.

A Part Haul service is defined[15] in the context of a Full Haul service as follows (**emphasis** added):

> **Part Haul** means a Forward Haul Gas transportation service on the DBNGP which is **not Full Haul**.

In this context, the Reference P1 Part Haul Service is defined[16] as:

> ***P1 Service*** has the meaning given in clause 3.2(a) and clause 6.2A of the Access Arrangement.

Clause 3.2(a) states (in full; **emphasis** added):

> The **P1 Service** is the **Part Haul** Gas transportation service that is a category of T1 Service and is provided under this Contract which gives Shipper a right, subject to the terms and conditions of this Contract, to access capacity of the DBNGP and which (subject, in all cases, to clauses 8.15 and 17.9 of this Contract):
>
> (i) can only be Curtailed in the circumstances specified in clause 17.2;
>
> (ii) is treated the same in the Curtailment Plan as all other shippers with a P1 Service, and in the order of priority with respect to other Types of Capacity Service set out in clause 17.9; and
>
> (iii) is treated the same in the Nominations Plan as all other shippers with a P1 Service, and in the order of priority with respect to other Types of Capacity Service referred to in clause 8.9.

The 2005 Terms and Conditions do not contain a "clause 6.2A". However, clause 6.3 addresses the Reference P1 Part Haul Service, and states (in full; **emphasis** added):

> 6.3 P1 Service
>
> (a) **P1 Service** is a **Part Haul** Service in which Operator (subject to availability of Capacity):
>
> (i) takes receipt, at one or more Receipt Points on a Day, of a quantity of the Shipper's gas not exceeding:
>
> (A) the sum of the Shipper's MDQ;
>
> (B) plus or minus the quantity of gas required to correct any Imbalance on the preceding Day; and
>
> (ii) delivers to the Shipper at one or more Delivery Points on that Day a quantity of gas not exceeding the Shipper's MDQ,

[15] Section 1 "Interpretation".
[16] Ibid.

without interruption or curtailment except as permitted by the Access Contract.

(b) Prospective Shippers seeking access to Spare Capacity of the DBNGP as it is configured at the time of approval of this Access Arrangement must nominate a minimum term of 2 years when lodging an Access Request for P1 Service, unless Operator in its absolute discretion agrees otherwise.

(c) Prospective Shippers seeking access for Developable Capacity must nominate a minimum term of 15 years when lodging an Access Request for P1 Service, unless Operator in its absolute discretion agrees otherwise.

It is therefore apparent that the Reference P1 Part Haul Service must satisfy the definition of "Part Haul".

At a wider level, a Part Haul service is necessarily different to a Full Haul service (i.e. a Part Haul service is "not a Full Haul service").

"Enabling" and "Limiting" Interpretations of the Reference P1 Part Haul Service

The definition of "Part Haul" may be interpreted in the following two ways (among others; see below):

(1) **"Enabling" Interpretation:**

Under a "Enabling" interpretation, "Part Haul" means either:

(a) transport between inlets upstream of MLV 31 and outlets upstream of CS9 (e.g. from the Pilbara to the MGSF);

or

(b) transport between inlets downstream of MLV 31 and outlets downstream of CS9 (e.g. from the MGSF to the wider Perth area).

This "Enabling Interpretation" characterises a service which:

- is complementary to "Full Haul" services;
- allows for a full range of part haul transport, and
- facilitates the efficient operation of the MGSF.

(2) **"Limiting" Interpretation:**

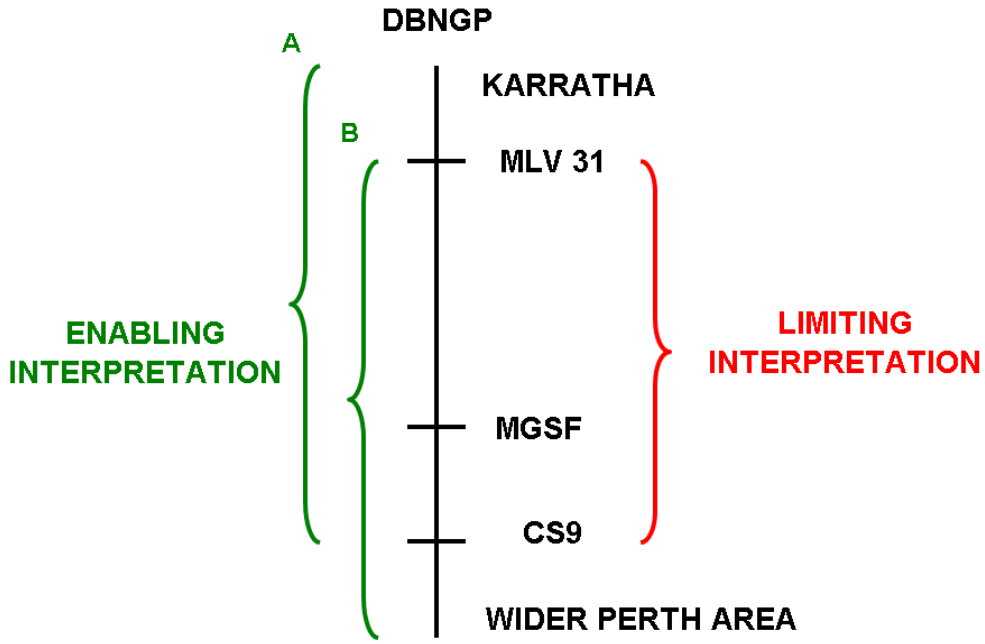
Under a "Limiting" interpretation, "Part Haul" means transport between inlets downstream of MLV 31 and outlets upstream of CS9.

This "Limiting Interpretation" characterises a Part Haul service which is severely constrained, and does not facilitate the efficient operation of the

MGSF. In particular, the Limiting Interpretation does not accommodate gas transport to and from the MGSF.

The Enabling and Limiting Interpretations of the Reference P1 Part Haul Service are portrayed schematically below.

ALTERNATIVE INTERPRETATIONS: DBNGP REFERENCE P1 SERVICE



Note: the Enabling Interpretation provides for part haul gas transport within either of the sections designated A or B. Section A comprises the proposed North West and Mid West Zones, and section B comprises the proposed Mid West and South West Zones (see below).

In order to establish which interpretation is more likely to be intended, it is necessary to consider related provisions applying to the Reference P1 Part Haul Service.

Clause 14.7(b) of the 2005 Terms and Conditions applying to the Reference P1 Part Haul Service[17] states (in full; **emphasis** added):

> Subject to subsection (c), if a relocation of Capacity under this clause results in **Gas being transported to an Outlet Point down stream of Compressor Station 9 on the DBNGP so that a Part Haul service becomes a Full Haul service**, any Capacity so relocated is to:
>
> (i) be treated as if it were on the same terms and conditions as Full Haul Capacity, including as to the calculation of the Capacity Reservation Charges and the Commodity Charges; and
>
> (ii) be treated under this Contract as though it was Full Haul Capacity.

[17] See also discussion of clause 14.7 of the Reference B1 (Back Haul) Service.

It is apparent that the Reference P1 Part Haul Service does not accommodate Outlet Points downstream (i.e. south) of CS9.

Applying this prohibition in the context of the definitions of "Full Haul" and "Part Haul", i.e.:

> Full Haul means a Gas transportation service on the DBNGP where the receipt point is **upstream of main line valve 31** on the DBNGP and the delivery point is **downstream of Compressor Station 9** on the DBNGP.

and

> **Part Haul** means a Forward Haul Gas transportation service on the DBNGP which is **not Full Haul**.

it is evident that the specific exclusion of Outlet Points downstream of CS9 results in the Enabling Interpretation being not applicable.

Further, if the criterion "not Full Haul" excludes Outlet Points downstream of CS9, then it may also be taken to mean that Inlet Points upstream of MLV 31 are also not permitted for Part Haul services.

In other words, interpretation of the above provisions indicates that Part Haul services may not have Inlet Points in the section of the DBNGP designated as relevant to Full Haul services (i.e. upstream of MLV 31), and correspondingly Part Haul services may not have Outlet Points in the DBNGP section relevant to Full Haul services (i.e. downstream of CS9).

Hence, under the Limiting Interpretation, Part Haul is defined as transport between inlets downstream of DBNGP MLV 31 and outlets upstream of DBNGP CS9.

This Limiting Interpretation of the nature of the Reference P1 Part Haul Service is reinforced by clause 14.7(c) of the Reference T1 Full Haul Service, which states (in full; **emphasis** added):

> If a relocation of Capacity under this clause results in Gas being transported to an **Outlet Point up-stream of Compressor Station 9 on the DBNGP so that a Full Haul service becomes a Part Haul service**, any Capacity so relocated is to:
>
> (i) remain on the same terms and conditions as Full Haul Capacity, including as to the calculation of the Capacity Reservation Charges and the Commodity Charges; and
>
> (ii) be treated under this Contract as though it was Full Haul Capacity.

It is therefore apparent that the Limiting Interpretation may be applied to the Reference P1 Part Haul Service.

Consequently, the Reference P1 Part Haul Service does not accommodate:

(a) transport between inlets upstream of MLV 31 and outlets upstream of CS9 - i.e. transport from the Pilbara to Mondarra;

or

(b) transport between inlets downstream of MLV 31 and outlets downstream of CS9 - i.e. transport from Mondarra to the wider Perth area.

The Reference P1 Part Haul Service under the Limiting Interpretation does not facilitate the efficient operation of the MGSF, the interests of users of services offered by the MGSF, and the wider gas market. In particular, it does not facilitate transport of gas from the North West for injection into the MGSF, and / or withdrawal of gas from the MGSF for transport to the South West.

"Hybrid" Interpretation of the Reference P1 Part Haul Service

In the interests of completeness, it may be possible (albeit inconsistently; see below) to interpret the Reference P1 Part Haul Service as being a hybrid between the Enabling and Limiting Interpretations presented above.

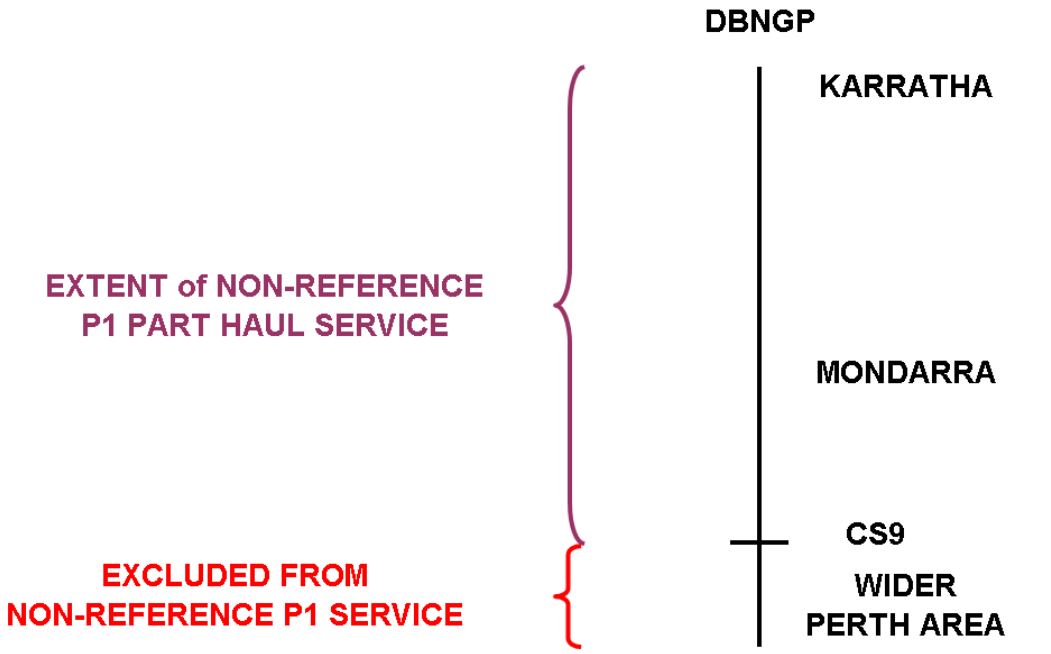
Such a "Hybrid Interpretation" would exclude the Reference P1 Part Haul Service from having Outlet Points downstream of CS9 in accordance with the provisions identified above, but permit Inlet Points upstream of MLV 31 because these are not explicitly excluded.

Such an interpretation corresponds to the definition of the Non-Reference P1 Part Haul Service - i.e.:

> ***Part Haul*** means a Gas transportation service on the DBNGP where the **Outlet Point is upstream of Compressor Station 9 on the DBNGP**, regardless of the location of the Outlet Point, but does not include Back Haul.

The associated schematic representation of this definition is reproduced immediately below for convenience.

DBNGP NON-REFERENCE P1 SERVICE



This Hybrid Interpretation requires inconsistent interpretation of the provision "not Full Haul". On the one hand, it accepts Inlet Points in common with Full Haul services, but excludes corresponding Outlet Points.

The Hybrid Interpretation, in common with the Non-Reference P1 Part Haul Service, does not accommodate transport of gas from the MGSF to end users of gas in the wider Perth area, as CS9 is around 50 kilometres north (i.e. upstream) of the extremity of that area.

Evaluation of Interpretations

The Limiting Interpretation does not facilitate gas transport from the Pilbara to the MGSF, and also does not facilitate transport from the MGSF to the wider Perth area. As such, the MGSF, users of its services, and the wider gas market are doubly disadvantaged, as transport to and from the MGSF is not accommodated.

The Hybrid Interpretation does not facilitate gas transport from the MGSF to the wider Perth area. As such, the MGSF and its stakeholders suffer disadvantage due to the lack of a Reference Service accommodating gas withdrawn from the MGSF and delivered via the DBNGP to end users in the wider Perth area.

The Enabling Interpretation does facilitate the intended use of the MGSF, as it provides for transport of gas from the Pilbara area to Mondarra, and complementary transport from Mondarra to the wider Perth area.

It is in the interests of APA, MGSF customers, and the wider gas market that the Enabling Interpretation applies unambiguously.

In order for this to be achieved, modification of the Reference P1 Part Haul Service is required. In text below, APA offers an alternative characterisation of the Reference P1 Part Haul Service.

The Reference B1 Back Haul Service

Under clause 1 (Interpretation) of the Reference B1 Back Haul Service Terms and Conditions, "Back Haul" is defined as follows (stated in full; **emphasis** added):

> ***Back Haul*** means a Gas transportation service on the DBNGP where the **inlet point is downstream of the outlet point**.

This definition is complementary to the definition[18] of "Forward Haul":

> ***Forward Haul*** means a Gas transportation service on the DBNGP where the inlet point is upstream of the outlet point.

In this context, the Reference B1 Back Haul Service is defined[19] as:

> ***B1 Service*** has the meaning given in clause 3.2(a) and clause 6.2B of the Access Arrangement.

[18] Ibid.
[19] Ibid.

Clause 3.2(a) states (in full; **emphasis** added):

> The **B1 Service** is the **Back Haul** Gas transportation service that is a category of T1 Service and is provided under this Contract which gives Shipper a right, subject to the terms and conditions of this Contract, to access capacity of the DBNGP and which (subject, in all cases, to clauses 8.15 and 17.9 of this Contract):
>
> (i) can only be Curtailed in the circumstances specified in clause 17.2;
>
> (ii) is treated the same in the Curtailment Plan as all other shippers with a B1 Service, and in the order of priority with respect to other Types of Capacity Service set out in clause 17.9; and
>
> (iii) is treated the same in the Nominations Plan as all other shippers with a B1 Service, and in the order of priority with respect to other Types of Capacity Service referred to in clause 8.9.

The (revised) approved Access Arrangement as at 22 January 2010 does not contain a "clause 6.2B". However, clause 6.4 addresses the Reference B1 Back Haul Service, and states (in full; **emphasis** added):

> 6.4 B1 Service
>
> (a) **B1 Service** is a **Back Haul** Service in which Operator (subject to availability of Capacity):
>
> (i) takes receipt, at one or more Receipt Points on a Day, of a quantity of the Shipper's gas not exceeding:
>
> (A) the sum of the Shipper's MDQ;
>
> (B) plus or minus the quantity of gas required to correct any Imbalance on the preceding Day; and
>
> (ii) delivers to the Shipper at one or more Delivery Points on that Day a quantity of gas not exceeding the Shipper's MDQ, without interruption or curtailment except as permitted by the Access Contract.
>
> (b) Prospective Shippers seeking access to Spare Capacity of the DBNGP as it is configured at the time of approval of this Access Arrangement must nominate a minimum term of 2 years when lodging an Access Request for B1 Service, unless Operator in its absolute discretion agrees otherwise.
>
> (c) Prospective Shippers seeking access for Developable Capacity must nominate a minimum term of 15 years when lodging an Access Request for B1 Service, unless Operator in its absolute discretion agrees otherwise.

These provisions suggest that a Back Haul service is any service which accepts gas at an inlet point which is downstream of the associated outlet point(s)[20].

[20] Conventionally, Back Haul involves the notional, and not physical, transport of gas.

This interpretation of the nature of the Reference B1 Back Haul Service is supported by clause 14.7(a) of the Reference T1 Full Haul Service Terms and Conditions which states (in full; **emphasis** added):

> Unless the Parties agree in writing to the contrary, no Charges payable under this Contract are to be reduced as a result of a relocation of Contracted Capacity under this clause 14, even if the relocation causes some or all Gas to be transported over a shorter distance, or the **relocation causes a notional reversal of flow of Gas transported under this Contract for Shipper from Forward Haul to Back Haul**.

However, a Back Haul service may be seen to incorporate the concepts of Full Haul and Part Haul.

Clause 14.7(b) of the Reference B1 Back Haul Service Terms and Conditions states (in full; **emphasis** added):

> Subject to subsection (c), if a relocation of Capacity under this clause results in Gas being transported to an Outlet Point down stream of Compressor Station 9 on the DBNGP so that a **Part Haul service becomes a Full Haul service**, any Capacity so relocated is to:
>
> (i) be treated as if it were on the same terms and conditions as Full Haul Capacity, including as to the calculation of the Capacity Reservation Charges and the Commodity Charges; and
>
> (ii) be treated under this Contract as though it was Full Haul Capacity.

This provision may be interpreted to mean that a Back Haul service with outlet point(s) and hence necessarily inlet point(s) downstream of CS9 is to be treated as Full Haul transport.

This outcome is incongruous, given that CS9 is only around 50 kilometres north (i.e. upstream) of the extremity of the wider Perth area, and far removed from the MGSF, and more particularly, the Pilbara.

It is in the interests of APA, MGSF customers, and the wider gas market that the Reference B1 Back Haul Service has uniform application regardless of the location of Inlet and Outlet Point(s).

In text below, APA offers an alternative characterisation of the Reference B1 Back Haul Service.

APA's Proposal for Part Haul and Back Haul Services

APA fully acknowledges that it is DBP's prerogative to offer Non-Reference Services whose forms and contents are established by DBP. Consequently, this submission makes no further comment regarding such services other than to reiterate that:

- the Non-Reference P1 Part Haul Service does not accommodate transport of gas from the MGSF to the wider Perth area; and
- the contract term for the Non-Reference P1 Part Haul and B1 Back Haul Services is unreasonably long and inflexible.

The preceding analysis indicates that neither the Reference P1 Part Haul nor the Non-Reference P1 Part Haul facilitate the efficient operation of the MGSF. This is not in the interests of users of services provided by the MGSF and their wider stakeholders.

Further, the Reference B1 Back Haul Service contains an apparent anomaly regarding the scope of Full Haul transport.

APA therefore submits that part haul and back haul Reference Services which facilitate the efficient operation of the MGSF should be included in the Access Arrangement applying to the DBNGP. In order to achieve this, key aspects of such services proposed by the ERA in its Draft Decision should be modified.

APA further submits that such modification may be achieved by defining the following conceptual model of DBNGP gas transport, and then incorporating these concepts into the definition and characterisation of the Reference P1 Part Haul and Reference B1 Back Haul Services.

This conceptual model is presented in the following text.

Conceptual Model of DBNGP Gas Transport

The concepts of Full Haul and Part Haul may be seen as being subordinate to the concepts of Forward Haul and Back Haul.

APA submits that the definitions of Forward Haul and Back Haul employed in the 2005 Approved AA be retained. These state:

> ***Forward Haul*** means a Gas transportation service on the DBNGP where the inlet point is upstream of the outlet point.
>
> ***Back Haul*** means a Gas transportation service on the DBNGP where the inlet point is downstream of the outlet point.

APA further submits that these definitions should be extended to explicitly indicate that "Forward Haul" and "Back Haul" apply to the definitions of "Full Haul" and "Part Haul".

APA proposes that for the purposes of defining "Forward Haul", "Back Haul", "Full Haul", and "Part Haul", the DBNGP be divided into three zones:

(1) a North West Zone bounded at its upstream end by the DBNGP's starting point at Karratha and at its downstream end by MLV 31;

(2) a Mid West Zone bounded at its upstream end by MLV 31 and at its downstream end by CS9;

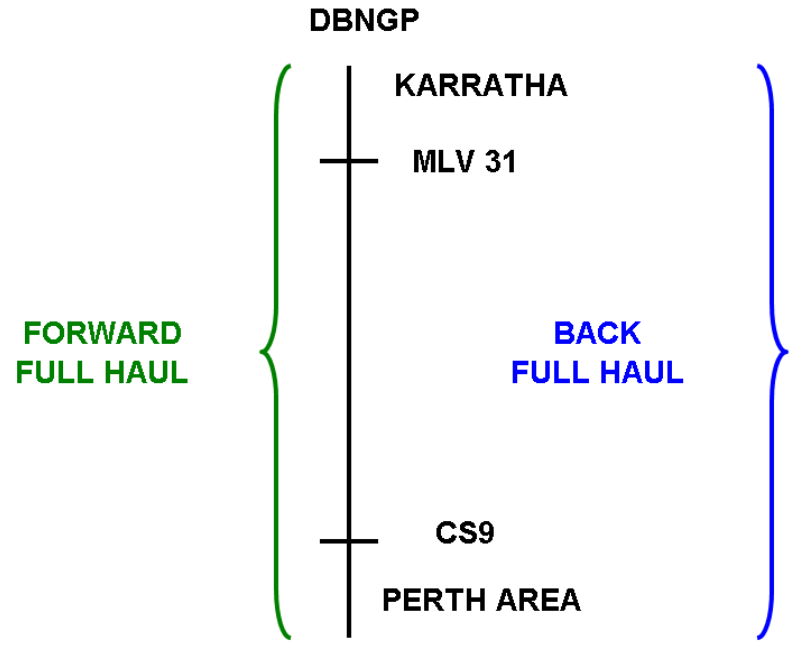
(3) a South West Zone bounded at its upstream end by CS9 and at its downstream end by Clifton Road.

"Full Haul" and "Part Haul" are then explicitly defined in the context of "Forward Haul" and "Back Haul" as follows:

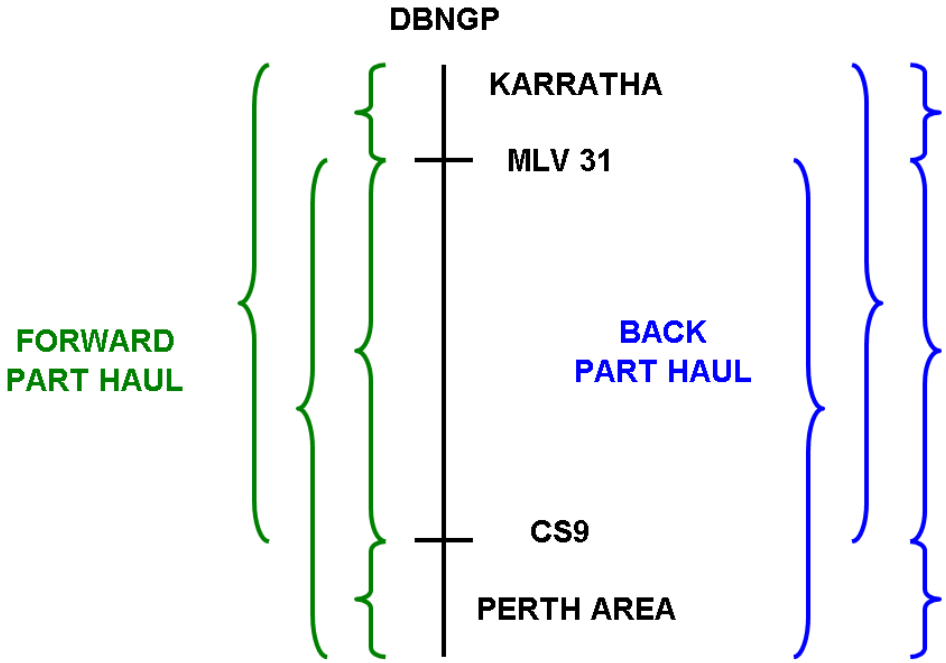
Direction	Distance	Definition
Forward Haul	Full Haul	Inlet Point(s): in North West Zone Outlet Point(s): in South West Zone
Forward Haul	Part Haul	Inlet Point(s): in North West Zone Outlet Point(s): in Mid West Zone or Inlet Point(s): in Mid West Zone Outlet Point(s): in South West Zone or Inlet Point(s): in North West Zone Outlet Point(s): in North West Zone or Inlet Point(s): in Mid West Zone Outlet Point(s): in Mid West Zone or Inlet Point(s): in South West Zone Outlet Point(s): in South West Zone
Back Haul	Full Haul	Inlet Point(s): in South West Zone Outlet Point(s): in North West Zone
Back Haul	Part Haul	Inlet Point(s): in South West Zone Outlet Point(s): in Mid West Zone or Inlet Point(s): in Mid West Zone Outlet Point(s): in North West Zone or Inlet Point(s): in South West Zone Outlet Point(s): in South West Zone or Inlet Point(s): in Mid West Zone Outlet Point(s): in Mid West Zone or Inlet Point(s): in North West Zone Outlet Point(s): in North West Zone

This model is shown schematically in the following figures.

CONCEPTUAL MODEL: FULL HAUL



CONCEPTUAL MODEL: PART HAUL



Implementation of the Reference Part Haul and Back Haul Services

The conceptual model presented above does not address details of implementation. APA requests the opportunity to discuss such details with the ERA.

Clarification: DBNGP Inlet and Outlet Points at Mondarra

Clauses 3.3(a) of the Reference P1 Part Haul Service and Reference B1 Back Haul Service provide for the specification of DBNGP Inlet Points at "item 1 of clause 5 of the Access Request Form". Correspondingly, clauses 3.3(b) of the Reference P1 Part Haul Service and Reference B1 Back Haul Service provide for the specification of DBNGP Outlet Points at "item 2 of clause 5 of the Access Request Form".

Schedules 1 of the Terms and Conditions for the Reference P1 Part Haul Service and the Reference B1 Back Haul Service respectively are designated as containing the Access Request Form. However, in both cases, Schedule 1 is a blank page.

The "Dampier to Bunbury Natural Gas Pipeline Reference Service Access Request Form" obtained from DBP's website has as its clause 4 "Inlet and Outlet Points". Items 1 and 2 provide for the "description and contracted capacities" for the respective Points.

APA requests that the Terms and Conditions for all Reference Services explicitly incorporate an Access Request Form.

APA further requests that in the interests of clarity the Terms and Conditions for all Reference Services explicitly provide for the availability of Inlet Points and Outlet Points at Mondarra.

Conclusions

(1) Under the "Enabling" interpretation discussed above, "Part Haul" means either:

(a) transport between inlets upstream of MLV 31 and outlets upstream of CS9 (e.g. from the Pilbara to the MGSF);

or

(b) transport between inlets downstream of MLV 31 and outlets downstream of CS9 (e.g. from the MGSF to the wider Perth area).

Under the "Limiting" interpretation, "Part Haul" means transport between inlets downstream of MLV 31 and outlets upstream of CS9.

The operation of the MGSF and consequently the interests of users of MGSF services and in turn the wider gas market are disadvantaged by the Reference P1 Part Haul Service as contained in the 2005 approved DBNGP Access Arrangement and prescribed by the Draft Decision for inclusion in the 2011 DBNGP Revised Access Arrangement. This is because the Reference P1 Part Haul Service as reasonably interpreted does not accommodate transport of gas:

- from the Pilbara to the MGSF; and / or
- from the MGSF to the wider Perth area

because the "Limiting Interpretation" of the Reference P1 Part Haul Service, as depicted schematically below, may be seen to apply.

(2) The Non-Reference P1 Part Haul Service as proposed by DBP does not facilitate the efficient operation of the MGSF, because this Service does not provide for transport from the MGSF to the wider Perth area. Further, the contract term for this Service, and also for the Non-Reference B1 Back Haul Service, is unreasonably long and inflexible.

(3) The Terms and Conditions for the Reference B1 Back Haul Service infer that back haul transport within the wider Perth area under that Service could be construed to be Full Haul.

(4) In the interests of clarity, APA requests that the Terms and Conditions for all Reference Services explicitly incorporate an Access Request Form. APA further requests that in the interests of clarity the Terms and Conditions for all Reference Services explicitly provide for the availability of Inlet Points and Outlet Points at Mondarra.

Constraints on the efficient operation of the MGSF are significant in the wider context of the Western Australian natural gas market.

APA submits that Reference part haul and back haul services should be prescribed by the ERA in its Final Decision. Further, in prescribing these services the ERA should incorporate APA's submission on clarifying the drafting of the definition and terms of the part haul and back haul to ensure certainty for prospective users of both these services on DBNGP and of the MGSF.

Recap: Benefits of Mondarra Gas Storage

The 2010 APA Submission identifies that the further development and expansion of the MGSF offers several benefits to Western Australia.

In the interests of convenience, the relevant text is reproduced immediately below.

(1) Security of supply.

One of the generic functions of gas storage identified in this submission is contribution to security of supply.

Over the last fifteen years, there have been a number of unplanned gas supply interruptions that have affected gas production and gas supply in Western Australia. Appendix 4 provides a list of publicly known unplanned gas supply interruptions.

In 2008, Western Australia experienced two significant gas supply disruptions – the Karratha Gas Plant shutdown in January and the Varanus Island incident in June. Both of these events resulted in significant disruption to the State's gas supplies, with the Varanus Island incident reducing supplies by approximately 30 per cent until partial restoration in August 2008.[21]

In response to these gas supply disruptions, and to ensure the State is prepared to manage any future supply emergency, the Government established the Committee in February 2009[22].

The Committee was tasked with reviewing and providing advice to Government in regard to:

- "gas disruption emergency response;
- gas supply security, both present and long-term;
- the entire gas supply chain and the risk, duration and effect of potential supply interruptions;
- alternative approaches to avoid or minimise gas supply disruption or mitigate its effect; and
- lessons learnt from past gas supply disruptions."[23]

All the participants in the Committee are major participants in the WA Domestic Gas Market and the report findings represented the consensus view. One of the key findings of the Committee was:

> "There is the potential for a gas storage facility close to Perth to provide a strategic supply of gas to residential and small business gas tariff customers. Economies of scale suggest that this option could be extended to larger distribution customers who seek a higher reliability of supply. At a minimum, a gas storage facility with additional pipeline interconnect could provide adequate supply to the south west gas

[21] Gas Supply and Emergency Management Committee Report to Government, Office of Energy, September 2009, Foreword
[22] Op. Cit., pages 6 and 41
[23] Op. Cit., page 6

> distribution networks to ensure that the networks do not collapse in the event of a major supply disruption."[24]

The Committee recommended the Government to note that the Committee had identified at least two potential cost effective gas contingency service options (i.e., mitigation measures) with one of these being:

> "additional gas storage capacity capable of withdrawal rates of between 35 TJ/day and 100 TJ/day from a gas reservoir, such as the Mondarra gas reservoir, and additional interconnection of the Parmelia Pipeline with the DBNGP to allow stored gas to flow into these pipelines and WA Gas Network's distribution system;"[25]

(2) More efficient use of gas transportation infrastructure.

A key function of gas storage is load factor management.

Gas physically upstream of the MGSF may be transported at the average rate of end user consumption, with excess gas being stored during periods of lower than average end user gas consumption and withdrawn during consumption peaks. This means that the DBNGP capacity upstream of the MGSF may be used for both transportation (directly to customers in Perth) and for gas storage injection. Peak flow rates for pipeline users can then be managed south of the MGSF instead of across the entire pipeline.

Such increased efficiency should *ceteris paribus* result in lower gas transport costs in the long run.

(3) Facilitation of gas trading and development of the WA gas market.

It is widely recognised that Western Australia would benefit from a deeper and more liquid domestic gas trading market. This was recognised by the Committee as follows:

> "An increased level of gas market information and transparency would facilitate a more competitive market, greater efficiencies in relation to energy consumption, assist gas industry stakeholders in identifying potential trading opportunities, foster risk mitigation or investment opportunities and will also inform Government in relation to policy development."[26]

Combined use of MGSF load factor management and "parking" services by gas shippers and gas end users would, in APA Group's view, facilitate to a considerable extent the ongoing development of the Western Australian gas market, resulting in increased economic efficiency and the competitiveness of Western Australian industry.

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[24] Op. Cit., Executive Summary, page 4

[25] Gas Supply and Emergency Management Committee Report to Government, Office of Energy, September 2009, Recommendations, page 5

[26] Op. Cit., Executive Summary, page 4

(4) Facilitation of separate gas marketing by upstream joint ventures.

At present, joint ventures are involved in the vast majority of Western Australian gas production. Historically, this gas has not been marketed separately by each individual joint venture participant. Rather, joint ventures have marketed gas in common.

Such joint marketing approach has come under review over time because of concentration of market power. In the Gorgon decision on Joint Marketing, the ACCC contended that separate marketing is not viable in WA because of market immaturity. The absence of gas storage services (enabling trading / swaps and the like) is one key criteria by which the WA market is adjudged "immature". Establishment of a gas storage facility would therefore pave the way for market development and ultimately, separate marketing.

(5) Increased gas delivery competition.

The PGP was constructed in order to transport gas from the Mid West to the South West of Western Australia. Over the past four decades, the PGP has transported gas from both earlier[27] and later[28] discoveries in the North Perth Basin.

The PGP's throughput declined from the mid 1980s onward due to the depletion of the Dongara field (which held the majority of North Perth Basin produced reserves) and the lack of reserves replacement. In 2010, the PGP is operating well below historical maximum throughput due to the lack of upstream gas supplies.

Over time, it is possible that with expansion, the PGP constitutes an alternative means of delivering gas stored in the MGSF to end users in the wider Perth area. As such, it may provide direct competition to the DBNGP for transport of gas from Mondarra south.

APA Group submits that increased gas delivery competition will benefit the Western Australian gas market.

[27] Dongara, Mondarra and Yardarino in the wider Dongara area, and Walyering and Gingin south of Dongara; all discovered in the mid 1960s to early 1970s.

[28] Woodada, Beharra Springs, and Xyris

Appendix 1:

Background on APA Group

The APA Group is Australia's largest gas transmission business, delivering more than half the natural gas used across the country. The APA Group's pipeline infrastructure is in place across mainland Australia, playing a critical role in delivering natural gas to residential and industrial users, as well as electricity generators. The APA Group also delivers natural gas to the mining sector, a significant part of Australia's economy, which in 2008 contributed approximately 6% of the nation's GDP and 35% of exports.

Here in Western Australia, the APA Group plays a key role in fuelling this vital part of Australia's wealth creation and employment via the 3,000 km of gas pipelines it owns and/or operates in the state. This includes the MGSF, the GGP, the PGP, the Midwest Pipeline, the Telfer Pipeline and various lateral pipelines. Figure A1-1 below shows Western Australian assets in which the APA Group holds an interest.

Figure A1-1: APA Group's Western Australian Assets & Location of MGSF

In particular, the APA Group owns and operates the MGSF, located near Dongara in the state's Mid West. With the growing demand for gas storage, the APA Group is actively seeking ways to further develop this gas infrastructure asset.

The operation of any gas storage facility is inextricably linked to the operation of gas pipelines. In the case at hand, the MGSF operates in conjunction with the DBNGP and the PGP. Issues arising from the interaction between the MGSF and the DBNGP are the subject of this Appendix's parent submission.

Appendix 2

Background on Gas Storage

Western Australia's only natural gas storage facility is located at Mondarra, located roughly 20 kilometres east south east of the town of Dongara in the state's Mid West, and in close physical proximity to both the DBNGP and the PGP.

The MGSF has operated since 1995 and is currently owned and operated by APT Parmelia Pty Ltd, a wholly owned subsidiary of the APA Group.

Overview of Gas Storage

Gas may be stored:

- in underground reservoirs, which include depleted gas fields, aquifers, salt domes, and man made excavations;
- as liquefied natural gas ("LNG"); and
- in pipeline linepack, which is the gas inventory held by a transmission pipeline or distribution system.

Underground storage facilities are typically capable of storing several to many petajoules of gas, depending on the characteristics of the reservoir. A typical ocean going LNG tanker can carry of the order of three petajoules.

Thus, it is evident that underground storage and (to a lesser extent LNG tankers) can store appreciable quantities of gas. In contrast, pipeline linepack offers storage which is one to two orders of magnitude[29] smaller than a typical depleted reservoir.

Gas transmission pipeline operators may offer limited gas storage services by utilising pipeline linepack. In particular, DBP (the operator of the DBNGP) offers a "Park and Loan Service", which allows users of the service to effectively store small quantities of gas in the DBNGP's linepack, and "borrow" correspondingly small quantities of gas from the DBNGP's linepack.[30] DBP charges $4.50 per gigajoule (in 2008 dollars) for reserving linepack storage space in the DBNGP[31]. The APA Group understand that this cost is approximately three times the DBNGP full haul transport unit cost.

[29] i.e., 10 to 100 times less
[30] See DBNGP website: http://www.dbp.net.au/access.html
[31] Op. Cit., Park and Loan Terms Sheet, section 8

Functions of Gas Storage

Gas storage may provide three independent, but potentially overlapping, functions:

(1) Load factor management. By injection of gas during periods of low gas consumption and withdrawing gas when gas consumption is high, demands on the entire transmission pipeline capacity may be reduced, resulting in more efficient gas transportation and utilisation of infrastructure. In addition, fluctuations in required wellhead production flow rates may be reduced.

(2) Storage reservation. Storage may be used to "park" gas which has been already produced but could be consumed more efficiently at some time in the future.

(3) Security of supply. Gas held in storage may be used during periods of supply interruptions (arising from either or both interruptions to wellhead production and pipeline outages).

The MGSF currently offers services such as:

- Firm injection;
- Storage reservation; and
- Withdrawal,

which accommodate all three of these functions.

Appendix 3

Mondarra Gas Storage Facility

In general terms, the MGSF comprises connections to the DBNGP and the PGP, surface facilities to allow the injection and withdrawal of gas, wells connecting the surface facilities with the geological reservoir, and the reservoir itself.

Gas storage operations at Mondarra initially utilised the existing Mondarra #1 well for injection and withdrawal of stored gas. New piping and metering was installed to facilitate transfer of gas from the Mondarra Interconnection Pipeline to the well for the purposes of injection. The existing surface facilities were used for withdrawal of gas from the reservoir and delivery into the PGP. As such, injection flow rates into the MGSF were a function of the prevailing DBNGP operating pressure and withdrawal flow rates reflected those achieved during the field's production life.

In Mid 2007, the APA Group drilled a second well, Mondarra #5, into the Mondarra reservoir[32] and the well was brought into injection service in late 2008.

In December 2009, the APA Group completed modifications to the compressor and other plant, which allowed gas to be injected at greater pressures into the reservoir and also enabled higher rates of withdrawal.

Mondarra's Place in Western Australia's Gas Chain

The relevance and importance of the MGSF continues to increase as the Western Australian natural gas market grows and matures. Growth in natural gas consumption places ever increasing demands on gas transport infrastructure. Consequently, developments such as the MGSF which allow increased efficiency of gas transportation are becoming progressively more important to both users of gas transmission pipeline services in particular and the people of Western Australia in general.

The MGSF is located in very close geographic proximity to both the DBNGP and the PGP[33]. As such, it is well physically positioned to interact with both pipelines as shown in Figure A3-1 below.

[32] Wells Mondarra #2, #3, and #4 were 'step out' wells drilled soon after Mondarra #1 in order to delineate the Mondarra field. Mondarra #2 encountered a separate gas accumulation which was produced concurrently with the Mondarra field. Mondarra #3 and #4 were drilled beyond the extent of the Mondarra field.

[33] The three assets are separated by several hundred metres.

Figure A3-1: Mondarra Gas Storage Facility: Layout and Pipeline Interconnections and Locations

The PGP provides an alternative delivery system for natural gas consumed in the South West of the state. The pipeline and its laterals traverse the Perth metropolitan area, running through major industrial areas.