

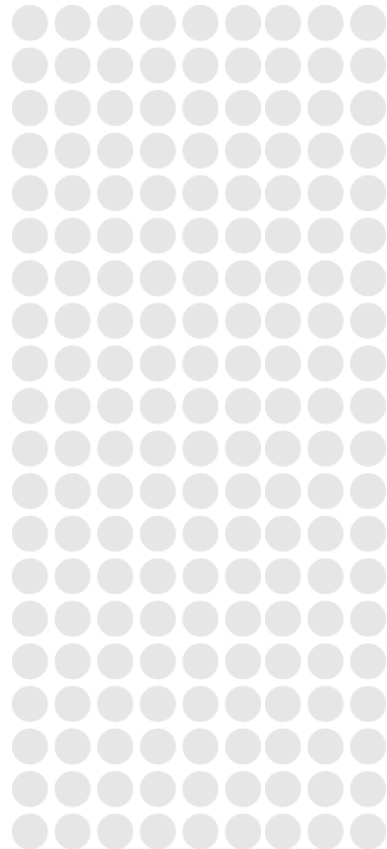


July 2019

amadeus gas pipeline

reference service proposal

APT Pipelines (NT) Pty Limited
ACN 075 733 336



energy. connected.



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1 Introduction

This document sets out the reference service proposal for the Amadeus Gas Pipeline (**AGP**), approval of which is to precede submission of a full access arrangement proposal for the pipeline on 1 July 2021.

The proposal has been prepared by the service provider, APT Pipelines (NT) Pty Ltd (**APTNT**), and submitted to the Australian Energy Regulator (**AER**) for approval, in accordance with rule 47A of the National Gas Rules (**NGR**).

APTNT proposes a firm transportation service as the single reference service on the AGP.

APTNT appreciates the time and effort contributed by key stakeholders to the preparation of this reference service proposal for the AGP.



2 Covered pipeline, service provider and requirement for reference service proposal

2.1 Pipeline and service provider

The Gas Pipelines Access (Northern Territory) Act 1998 implemented the access regulatory regime of the Gas Pipelines Access Law and the National Third Party Access Code for Natural Gas Pipeline Systems (**Code**) in the Northern Territory. The pipeline system specified in pipeline licences PL 1, PL 4 and PL 18 issued under Part III of the Energy Pipelines Act 1981 (NT) was listed, in Schedule A, as a pipeline covered from commencement of the Code. This pipeline system, previously known as the Amadeus Basin to Darwin Pipeline, is now called the Amadeus Gas Pipeline (AGP).

In July 2008, the National Gas (Northern Territory) Act 2008 came into effect, replacing the scheme of access regulation of the Code with the scheme of the National Gas Law (**NGL**) and the NGR.

A transmission pipeline that was covered under the Code (an old scheme covered transmission pipeline) was deemed, by clause 6 of Schedule 3 to the NGL, to be a covered pipeline on commencement of the NGL.

The AGP, which was a covered pipeline under the Code, is now a covered pipeline under the access regime of the NGL and the NGR.

A service provider is a person who owns, controls or operates a covered pipeline (NGL, s. 8(1)). APTNT owns and operates the AGP. APTNT is the service provider for the AGP for the purposes of the access regime of the NGL and the NGR.

Rule 47A of the NGR, which came into effect on 1 April 2019, requires a full regulation pipeline (a covered pipeline that is not a light regulation pipeline) service provider to submit to the AER a reference service proposal prior to the full access arrangement proposal. The reference service proposal must be submitted no later than 12 months prior to the review submission date in the current access arrangement (NGR, rule 47A(3)).

The AGP is a full regulation pipeline, and the review submission date in the current Access Arrangement is 1 July 2020.

APTNT should, then, submit a reference service proposal for the AGP, to the AER, by 1 July 2019. The AER has, however, agreed to APTNT deferring submission of the reference service proposal to 1 August 2019 to allow consultation with stakeholders in the Northern Territory.



2.2 Requirements for reference service proposal

The reference service proposal that APTNT must submit in accordance with rule 47A is to:

- (a) Identify the AGP, and include a reference to a website where a description of the pipeline can be inspected (NGR, rule 47A(1)(a)).
- (b) Set out a list of all the pipeline services that APTNT can reasonably provide on the AGP, and a description of those pipeline services fitting the characteristics in subrule 47A(2) (NGR, rule 47A(1)(b)).
- (c) Identify, from the services in this list, at least one pipeline service that APTNT proposes to specify as a reference service meeting the reference service factors, and provide relevant supporting information (NGR, rule 47A(1)(c)).

The characteristics referred to in subrule 47A(2) are:

- (a) Type of service.
- (b) Priority of service relative to other pipeline services of the same type.
- (c) Receipt and delivery points.

The reference service factors that APTNT should consider when specifying a reference service are set out in NGR, rule 47A(15). They are:

- (a) Actual and forecast demand for the pipeline service, and the number of prospective users of the service.
- (b) The extent to which the service is substitutable with another pipeline service to be specified as a reference service.
- (c) The feasibility of allocating costs to the service.
- (d) The usefulness of specifying the pipeline service as a reference service in supporting access negotiations and dispute resolution for other pipeline services, such that:
 - (i) Reference services serve as a comparison for the assessment of other pipeline services by a user or prospective user when negotiating access to those other services.
 - (ii) A reference tariff serves as a price benchmark for other pipeline services.
 - (iii) Reference service terms and conditions serve as a template for the terms and conditions of other pipeline services.



- (e) The likely regulatory cost for all parties (including the AER, users, prospective users and the service provider) in specifying the pipeline service as a reference service.

If the service provider has engaged with pipeline users and end users in developing a reference service proposal, the proposal should describe any feedback received from those users about which pipeline services should be specified as reference services (NGR, rule 47A(1)(d)).

APTNT addresses each of these requirements in the following sections of this proposal.

3 Amadeus Gas Pipeline

3.1 Pipeline description

The AGP is a transmission pipeline extending approximately 1,600 kilometres from gas fields in the Amadeus Basin, in central Australia, to Darwin. It transports natural gas to Darwin, Alice Springs and regional centres, principally to fuel electricity generation.

Gas is delivered into the AGP at Palm Valley and Mereenie, and from the Bonaparte Gas Pipeline, at Ban Ban Springs (see Figure 1). Gas can be delivered into the AGP from the Wickham Point Pipeline, at Weddell. The Wickham Point Pipeline (not part of the AGP) was constructed to supply gas, in an emergency, from an LNG plant at Wickham Point, to the Weddell Point Power Station.

Construction of the AGP was completed in 1986. Nine locations along the pipeline were developed as sites for future compressor stations, which could provide additional capacity if the demand for pipeline services were to increase. The first and only AGP compressor station was constructed at Warrego in 1995.

Although it was originally designed to transport gas from Amadeus Basin fields to Darwin, the APG is now multi-directional. Gas can flow north to the interconnection with the Northern Gas Pipeline, and to Darwin. Gas can flow south, from Ban Springs, to the interconnection with the Northern Gas Pipeline, and to Alice Springs via the Palm Valley to Alice Springs Pipeline.

The AGP also interconnects with the McArthur River Pipeline at Daly Waters, and with the Tanami Lateral, at Tanami Road. The McArthur River Pipeline and the Tanami Lateral deliver gas to remote mining operations.

Interconnection with the Northern Gas Pipeline, at Warrego, near Tennant Creek, allows gas to flow from the AGP into the Northern Gas Pipeline, and into Queensland and the east coast pipeline network. Commercial operation of the interconnection between the two pipelines commenced in January 2019. About half of the gas now flowing in the AGP is delivered into the Northern Gas Pipeline.

The geographic location and route of the AGP are shown in Figure 1. A pipeline schematic is provided in Figure 2.

Two of the licences for the AGP noted in Schedule A to the Code — PL 4 and PL 18 — are held by APTNT. The third licence, PL 1, is for the Palm Valley to Alice Springs Pipeline. Coverage of that pipeline was revoked in July 2000. The current licence holder is not an APA Group entity.



PL 4 is the licence for the main high pressure pipeline extending from the outlet flange of the Palm Valley delivery station to the delivery flange at the Channel Island Power Station near Darwin.

The pipeline system licensed as PL 4 includes:

- The Mereenie Pipeline, which extends from a delivery flange at the Mereenie production facility to the AGP main line at Tylers Pass (west of Alice Springs).
- The Tennant Creek Pipeline, which extends from an outlet flange on the main line to a delivery flange at the Tennant Creek Power Station.
- The Katherine Pipeline, which extends from an outlet flange on the AGP main line to a delivery flange at the Katherine Power Station.

PL 18 is the licence for a short extension from the Darwin City Gate (part of the pipeline system licensed as PL 4) to a pressure reduction facility located at the corner of Wishart Road and Berrimah Road. Gas from the pressure reduction facility flows into the Darwin distribution network.

The principal sections of the AGP are listed in Table 1.

Table 1 — Amadeus Gas Pipeline: principal sections

Section	Length (km)	Diameter (mm)
Palm Valley to Mataranka	1,110	356
Mataranka to Darwin City Gate	391	324
Darwin City Gate to Channel Island	12	324 219 (Channel Island Bridge)
Mereenie Pipeline	116	273
Tennant Creek Pipeline	24	114
Katherine Pipeline	5	114

Neither the Bonaparte Gas Pipeline, nor any of the other lateral pipelines extending from the AGP (see Table 2), are a part of the pipeline system licensed as PL 4. Neither the Bonaparte Gas Pipeline, nor any of the laterals, are a part of the AGP.



Table 2 — Lateral pipelines extending from, but not part of, the Amadeus Gas Pipeline

Lateral pipeline	
Tanami Lateral	
Elliott Pipeline	
McArthur River Pipeline	
Mataranka Lateral	Low pressure plastic pipeline
Mt Todd Pipeline	Operation suspended

3.2 Website

Additional information on the AGP is available at <https://www.apa.com.au/our-services/gas-transmission/central-region-pipelines/amadeus-gas-pipeline/>.

Figure 1 — Amadeus Gas Pipeline: geographic location and route

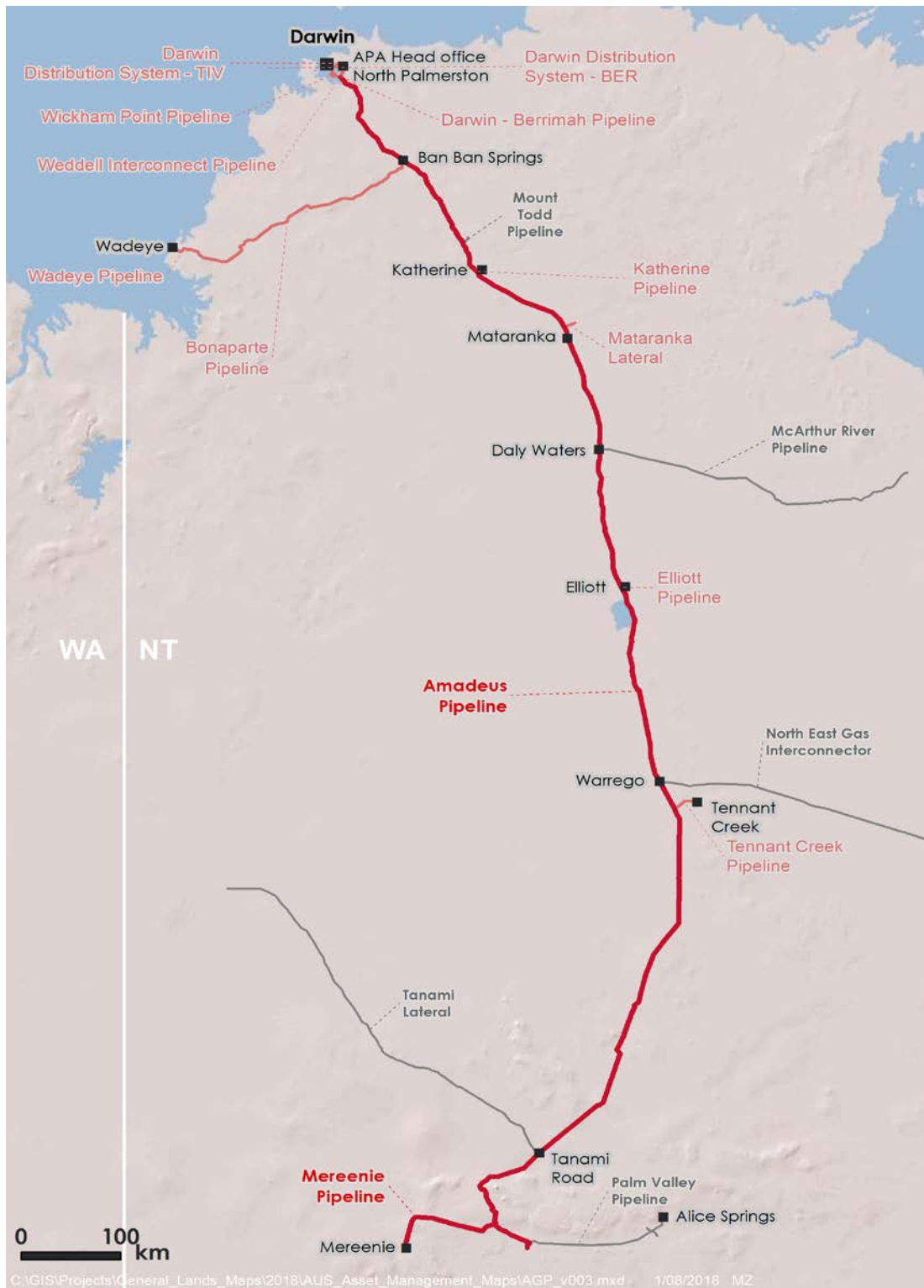
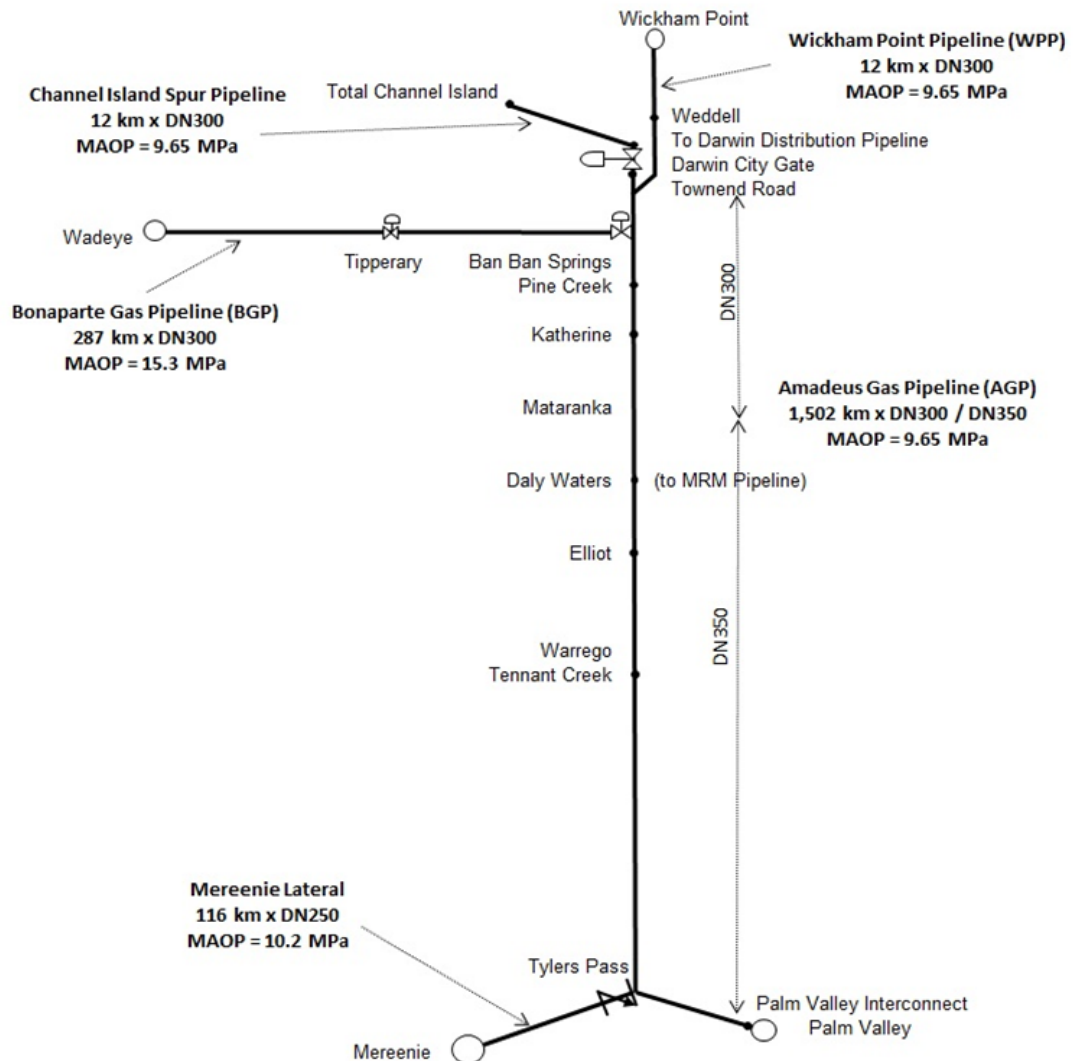




Figure 2 — Amadeus Gas Pipeline: pipeline schematic





4 Services that can reasonably be provided using the Amadeus Gas Pipeline

The services APTNT can reasonably provide on the AGP are listed in Table 3. They are described in greater detail in the paragraphs that follow. The list in Table 3 does not include the exchange capacity trading service, which APTNT can, and must, provide in accordance with specific regulatory requirements of the NGR. Neither APTNT, nor the AER, has discretion regarding such services in the context of deciding reference services for the AGP.

Table 3 — Services that can reasonably be provided using the Amadeus Gas Pipeline

Service	Description
Firm transportation service	<ul style="list-style-type: none"> - Transportation from a receipt point to a delivery point. - Highest priority service. - Available between any receipt point and any delivery point.
Interruptible transportation service	<ul style="list-style-type: none"> - Transportation from a receipt point to a delivery point. - Lower priority service (may not be available on a day). - Available between any receipt point and any delivery point.
Firm parking service	<ul style="list-style-type: none"> - Pipeline storage of gas. - Highest priority right to store.
Firm loan service	<ul style="list-style-type: none"> - Borrowing of gas from pipeline line pack. - Highest priority right to borrow.
Interruptible parking service	<ul style="list-style-type: none"> - Pipeline storage of gas. - Lower priority service (may not be available on a day).
Interruptible loan service	<ul style="list-style-type: none"> - Borrowing of gas from pipeline line pack. - Lower priority service (may not be available on a day).
In-pipe trade service	<ul style="list-style-type: none"> - Facilitation of trade of gas between pipeline users.
Operational capacity transfer service	<ul style="list-style-type: none"> - Facilitation of transfer of firm transportation capacity between pipeline users.
Interconnection service	<ul style="list-style-type: none"> - Provision, or facilitation, of interconnection to another pipeline.



Although APNT can provide the AGP transportation services listed in Table 3, all available capacity for firm transportation service is currently contracted. Access to firm transportation service may be possible only after a gas transportation agreement with an existing user terminates, or after APTNT has expanded the capacity of the pipeline.

Current constraints on APTNT's provision of services on the AGP are discussed further in section 4.6 below. In the following paragraphs, APTNT describes each of the services listed in Table 3.

4.1 Firm transportation service

Pipeline service usage is driven by the business needs of pipeline users. Those business needs are, in turn, driven by the end users of gas transported by pipeline users. Users transporting gas to facilities or end users requiring highly reliable gas supplies typically require a correspondingly reliable gas transportation service. To meet this requirement, most gas transmission pipeline service providers offer firm transportation service.

Firm transportation service is the most reliable service the provider can make available on its pipeline. Should the interruption or curtailment of pipeline services be necessary, firm transportation service has priority ahead of other types of transportation service and other services using pipeline capacity (such as interruptible parking service). Firm transportation service is not interrupted or curtailed until all of these other services have been interrupted or curtailed to the extent necessary to allow provision of the firm transportation service to continue.

For AGP firm transportation service APTNT:

- Receives, from a user, at a receipt point, on a day, a quantity of gas not exceeding the maximum daily quantity (MDQ) specified in the user's gas transportation agreement.
- Delivers to the user, at a delivery point specified in the user's gas transportation agreement, on the same day, a quantity of gas not exceeding the user's MDQ, without interruption or curtailment, except in the specific circumstances set out in the user's gas transportation agreement.

Firm transportation service has priority ahead of other types of transportation service.

Under a gas transportation agreement for firm transportation service, the user nominates, prior to the start of a day, the quantity of gas to be transported from a receipt point to a delivery point, on the day, and APTNT is obliged to accept a



nomination that does not exceed the MDQ specified in the user's transportation agreement.

The user's entitlement to its MDQ on a day may be restricted by specification, in the user's gas transportation agreement, of the maximum quantity of gas APTNT is obliged to receive from the user at a receipt point in any hour, or by the maximum quantity of gas APTNT is obliged to deliver at a delivery point in any hour. These maximum hourly quantities are determined by the physical operating characteristics of the AGP.

Following receipt of the user's nomination, APTNT must schedule receipt and delivery of the user's gas. If APTNT does not expect to have sufficient pipeline capacity available, on the day, to transport all of the quantities of gas nominated by all firm transportation service users, APTNT must limit the quantities scheduled for receipt and for delivery in accordance with the scheduling limitations set out in the user's transportation agreement.

If, on a day, there is insufficient pipeline capacity available to transport all of the quantities of gas that have been scheduled for firm transportation service, APTNT may interrupt or curtail its receipt and delivery of gas in accordance with the interruption and curtailment priorities set out in the user's transportation agreement.

The circumstances when firm transportation service may be interrupted or curtailed without APTNT incurring any liability to the user include:

- Interruption or curtailment necessary for safe operation of the pipeline.
- Interruption or curtailment resulting from planned or unplanned maintenance carried out by the service provider in accordance with the relevant provisions in the user's gas transportation agreement.
- Interruption or curtailment resulting from a force majeure event.

Firm transportation service is a service between any AGP receipt point, and any delivery point on the pipeline.

Firm transportation service may be provided long term or short term. When executing a gas transportation agreement for long term firm transportation service, a prospective user commits to taking the service for a period longer than 12 months. APTNT may decline a request for firm transportation service over a shorter period if granting that request would materially reduce the ability of another prospective user to obtain long term firm transportation service.



4.2 Interruptible transportation service

Pipeline users or end users with facilities that can tolerate interruptions to gas supplies (because, for example, they can curtail their operations or quickly switch to alternative fuels) may seek services that are less reliable than firm transportation service. Most gas transmission pipeline service providers then offer, in addition to firm transportation service, interruptible transportation service, which is only available when circumstances permit.

At any particular time, the service provider may not be able to offer the firm transportation service, but its pipeline may be capable of providing service at lower levels of reliability. This service may not be available at the same level of reliability as the firm transportation service because:

- Certain plant and equipment items comprising the pipeline (for example, gas compressors) must be periodically withdrawn from service for routine maintenance.
- Pipeline plant and equipment has mechanical, electrical and electronic components that may fail after long periods of intermittent operation.
- Some pipeline users, typically users of firm transportation service, may have higher priority access to pipeline services.

In these circumstances, when firm transportation service cannot be offered because the pipeline capacity used to provide that service has been fully contracted, the service provider may offer an interruptible transportation service.

An interruptible transportation service is a pipeline service whereby the service provider accepts, from a user, a nomination for transportation of a quantity of gas on a day, to a delivery point specified in the user's gas transportation agreement, and undertakes to deliver to the user, at that delivery point, on that day, the user's nomination subject to capacity being available, and subject to any interruption or curtailment of capacity on the day.

Interruptible transportation service has a lower priority than some other types of service. In particular, interruptible transportation service has lower priority than firm transportation service.

APTNT can offer interruptible transportation service using the AGP. That service is a service between any AGP receipt point and any delivery point on the pipeline.



4.3 Firm and interruptible parking services

The primary business of a gas pipeline service provider is the provision, to users of its pipeline, of the service of transporting gas from one or more receipt points on the pipeline to one or more delivery points.

However, in addition to being a vehicle for gas transportation, a pipeline is also a vessel that can be used for the storage of gas additional to the volumes of gas being transported. This storage of gas in a pipeline is called parking, and some pipelines can offer parking service, which may be either firm or interruptible.

Parking service is not a transportation service. It is a service offered to a user who has an agreement with the service provider for the transportation of gas.

Parking service allows a user or end user flexibility in the management of disruptions to gas supplies, and in the management of plant shutdowns for planned and unplanned maintenance, through the storage of gas in a pipeline, and the subsequent withdrawal of that gas for use.

A firm parking service is a service whereby:

- The service provider stores in its pipeline, gas received from a user, up to a quantity of gas not exceeding the parking allowance specified in the user's gas transportation agreement, without interruption or curtailment, except in the specific and limited circumstances set out in the user's gas transportation agreement.
- The user can withdraw, on another day, gas it has stored in the pipeline by nominating, and having the service provider schedule, transportation to a delivery point, in accordance with the terms of a transportation service specified in the user's gas transportation agreement.

Firm parking service has priority ahead of other types of parking service.

Parking service may not always be available. By storing gas in its pipeline, the service provider restricts the capacity of the pipeline for the provision of firm transportation service. Parking service may not be available if all of the capacity of the pipeline has been made available to users for the provision of firm transportation service.

Interruptible parking service is a form of storage service with lower reliability. It is a service whereby the service provider stores, in its pipeline, gas received from a user, on a day, up to a quantity of gas not exceeding the interruptible parking allowance specified in the user's gas transportation agreement. If the provision of interruptible parking service on a day is expected the service provider's ability



to provide transportation service on the day, the service provider may ask the user of the parking service to reduce the volume of gas stored in the pipeline.

Interruptible parking service has lower priority than some other types of service. In particular, the service has lower priority than firm parking service.

4.4 Firm and interruptible loan service

Loan service is a service offered by a pipeline service provider whereby a user can borrow gas from the service provider's line pack (the gas the service provider has stored in the pipeline to allow the pipeline to operate as a transportation vehicle).

Loan services, like parking services, are not transportation services. They are services offered to users who have agreements for the transportation of gas, and who require flexibility in the management of disruptions to gas supplies, or in the management of plant shutdowns.

A firm loan service is a service whereby the service provider delivers to a user, at a delivery point, on a day, a quantity of gas not exceeding the loan allowance specified in the user's gas transportation agreement, without interruption or curtailment, except in the circumstances set out in the transportation agreement.

Firm loan service has priority ahead of other types of loan service.

Firm loan service is typically available at one or more delivery points on a pipeline.

Loan service may not always be available. If a part of the pipeline line pack is used to provide loan service, the service provider's ability to provide transportation services — in particular, its ability to provide firm transportation service — may be restricted.

In these circumstances, the service provider may offer a lower priority interruptible loan service. Interruptible loan service is a service whereby the service provider delivers gas to a user, on a day, up to a quantity of gas not exceeding the interruptible loan allowance specified in the user's gas transportation agreement. If the provision of interruptible loan service on a day is expected to impair the service provider's ability to provide transportation service on the day, the service provider may ask the user of the loan service to replenish the pipeline line pack.

Pipeline capacity and line pack used to provide a user with interruptible loan service may be required to meet the prior claim of another user of that service, or to meet the prior entitlements of the users of other types of service.



4.5 In-pipe trade, operational capacity transfer and interconnection services

In-pipe trade and operational capacity transfer services provide flexibility by facilitating the trading of gas, and of pipeline capacity, between pipeline users. They are not transportation services, and are only available to users that have agreements with the service provider for provision of transportation services.

In the case of the AGP, in-pipe trade service is a service whereby APTNT recognises, in a user's gas transportation agreement, that user's delivery of gas, on a day, to a notional point (in-pipe delivery point) in the AGP, and recognises, in a second user's gas transportation agreement, receipt of that gas at a notional point (in-pipe receipt point) in the AGP, thereby facilitating the trade of gas between AGP users.

Operational capacity transfer service facilitates the transfer of entitlements to capacity for firm transportation service between users of the AGP. It is a service whereby APTNT facilitates, through provisions in a user's gas transportation agreement, the user's purchase of all or part of another user's entitlement to firm transportation service (MDQ) on a day, or the user's sale of all or part of its entitlement to firm transportation service (MDQ), on a day, to another user.

Operational capacity transfer service is available to users bilaterally trading capacity with each other, or by trading capacity through the exchange capacity trading arrangements administered by the Australian Energy Market Operator (AEMO).

Interconnection service is an engineering and construction service, and not a pipeline transportation service. It is the service provider's provision or facilitation of interconnection to another pipeline, and usually involves the construction of a new receipt point or a new delivery point. The scope and scale of an interconnection service depend on the user's specific requirements for interconnection.

4.6 Current constraints on service provision

Currently, the capacity of the AGP available for the provision of firm transportation service is fully contracted to users. APTNT may be able to offer a prospective user interruptible transportation service.

Capacity expansion for firm transportation service provision is technically feasible, however, at present, APTNT has no specific plans to expand the capacity of the pipeline during the access arrangement period for which the reference service proposal is being prepared (expected to be 5 years from 1 July 2021).



5 Engagement with pipeline users and end users

APTNT engaged with AGP users and potential users, and with end-users of the pipeline, during the preparation of this reference service proposal.

Engagement focused on two groups of stakeholders:

- Existing and prospective pipeline users, and the operators of interconnected pipelines.
- A wider group, principally in the Northern Territory, who might represent end users, or who might be interested in energy supply and use, and in gas transmission as a key element of energy supply chains (but who were not pipeline users or end users themselves).

APTNT explained to both groups the immediate purpose of engagement — development of the reference service proposal for the AGP — and also explained that reference service specification was the start of a more extensive regulatory review. Stakeholders were advised that, once reference services had been specified and approved by the AER, APTNT would prepare, and submit to the regulator for approval, an access arrangement revision proposal for the AGP. This proposal would set out, in addition to the approved reference services, information on the facilities needed to provide those services, contract terms and conditions for the services, and prices — known as reference tariffs — for the reference services. The access arrangement revision proposal was to be submitted to the AER on 1 July 2020, and regulatory approval of the revision proposal was expected to be completed by 1 July 2021. The reference service proposal was the first in a series of opportunities for stakeholders to engage in this more extensive regulatory review, both with the service provider (APTNT) and with the AER.

APTNT has seen the identification of stakeholders for the purpose of developing the reference service proposal as an opportunity to identify a potential stakeholder group to be consulted in later stages of the revision of the AGP Access Arrangement.

5.1 Users, prospective users and interconnected pipeline operators

Existing and prospective users, and the operators of interconnected pipelines, were contacted and provided with information on the AGP, on the reference service proposal process, and on the services that can reasonably be provided using the pipeline. APTNT offered to discuss, individually, with each user, prospective user and pipeline operator possible reference services for the AGP.



At the time of preparing this reference service proposal, APTNT had three requests for access to services to be provided on the AGP from prospective users. Each of these requests was for a firm transportation service, and two of the three also sought an interruptible transportation service in addition to firm transportation service.

The total firm transportation service sought would use around 80 TJ/d of pipeline capacity. The capacity was required for between three and five years.

The total interruptible transportation service sought would use around 20 TJ/d of pipeline capacity.

Three of the existing and prospective users agreed to meet with APTNT to discuss reference services. A fourth, prospective, user advised that its downstream project was not sufficiently well advanced to warrant discussions on the reference service proposal.

One of the prospective users APTNT met with was completing front end engineering and design for a mining and minerals processing operation, and understood its future energy requirements. That party, Arafura Resources Limited, had no concern about being identified by APTNT in its reference service proposal. Arafura Resources advised that, as part of optimised energy supply facilities for its project, it would be seeking either directly (itself), or indirectly through a provider of power generation services, access to firm transportation service on the AGP.

In response to APTNT's offer to discuss possible reference services, one of the operators of the pipelines which interconnects with the AGP advised that it did not have a strong interest in reference services on interconnected pipelines. Reference services were a matter for the users of those pipelines.

5.2 Potentially interested stakeholders

More broadly, APTNT has contacted or met with other parties potentially interested in the Northern Territory energy supply chain, including:

- Four end users of gas supplied from the Darwin distribution network (all of the users of that network as the network in Darwin does not supply domestic residential end users)
- 19 Territory-based organisations potentially representing end users.
- Six government agencies, including five Northern Territory Government agencies.

See Table 4 for the full list of potentially interested stakeholders.

Table 4: Potentially interested stakeholders contacted by APTNT

Organization	Classification
End user 1	End user
End user 2	End user
End user 3	End user
End user 4	End user
Anglicare NT	End user representative
Central Land Council	End user representative
Council of the Ageing (COTA)	End user representative
Darwin Community Legal Service	End user representative
Energy Consumers Australia	End user representative
Mission Australia	End user representative
Multicultural Council of Australia	End user representative
Northern Land Council	End user representative
NT Cattleman's Association	End user representative
NT Chamber of Commerce	End user representative
NT Farmers Association	End user representative
Red Cross (Northern Territory)	End user representative
St Vincent de Paul (Northern Territory)	End user representative
Housing Industry Association	Energy sector stakeholder
Industry Skills Advisory Council (Northern Territory)	Energy sector stakeholder
Master Builders Association	Energy sector stakeholder
NT Environment Centre	Energy sector stakeholder
NT Minerals Council	Energy sector stakeholder
Urban Development Institute	Energy sector stakeholder
Australian Energy Market Commission	Government agency
Department of Chief Minister (Northern Territory)	Government agency
Department of Trade, Business and Innovation (Infrastructure and Projects Unit) (Northern Territory)	Government agency
Department of Trade, Business and Innovation (Microeconomic Unit) (Northern Territory)	Government agency
Department of Trade, Business and Innovation (Strategic Oil and Gas Industry Development Unit) (Northern Territory)	Government agency
Land Development Corporation (Northern Territory)	Government agency



The end users supplied from the Darwin gas distribution network were all businesses known to APTNT through its operations in the Northern Territory, and were contacted directly by APTNT.

To extend its engagement more widely, to stakeholders in the Northern Territory who might represent end users, or who might be interested in energy supply and use, and in gas transmission as a key element of energy supply chains, APTNT engaged GHD. GHD provides professional services, particularly engineering and technical services, to the infrastructure sector. Within its project management group, GHD has a team of qualified and internationally accredited engagement, communication and facilitation professionals, and that team has representatives based in Darwin. Advisers from GHD's Darwin office assisted APTNT identify and contact:

- Territory-based organisations potentially representing end users of gas.
- Government agencies, in particular, those in the Northern Territory, concerned with energy supply.

Once identified, each of these stakeholders was telephoned and provided with an overview of the process, and invited to attend a workshop to be held in Darwin. An information pack, providing information on the AGP, on the reference service proposal process, and on the services that can reasonably be provided using the pipeline, was emailed to invitees before the workshop.

APTNT held the stakeholder workshop, in Darwin, on 16 July 2019. In total, 24 organisations across various industry and government sectors were invited to participate in the workshop and six people attended. In addition to the workshop, APTNT offered to meet face-to-face with interested parties for more detailed discussions about reference services.

Two end user representative groups, the Council of the Ageing and the Northern Land Council, and three Northern Territory Government agencies, participated in the workshop.

APTNT met separately with a fourth Northern Territory Government agency.

The outcomes from the workshop, and the face-to-face meeting, provided valuable insights into the interests of AGP stakeholders, and will help shape APTNT's future stakeholder engagement.

APTNT acknowledges concerns that the time for consultation was short, and that a longer notice period may have allowed a larger number of stakeholders to attend the workshop. Now better informed on stakeholders and their interests,



APTNT will endeavour to engage with them much earlier, especially in the lead up to submission of the full AGP Access Arrangement revision proposal.

Attachment 1, *Northern Territory Reference Services Stakeholder Engagement Summary (July 2019)*, summarises discussions in the workshop.

During the workshop, participants focused largely on understanding the role of the AGP in Northern Territory energy supply chains; the regulatory process being initiated through development of the reference service proposal; and the likely future of the energy sector, including future development of the AGP.

Participants were not concerned with the specification of pipeline reference services.

The Council of the Ageing was particularly interested in the pricing of pipeline services, and the way that tariffs might feed through to the prices paid by domestic residential electricity consumers in the Northern Territory.

The Government agencies at the workshop were concerned with future development of the AGP in the context of a changing Northern Territory energy sector. Their queries included:

- What gas specification was in place for the AGP, and could the pipeline accommodate different gas specifications, which might come from the Beetaloo Basin?
- Could the AGP be used to transport hydrocarbon liquids or hydrogen?
- Was APTNT planning to expand the capacity of the pipeline?

That APTNT had no specific plan for expanding the capacity of the AGP during the access arrangement period seemed to be, for some workshop participants, a matter of concern. This concern was allayed by APTNT's advice that it was in the business of providing pipeline transportation services, and was actively seeking opportunities to develop the AGP. Expansion would, however, depend on commitments from potential users to underpin such an investment in long-lived assets, which would be required. APTNT did not have those commitments at the present time.



6 Reference service proposal

An assessment of each of the services that can reasonably be provided on the AGP, against the reference service factors of NGR rule 47A(15), is made in the following subsections of this section of the proposal.

The section concludes with APTNT's reference service proposal.

6.1 Interconnection service

Interconnection service is usually the construction of a new receipt point, or the construction of a new delivery point, on a pipeline. Interconnection is not a transportation service.

An interconnection service is a bespoke service not frequently required by prospective users. The scope of interconnection service varies widely depending on the location of the receipt point or delivery point, and on the prospective user's specific requirements for gas flow, composition, temperature and pressure. These requirements, and the ways in which they can be met, are issues for extended discussions between the prospective user's technical and engineering advisors and APTNT technical and engineering staff. Facilities to meet the prospective user's needs can be designed and costed only after those discussions have concluded.

APTNT has had two requests for interconnection service since commencement of the last revision of the AGP Access Arrangement (1 July 2016). These were for interconnection to the AGP of:

- The Tanami Lateral.
- The Northern Gas Pipeline.

APTNT is currently unaware of any prospective user of the service during the next access arrangement period.

Interconnection service is not substitutable with any other pipeline service that can reasonably be provided on the AGP.

The bespoke nature of the service implies that the prior allocation of costs to an interconnection service is infeasible.

Any prior specification of an interconnection service as a reference service, made in advance of a specific need, is unlikely to serve as a benchmark for a particular interconnection service, and is unlikely to serve as a benchmark for any other service that can reasonably be provided on the AGP.



An interconnection service's terms and conditions are, essentially, the terms and conditions of an engineering and construction agreement. They cannot serve as benchmarks for the terms and conditions for any other services potentially available on the AGP to a prospective user.

Were it meaningful to specify a standard interconnection service (APTNT believes it is not), and then to estimate costs for that service for the purpose of determining a tariff, the tariff could not serve as a benchmark for the prices of other pipeline services that can reasonably be provided using the AGP. Interconnection service is not a substitute for any of those other services.

Specification of an interconnection service as a reference service would not, in these circumstances, be useful in supporting access negotiations and dispute resolution for other pipeline services.

The regulatory costs of specifying an interconnection service as a reference service are likely to be high. In part, this would be a consequence of the inherent difficulty of prior specification of a standard interconnection service, which would then have to be costed by the service provider. The service provider costs of specifying and costing the standard service are likely to be small. However, costs incurred by the service provider, by prospective users, and possibly by the AER, in resolving disputes arising where the attempted standardisation of a bespoke service has proven inappropriate are likely to be high.

APTNT stands ready to negotiate interconnection services with prospective users but does not propose offering interconnection service as a reference service.

6.2 In-pipe trade service

In-pipe trade service is not a transportation service, and is not sought in its own right. It is a service providing users with flexibility in the way they can use gas transportation services under their transportation agreements.

In-pipe trade service is not a service routinely sought by pipeline users. Only of the seven current agreements for gas transportation on the AGP include the service.

In-pipe trade service is not a substitute for any of the other pipeline services that can reasonably be provided on the AGP.

The costs of providing in-pipe trade service are the costs of developing the systems to manage service provision, and the on-going costs of gas accounting and billing. These costs are incurred by the wider APA Group, rather than specifically by APTNT, and are allocated to provision of the service across all APA owned and controlled pipelines, including the AGP. A price for in-pipe trade service, based



on this allocation of costs, is [posted on the APA Group website](#). Further allocation of the costs to the AGP is possible, but minor.

Determination of an AGP-specific price for in-pipe trade service, in the absence of forecast demand for the service, is infeasible.

In-pipe trade service is not substitutable with any other pipeline service that can reasonably be provided using the AGP. Consequently, terms and conditions for the service cannot serve as a benchmark for the terms and conditions for any of the other services that can reasonably be provided on the AGP can be offered to prospective users.

Prior specification of an in-pipe trade service as a reference services is unlikely to provide a point of reference from which other services sought by prospective users can be assessed, and is unlikely to assist access negotiations and dispute resolution for other pipeline services.

APA Group currently offers in-pipe trade service as a standard service on its pipelines, including the AGP. The listed price for the service is approximately \$0.01/GJ, capped at \$3,528 per month per gas transportation agreement. APTNT has not, to date, earned revenues from in-pipe trade service on the AGP. The regulatory costs incurred by APTNT and the AER in specifying an in-pipe trade service as a reference service are likely to exceed the revenues earned from the provision of that service to AGP users.

APTNT stands ready to negotiate in-pipe trade service with prospective users of the AGP but does not propose offering that service as a reference service.

6.3 Operational capacity transfer service

Like in-pipe trade service, operational capacity transfer service is not a transportation service, and is not sought in its own right. It is a service providing users with flexibility in the way they can use the gas transportation services to which they have access under their transportation agreements.

Operational capacity transfer service is not a substitute for any of the other pipeline services that can reasonably be provided on the AGP. It is, however, substitutable for the AEMO-administered exchange capacity trading service, which APTNT must provide in accordance with Parts 24 and 25 of the NGR.

The terms and conditions of the exchange capacity trading service, and its price, are set through regulatory processes, and are benchmarks for the terms and conditions, and price, of the operational capacity trading service that APTNT can provide on the AGP.



Neither APTNT's operational capacity transfer service, nor AEMO's exchange capacity trading service, are a substitute for any of the other services that can be reasonably be provided using the AGP. To the limited extent that prior specification of a capacity trading service can provide a point of reference from which other services sought by prospective users can be assessed, and can assist access negotiations and dispute resolution in respect of other pipeline services, the relevant benchmark is AEMO's regulated exchange capacity trading service.

In these circumstances, any regulatory costs incurred by APTNT, or by the AER, in specifying APTNT's operational capacity transfer service as a reference service, would be costs unnecessarily — and hence, inefficiently — incurred.

APTNT stands ready to negotiate operational capacity transfer service with prospective users of the AGP but does not propose offering that service as a reference service.

6.4 Parking and loan services

Parking and loan services are not gas transportation services. They are services providing users of a pipeline with greater flexibility in the way they use gas transportation services.

A degree of substitutability exists between firm and interruptible parking services, and between firm and interruptible loan services. However, neither the parking services, nor the loan services, are substitutes for any of the other services that can reasonably be provided on the AGP.

Terms and conditions, including the prices, for parking and loan services cannot serve as benchmarks for the terms and conditions of other pipeline services. The prior specification of parking and loan services as reference services is unlikely to provide points of reference from which other pipeline services sought by prospective users of the AGP could be assessed, and is unlikely to assist the negotiation of other pipeline services or the resolution of disputes that might arise over access to those services.

Several users have contracted for interruptible parking service on the AGP.

However, with the AGP fully contracted for firm transportation service provision, there is little or no spare pipeline capacity that can be used to provide additional parking service. Furthermore, high utilisation of the capacity available in a long, narrow diameter, pipeline, essentially without compression, means APTNT has little scope for varying the AGP line pack for the purpose of providing loan service.

APTNT does not propose offering parking and loan services as reference services.



6.5 Interruptible transportation service

Prospective users of the AGP have sought access to interruptible transportation service because capacity for firm transportation service is currently unavailable.

Interruptible transportation service provided on the AGP is, clearly, a substitute for the firm transportation reference service of the current AGP Access Arrangement. However, it is not a perfect substitute for that service. In the absence of spare pipeline capacity for firm transportation service, users have substituted for that service lower priority – less reliable – interruptible transportation service.

As noted in section 5.1 above, prospective users of the AGP with current access requests have sought 80 TJ/d of firm transportation service. They have sought only 20 TJ/d of interruptible transportation service.

Interruptible transportation service is, by its very nature, subject to uncertainty. Interruptible transportation service may or may not be available on a day, and this uncertainty is reflected in the terms and conditions for, and the pricing of, the service.

If there is insufficient pipeline capacity available on a day to transport all of the quantities of gas nominated by users of interruptible transportation service, APTNT must allocate the available capacity to those users. Currently, allocation is to be on an equitable basis, which may mean on the basis of the prices paid, first-come first served, or pro rata using nominated quantities. The quantity of interruptible transportation service available to users on any day is not known prior to the scheduling of service for that day, making any prior and precise allocation of costs to the service, as would be required for cost-based price setting, infeasible.

In these circumstances, the price for interruptible transportation service is often set by reference to the price for firm transportation service, typically as a proportion (a fraction between zero and one) of the firm service price, reflecting the relative priorities of the services.

Prior specification of the terms and conditions of interruptible transportation service is unlikely to provide a point of reference from which other services sought by prospective users can be assessed, and is unlikely to assist access negotiations and dispute resolution for other pipeline services that can reasonably be provided on the AGP. This is because the inherent difficulty of precisely specifying, in advance, the priority of interruptible transportation service.

The difficulty of specifying, in advance, the priority of the interruptible transportation service is a consequence of uncertainty, analogous to the difficulties forecasting the quantity of, and the allocation of costs to, interruptible



transportation service. These difficulties of forecasting quantity, and of allocating costs, substantially reduce the usefulness of any price for interruptible transportation service as a benchmark for the price of any other service that can reasonably be provided on the AGP.

The terms and conditions, including the price, for lower priority interruptible transportation service are, then, of limited use as benchmarks for the terms and conditions, and the prices, of other pipeline services, including firm transportation service. Rather, the terms and conditions of firm transportation service, including its price, provide benchmarks for the terms and conditions, and the price, for interruptible transportation service.

APTNT proposes to continue to offer interruptible transportation service on the AGP but not as a reference service.

6.6 Firm transportation service

Demand for transportation service since 2012 has been, primarily, demand for firm transportation service.

As noted above, APTNT currently has access requests for firm transportation service on the AGP that would utilise some 80TJ/d of pipeline capacity. Resultantly, prospective users of the AGP have a significant, if currently unmet, demand for firm transportation service.

Although gas transmission pipelines can provide, to varying degrees, other types of service, they are designed and built to provide firm transportation service. The costs incurred in building and operating a transmission pipeline are largely the costs of providing the firm transportation service. As Australian regulatory decisions over two decades have demonstrated, the allocation of costs to firm transportation service provision is not problematic.

A prior and complete specification of firm transportation service provides a well-defined point of reference against which a prospective user can assess another pipeline service (including interruptible transportation service) for the purpose of negotiating access to that other service. Specification of a firm transportation service as a reference service provides benchmark terms and conditions of service supporting access negotiations and dispute resolution for other pipeline services, particularly transportation services, which are not reference services.

Furthermore, other pipeline services – interruptible transportation service, as noted above, is an example - are often priced at premiums or discounts to the price of firm transportation service. Specification of a firm transportation service as a reference service, and the setting of a reference tariff for that service, provides a



benchmark for the prices of pipeline transportation services that are not reference services.

APTNT proposes to continue to offer firm transportation service on the AGP as a reference service.

In specifying firm transportation service as a reference service in a revised AGP Access Arrangement, APTNT would not expect to:

- Change the costs it incurs in managing a fully regulated pipeline.
- Increase the AER's costs of administering regulation of the AGP.
- Increase the costs users and prospective users incur in understanding and working with the access regulatory regime of the NGL and the NGR as it applies to the AGP.

6.7 Reference service proposal

APTNT proposes a firm transportation service as the single reference service on the AGP.

This firm transportation service is a service between any AGP receipt point, and any delivery point on the pipeline, whereby:

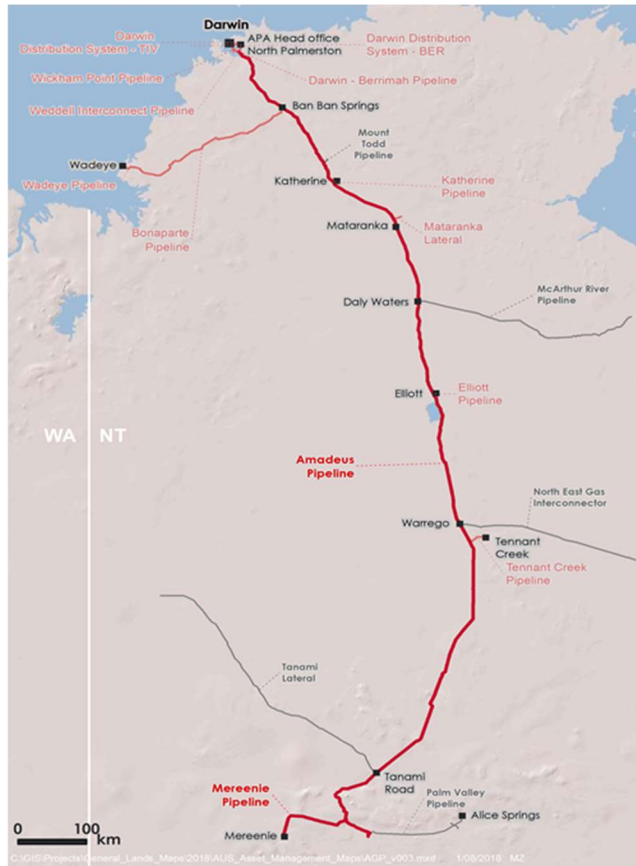
- APTNT receives, from a user, at a receipt point, on a day, a quantity of gas not exceeding the maximum daily quantity (MDQ) specified in the user's gas transportation agreement.
- APTNT delivers to the user, at a delivery point specified in the user's gas transportation agreement, on the same day, a quantity of gas not exceeding the user's MDQ, without interruption or curtailment, except in the specific and limited circumstances set out in the user's gas transportation agreement.
- APTNT is not obliged to receive from the user, at a receipt point, in any hour, a quantity of gas exceeding the maximum hourly quantity for that receipt point specified in the user's gas transportation agreement, and is not obliged to deliver to the user, in any hour, a quantity of gas exceeding the maximum hourly quantity for the receipt point specified in the transportation agreement.
- If, on a day, there is insufficient pipeline capacity available to transport all of the quantities of gas that have been scheduled for firm transportation service, APTNT may interrupt or curtail its receipt and delivery of gas in accordance with the interruption and curtailment priorities set out in the user's transportation agreement.

- APTNT may interrupt or curtail the service without incurring any liability to the user in limited circumstances including:
 - Interruption or curtailment is necessary for safe operation of the pipeline.
 - Interruption or curtailment resulting from planned or unplanned maintenance carried out by the service provider in accordance with the relevant provisions in the user's gas transportation agreement.
 - Interruption or curtailment results from a force majeure event.

This list characterises, but does not full specify, APTNT's proposed reference service. The full specification of the reference service will be specification of the firm transportation service in the AGP Access Arrangement, including the terms and conditions for that service, as approved by the AER after 1 July 2020.



Attachment 1



APA Group

Northern Territory Reference Services Stakeholder Engagement Summary

July 2019

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1. Introduction

APA Group owns and operates the Amadeus Pipeline in the Northern Territory.

The Amadeus Gas Pipeline (AGP) is a high pressure gas transmission pipeline originally designed to transport gas from Amadeus Basin fields, in central Australia, to Darwin.

Construction of the AGP was completed in 1986 and the pipeline is now operated by APA Group.

Initially, gas in the AGP flowed north, from the Amadeus Basin to Darwin. However, since its connection to the Bonaparte Gas Pipeline and Northern Gas Pipeline, the AGP is now bi-directional and can now flow south into Queensland and the east coast gas pipeline network.

Large users, such as gas power generators, mining and minerals processing operations, are supplied directly from the AGP. The AGP provides gas used in the generation of electricity in Darwin and other regional centres.

The AGP also feeds into gas distribution networks, which transport smaller volumes of gas at lower pressures and supply smaller industrial, commercial, and domestic residential consumers. These smaller consumers, supplied from distribution networks, buy gas from retailers that, in turn, buy gas from producers. A distribution network in Darwin supplies smaller industrial and commercial customers. Another network, in Alice Springs, supplies smaller industrial and commercial customers, and domestic residential consumers.

1.1 Regulatory requirements

The AGP is a fully regulated pipeline, meaning its commercial operation is overseen by the Australian Energy Regulator (AER), under the National Gas Law and the National Gas Rules. The National Gas Rules govern access to natural gas pipeline services and elements of broader natural gas markets.

As a fully regulated pipeline, the AGP must have an Access Arrangement setting out certain pipeline services that must be offered, the terms and conditions on which those services are offered, and the prices for those services. The services offered are called reference services; the prices at which they are offered are called reference tariffs.

The Access Arrangement must be approved by the AER and the AGP Access Arrangement is revised every five years. The next review if the AGP Access Arrangement is due on 1 July 2020.

1.2 Regulatory changes

In March 2019, changes were made to the National Gas Rules to give stakeholders, including pipeline users and end-users, more input into regulators' decisions. These changes require that APA Group submit a reference service proposal to the AER for approval before submitting proposed revisions to the Access Arrangement.

The reference service proposal will set out the reference services that APA Group must offer in the revised Access Arrangement.

Setting the reference services through the reference service proposal is expected to assist users negotiate access to the AGP by providing benchmarks for terms and conditions, including prices, for those other pipeline services.

2. Purpose of the consultation

APA is a signatory to the Energy Charter and has made a commitment to working with companies across the energy supply chain to ensure better customer outcomes. Central to this commitment is improving the way APA Group engages and interacts with stakeholders and communities.

In line with these commitments, APA Group is approaching a range of organisations and stakeholder groups that represent communities served by the AGP.

GHD was engaged by APA Group to coordinate attendees for a workshop held in Darwin on 16 July 2019 and to facilitate the stakeholder workshop and provide a summary of consultation to inform APA Group's reporting to the Australian Energy Regulator.

3. Selecting stakeholders

Stakeholders were selected through an internal stakeholder mapping process between GHD and APA Group.

Once organisations were identified, preliminary phone calls provided an overview of the process and the purpose of the workshop and established the contact details of the most appropriate person within each organisation. An information pack outlining the requirements of the AER and APA Group's business in the Northern Territory was provided to invitees in advance of the workshop.

In total, 24 organisations across various industry and government sectors were invited to participate in the workshop and 6 people attended.

The workshop was held from 10.30am – 12.30pm on Tuesday 16 July 2019 at GHD's offices in Darwin and was followed by lunch.

3.1 Session details and attendees

In total, 6 representatives attended the workshop.

Table 1 Workshop attendees

Organisation	Attendee
Council of the Ageing	Sue Shearer
Department of Trade, Business and Innovation (Micro-Economic Unit)	Anne Tan
Department of Trade, Business and Innovation (Strategic Oil and Gas Industry Development Unit)	Sean Redden Jason Howe
Northern Land Council	Walter Zukowski
Department of Trade, Business and Innovation (Infrastructure and Projects Unit)	Lachlan Wilkins

In planning for the workshop, invitees were assumed to not have a high awareness of the APA Group's business within the Northern Territory, or the regulations that have to be met. For that reason, one of the objectives of the workshop was to raise awareness of the APA Group's Northern Territory business and the associated regulatory requirements. The workshop was also viewed as an opportunity to identify potential participants in future consultative processes APA Group may undertake in the Northern Territory.

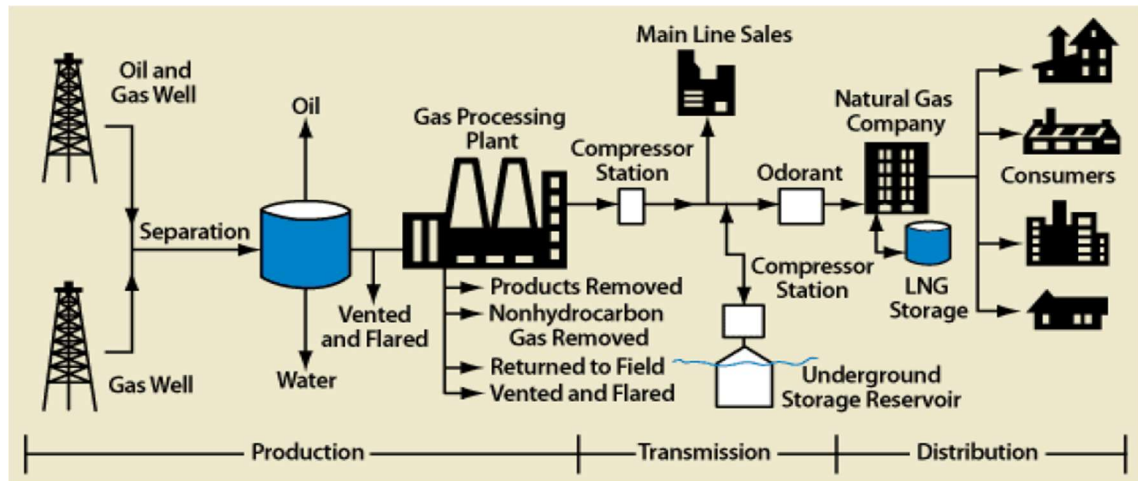
4. Information presented

The workshop was designed to meet the regulatory requirements and therefore focused on the APA Group's reference services. It sought feedback on the reference services to inform development of an Access Arrangement for the next five years from 2020.

Mr John Williams, Manager Regulatory for APA Group outlined the purpose of the workshop, the requirements to consult on reference services, and the development of the next five year Access Arrangement.

As part of the awareness raising of APA Group's business in the Northern Territory, an overview of the gas supply chain and process was also presented to the group (see below diagram).

Diagram 1 - The gas supply chain



Definitions of users and end-users were outlined and a general overview of APA Group’s business in the Northern Territory was provided.

Mr Williams provided a full list of potential services that could be included in an Access Arrangement and defined each of them, providing examples from a national perspective.

These are reflected in the table below:

Table 2 - Potential reference services

Service	Description (details in handout)
Firm transportation service	Transportation between any receipt point and any delivery point Highest priority service
Interruptible transportation service	Transportation between any receipt point and any delivery point Lower priority service (may not be available on a day)
Firm parking service	Gas storage in the AGP Highest priority right to store
Firm loan service	Borrowing of gas from AGP line pack Highest priority right to borrow
Interruptible parking service	Gas storage in the AGP Lower priority service (may not be available on a day)
Interruptible loan service	Borrowing of gas from AGP line pack Lower priority service (may not be available on a day)
In-pipe trade service	Facilitation of trade of gas between AGP users
Operational capacity transfer service	Facilitation of short term transfer of firm transportation capacity between AGP users
Interconnection service	Service providing, or facilitating, interconnection to another pipeline

5. Feedback and emerging themes

Feedback received from participants in the workshop was largely focused on understanding the business, regulatory requirements and potential future industry development.

The following provides a summary of general themes emerging in the workshop. A number of questions were asked which focused on:

The consultation process

Participants were eager to understand the consultation requirements and timeframes associated with the Access Arrangement and reporting to the Australian Energy Regulator. APA Group explained that their report on consultation in relation to reference

services has to be submitted to the AER in August 2019 for review before APA Group's Access Arrangement is submitted for formal review in July 2020.

Once approved, the Access Arrangement guides the service delivery for the next five years.

Stakeholders also wanted to understand the future stages of potential consultation. There was discussion around the need for consultation on pricing at a later stage and general discussion around the Northern Territory context, where this is expected to be a key issue of interest to stakeholders.

Participants made some suggestions of other organisations that could be included in potential future consultation. These included:

- Darwin International Airport
- Chamber of Commerce (who were on the original invitation list but were unable to attend)

There was discussion around the shift in focus of the regulator which now sees an interest in users' and end users' perspectives on what services they want and how they are using them.

Technical details of the Amadeus Pipeline

Stakeholders were interested in understanding how gas is transported, stored and distributed through the Amadeus Gas Pipeline and APA Group provided technical information on all of these aspects of their service.

Questions were focused on the form in which gas is moved through the pipeline (molecules vs capacity) and what would happen should there be a pipe failure on the Amadeus Gas Pipeline. Other questions were around the climate's effect on pipeline efficiency, noting the varying climatic conditions between Alice Springs and Darwin.

Department of Trade, Business and Innovation were interested in whether there are standards the gas has to meet and the APA Group spoke about the gas specifications that have to be met before anything moves through the pipeline.

Future development opportunities

Given the current focus in the Northern Territory on oil and gas development, particularly in relation to hydraulic fracturing in the Beetaloo Basin, there was lengthy discussion around future development opportunities. This included discussion around different forms of gas being able to be transported through the Amadeus Pipeline e.g. questions as to whether hydrogen or liquids could use the same pipeline. Discussion also focused on whether a five year Access Arrangement will limit APA Group's opportunity to develop the Amadeus Gas Pipeline. APA Group outlined that at any time, the capacity of the pipeline can be expanded however, that will be driven by demand. The Access Arrangement mandates pricing for the next five years but does not inhibit additional development, which would be undertaken in line with regulatory requirements.

There was interest in who would fund new infrastructure for the pipeline when it reaches capacity and how this would be managed if it occurred midway through the Access Arrangement timeframe. APA Group said this would all be negotiated with the interested parties.

Stakeholders were also interested in whether additional negotiations and agreements with customers needed to be reported to the AER. APA Group outlined regulatory reporting requirements.

APA's capacity

Having discussed the range of reference services that can be provided, APA Group discussed the fact that the Amadeus Gas Pipeline is at capacity (largely due to an existing agreement) and therefore can only provide interruptible transport service, which is based on daily capacity.

This raised a number of questions from stakeholders in relation to future capacity and development. APA Group reiterated that their infrastructure can be expanded but relies on defined demand existing. The current absence of spare capacity does not inhibit future industry development.

There was an indication from NT Government representatives participating that they expect there will be growing demand in the short-term future (potentially within the five year period of the Access Arrangement).

6. Where to from here?

APA appreciates the contribution of all stakeholders who participated in this process, and value all feedback provided. All participants in the workshop indicated that they maintain an interest in the work of APA Group and as such, they will continue to be involved and will remain on the Northern Territory stakeholder list.

Discussion and feedback received through this, and other forums nationally, will be incorporated into APA Group's report to the Australian Energy Regulator which will be followed by submission of the Access Arrangement and its review in July 2020.

This is the first step in a renewed effort to improve the way APA Group consult with stakeholders and we thank all stakeholders for their willingness to participate and to build ongoing relationships with APA Group. APA Group will continue to seek feedback with regards to the Amadeus Gas Pipeline and regulatory arrangements on an ongoing basis and at key trigger points in the regulatory framework.



GHD

Level 7, 24 Mitchell Street
Darwin NT 0800

T: 61 8 8982 0100 F: 61 8 8981 1075 E: drwmail@ghd.com

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