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Amadeus Gas Pipeline

2026 - 2031 Access Arrangement:
Reference Service Proposal

30 June 2024



TABLE OF CONTENTS

1. Introduction	1
1.1. Scheme Pipeline	1
1.2. Service provider	1
2. Regulatory requirements	2
2.1. Requirements for reference service proposal	2
2.2. Reference service factors	2
2.3. Consultation	2
3. Amadeus Gas Pipeline	3
3.1. Pipeline description	3
3.2. Website	5
4. Services that can be reasonably provided	6
4.1. Firm transportation service	6
4.2. Interruptible transportation service	8
4.3. Firm and interruptible parking service	9
4.4. Firm and interruptible loan service	9
4.5. In-pipe trade service	10
4.6. Interconnection service	10
5. Stakeholder engagement	11
5.1. Consultation	12
5.2. Outcome of consultation	12
5.3. What we heard and how we responded	13
6. Reference service proposal assessment	14
6.1. Firm transportation service assessment	15
6.2. Interruptible transportation service assessment	16
6.3. Parking and loan services assessment	17
6.4. In-pipe trade service assessment	19
6.5. Interconnection service assessment	20
7. Reference service proposal	21

1. Introduction

This document sets out the reference service proposal for the Amadeus Gas Pipeline in advance of its revised access arrangement proposal for the 2026-27 to 2030-31 regulatory period.

The proposal is submitted to Australian Energy Regulator (AER) for approval in accordance with the National Gas Rules.

1.1. Scheme Pipeline

The Amadeus Basin to Darwin Pipeline is a pipeline system that was specified by pipeline licences PL 1, PL 4 and PL 18 and originally covered by the *National Third Party Access Code for Natural Gas Pipeline Systems (Code)*.

In July 2008, the *National Gas (Northern Territory) Act 2008* replaced the Code with the National Gas Law (NGL) and the National Gas Rules (NGR). Any transmission pipeline which was covered under the Code was deemed to be a covered pipeline on commencement of the NGL.

Consequently, the Amadeus Basin to Darwin Pipeline which is now referred to as the Amadeus Gas Pipeline (AGP) is a covered pipeline under the access regime of the NGL and the NGR.

Rule 47A of the NGR requires the service provider of a scheme pipeline to submit a reference service proposal to the AER no later than 12 months prior to the review submission date for an access arrangement¹.

The AGP is a scheme pipeline with a review submission date for its Access Arrangement of 1 July 2025. A full access arrangement proposal for the AGP is to be submitted to the AER on the 1 July 2025.

1.2. Service provider

APT Pipelines (NT) Pty Ltd (APTNT) operates the AGP and is the service provider for the purposes of the access regime of the NGL and the NGR.

This document sets out the reference service proposal for the AGP and has been prepared by APTNT and submitted to the AER for approval.

¹ NGR, rule 47A(3).

2. Regulatory requirements

2.1. Requirements for reference service proposal

APTNT must submit a reference service proposal in accordance with rule 47A to:

- (a) identify the AGP, and include a reference to a website at which a description of the AGP can be inspected;
- (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; and
- (c) identify at least one pipeline service that APTNT proposes to specify as a reference service and provide relevant supporting information.

2.2. Reference service factors

In specifying a reference service, APTNT should have regard to the following factors²:

- (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 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) the reference service serves as a point of reference from which pipeline services that are not reference services can be assessed by a user or prospective user for the purpose of negotiating access to those other pipeline services,
 - (ii) a reference tariff serves as a benchmark for the price of pipeline services that are not reference services,
 - (iii) reference service terms and conditions serve as a benchmark for the terms and conditions of pipeline services that are not reference services, and
- (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.

2.3. Consultation

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 services³.

APTNT addresses each of these requirements in the following proposal.

² NGR, rule 47A(15)

³ NGR, rule 47A(1)(d))

3. Amadeus Gas Pipeline

3.1. Pipeline description

The AGP is a transmission pipeline that extends, approximately 1,600 km, from the 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.

The geographic location and route of the AGP are shown in Figure 3-1. Gas is delivered into the AGP at Palm Valley and Mereenie, and from the Bonaparte Gas Pipeline (not part of the AGP) at Ban Ban Springs. Gas can also 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 currently only, compressor station is at Warrego and was constructed in 1995.

Although it was originally designed to transport gas from the Amadeus Basin fields to Darwin, the APG is now bi-directional. The AGP interconnects with the Northern Gas Pipeline (NGP) at Warrego, near Tennant Creek. Gas can flow north to the NGP and to Darwin but can also flow south, from Ban Ban Springs to the NGP.

Commercial operation of the interconnection between the two pipelines, allowing gas to flow from the AGP into the NGP and into Queensland and the east coast pipeline network, commenced in January 2019. Over the last 5 years, over 40 per cent of the gas flowing in the AGP was delivered into the NGP. These flows have recently been curtailed by the current closure of the NGP. Work is currently underway to enable reverse flow of the NGP to deliver from the east coast pipeline network to the AGP. These works are planned to be completed in 2024.

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 and is not held by an APA Group entity. Coverage of that pipeline was revoked in July 2000.

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. This pipeline system 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; and
- 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.

Figure 3-1: Amadeus Gas Pipeline geographic location and route



The principal sections of the AGP are described in Table 3-1. Conversely, Table 3-2 lists both the pipelines that are connected and lateral pipelines extending from the AGP. These are not part of the AGP.

Table 3-1: Amadeus Gas Pipeline: principal sections

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

Table 3-2: Pipelines and laterals connected to the Amadeus Gas Pipeline

Pipelines and Laterals	AGP intersection
Northern Gas Pipeline	Warrego
Wickham Point Pipeline	Darwin City Gate
Bonaparte Pipeline	Ban Ban Springs
Tanami Lateral	Tanami Road
Elliot Pipeline	Elliot
McArthur River Pipeline	Daly Waters
Mataranka Pipeline	Mataranka
Palm Valley Pipeline	Palm Valley

3.2. Website

Additional detailed information on the AGP is available [here](#).

4. Services that can be reasonably provided

The pipeline services that APTNT can reasonably provide on the AGP are listed in Table 4-1 and are described in greater detail in the following sections.

This list does not include the exchange capacity trading service which APTNT is required to provide in accordance with the NGR. Neither APTNT, nor the AER, has discretion regarding this service in the context of deciding reference services for the AGP.

Table 4-1: Services which can reasonably be provided using the AGP

Service	Description
Firm transportation service	Transportation from a receipt point to a delivery point Highest priority service Available between any receipt point and any delivery point
Interruptible transportation service	Transportation from a receipt point to a delivery point Lower priority service (may not be available on any day) Available between any receipt point and any delivery point
Firm parking service	Pipeline storage of gas Highest priority right to store
Firm loan service	Borrowing of gas from pipeline linepack Highest priority right to borrow
Interruptible parking service	Pipeline storage of gas Lower priority right to store (may not be available on a day)
Interruptible loan service	Borrowing of gas from pipeline linepack Lower priority right to borrow (may not be available on a day)
In-pipe trade service	Facilitation of trade of gas between pipeline users
Interconnection service	Provision, or facilitation, of interconnection to another pipeline

Although APTNT can potentially provide each of these transportation services on the AGP, users have currently contracted for all of the capacity available for firm transportation service.

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 those users. Pipeline users transporting gas to facilities or to end users requiring 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 which is the most reliable service a service 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 which use pipeline capacity. Firm transportation service is not interrupted or curtailed until all other

services have been interrupted or curtailed to the extent necessary to allow provision of the firm transportation service to continue.

Firm transportation service is a service between any AGP receipt point, and any delivery point on the pipeline. In the case of the AGP, firm transportation service is a service 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; and
- delivers to the user on the same day, at a delivery point specified in the user's gas transportation agreement, a quantity of gas not exceeding the user's MDQ, without interruption or curtailment (except in the limited circumstances set out in the user's gas transportation agreement).

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.

Pipeline capacity used to provide a user with firm transportation service is not subject to prior claims by other users of that service, or by the users of other types of services.

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 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 which 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 specific and limited circumstances in which firm transportation service may be interrupted or curtailed without APTNT incurring any liability to the user are:

- 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; or
- interruption or curtailment resulting from a force majeure event.

4.2. Interruptible transportation service

Pipeline users or end users with facilities which can tolerate interruptions to gas supplies (possibly because they can switch to alternative fuels such as distillate) may seek services which are less reliable than firm transportation service.

Most gas transmission pipeline service providers offer, in addition to firm transportation service, interruptible transportation service which is only available when circumstances permit. At any time, the service provider may not be able to offer more than the firm transportation service but, over an extended period, its pipeline may be capable of providing additional volumes of service at lower levels of reliability. These additional volumes of service may not be available at the same level of reliability as the firm transportation service because:

- certain items of the plant and equipment comprising the pipeline (for example, gas compressors) must be periodically withdrawn from service for routine maintenance;
- pipeline plant and equipment have mechanical, electrical and electronic components which may fail after long periods of intermittent operation; or
- some pipeline users, typically foundation customers, 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 firm transportation service and other types of 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 service

The primary business of a gas pipeline service provider is 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 may be used for the temporary storage of gas additional to the volumes of gas being transported. This temporary storage of gas in a pipeline is called “parking” and some pipelines can offer a parking service, which may be either firm or interruptible.

Parking service is not a transportation service. It is a service that allows a user or end user flexibility to manage disruptions to gas supplies, and management plant shutdowns for planned and unplanned maintenance, through the temporary 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 at a receipt point on a day, 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; and
- the user can withdraw on another day, gas which it has stored in the pipeline by nominating, and having the service provider schedule, transportation to a delivery point, without making a corresponding receipt point nomination, 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 is expected to impair the service provider’s ability to provide transportation service on a 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 a 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 it to operate as a transportation vehicle).

Loan services, like parking services, are not transportation services. They are services which allow end-user flexibility in the management of disruptions to gas supplies, and 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 specific and limited circumstances set out in the transportation agreement.

Firm loan service has priority ahead of other types of loan service and is typically available at one or more delivery points on a pipeline.

However, 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, and especially 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, then the service provider may ask the user of the loan service to replenish the pipeline linepack.

Pipeline capacity and the linepack 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 service

In-pipe trade service provides flexibility by facilitating the trading of gas between pipeline users. They are not transportation services and are only available to users with 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 their 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.

4.6. Interconnection service

Interconnection service is an engineering and construction service rather than 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.

5. Stakeholder engagement

APANT is committed to fully consulting with consumers ahead of its 2026 to 2031 Access Arrangement submission to the AER to understand customer and stakeholder views and ensure its submission reflects customer and stakeholder needs.

APANT has established a Stakeholder Reference Group to formally consult on the design of its access arrangement. This group includes a range of stakeholders with representatives from existing and prospective pipeline users as well as consumer advocates. The functions of the Stakeholder Reference Group include, but are not limited to:

- Provide independent feedback and challenge APA on the degree to which its access arrangement addresses the needs and preferences of customers.
- Co-design the engagement program, including scope, timing, themes and engagement activities.
- Input into the development of the access arrangement and challenge key components including operating expenditure and capital expenditure.
- Assist in improving APA's understanding of the needs and expectations of different customer segments, including vulnerable groups.
- Provide advice on engagement materials to ensure they are fit for purpose.

APA's engagement objectives are to deliver an access arrangement that:



Brings the outside in' by directly responding to the needs and preferences of our customers and other key stakeholders



Provides sustainable returns for shareholders and investors



Delivers an informed, reliable, safe and secure supply of gas



Supports decarbonisation of the energy supply chain

These objectives have been co-designed with our Stakeholder Reference Group for the 2026 to 2031 Access Arrangement.

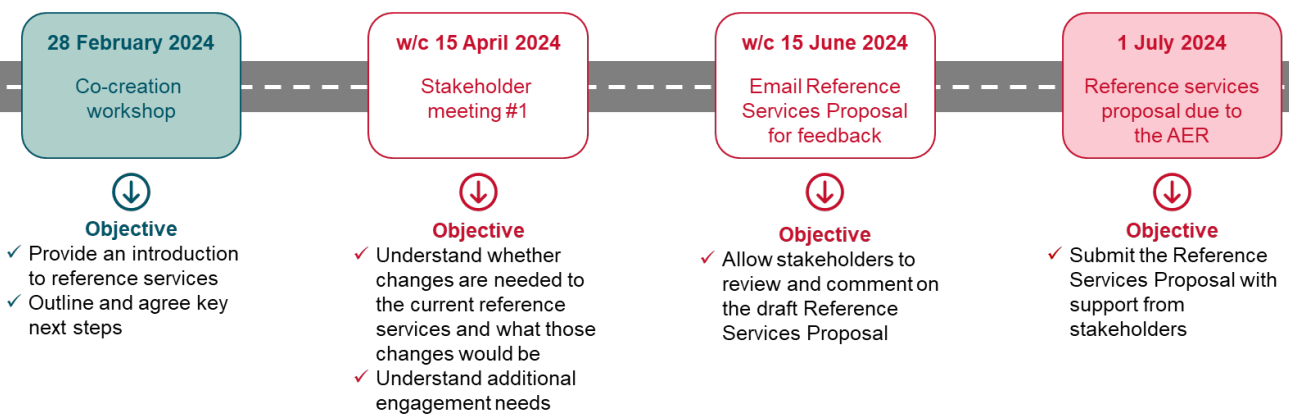
5.1. Consultation

In undertaking our engagement, we are consulting with stakeholders to understand their perspectives and ensure their preferences help shape our 2026 to 2031 Access Arrangement. We invited interested stakeholders to join our stakeholder reference group and attend a co-creation workshop held on 28 February 2024. The primary objective of this workshop was to co-design an engagement plan, but also to provide stakeholders with an introduction to the reference service proposal and seek initial feedback.

APANT invited further comments and feedback on elements of the reference service proposal:

- at its first stakeholder meeting on 15 April 2024; and
- by emailing the draft reference service proposal to the stakeholder reference group.

The engagement timeline and objectives, as it relates to the reference services proposal, is shown below.



5.2. Outcome of consultation

Our stakeholder reference group identified a number of priority areas for engagement at the co-creation workshop held on 28 February 2024. These priority areas have been summarised into five key themes:



Third party access



Future of AGP



Reliability and security



Affordability



Gas specification and information

5.3. What we heard and how we responded

In developing our reference service proposal, we have considered the five priority areas together with feedback provided during stakeholder interactions.

What we heard	How we responded
<p>Third party access was raised as a key priority by many stakeholders at the co- creation workshop</p>	<p>In assessing the current reference services, we considered the priority areas raised by stakeholders to ensure that they could be supported by the reference service proposal.</p> <p>We have assessed each possible service against the assessment criteria (see section 6). This assessment shows that the Firm Transportation service meets the criteria and should be maintained as a reference service. Interruptible transportation, currently a reference service, only meets one of the criteria, however, we propose to continue to offer this as reference service because it helps support third party access and it is already a reference service.</p>
<p>The inclusion of all services within the current reference tariffs was requested by a stakeholder</p>	<p>Only the Firm Transportation service meets the assessment criteria. All other potential pipeline services do not.</p> <p>Given stakeholders support, we have proposed to continue to offer Interruptible Transportation as a reference service on the AGP.</p>
<p>One stakeholder suggested that interruptible park and loan would fall into the definitions set out by the reference service proposal</p>	<p>We have assessed interruptible park and loans services and it does not satisfy the assessment criteria.</p> <p>We have included the interruptible service as a reference service, despite not satisfying the criteria, because of its low regulatory cost and the possibility of it being utilised in the future. However, park and loan services have a significant regulatory cost because of the operational requirements and because the AGP is fully contracted, are unlikely to be offered during this regulatory period.</p>
<p>One stakeholder noted they would like to understand the significance of each service by a set metric for review – e.g., interruptible revenue vs firm revenue. This would allow stakeholders to determine whether more attention should be applied.</p>	<p>The AGP is fully contracted with interruptible services and park and loan services utilised by few Users through their current transportation contracts.</p> <p>These services are not currently available to prospective users.</p>
<p>One stakeholder requested that In-pipe trade and pipeline expansion should be included as reference services.</p>	<p>We have assessed in-pipe trade as a reference service and it does not satisfy the assessment criteria.</p> <p>Pipeline expansion is not a service and is covered by Section 7.2 of the Access Arrangement. The services provided by expansion can be reference or negotiated services.</p>

6. Reference service proposal assessment

This section of the proposal assesses each of the services which can reasonably be provided by the AGP (as described in section 4) against the reference service factors of NGR rule 47A(15).

The reference service factors, and associated criteria are set out in Table 6-1.

Table 6-1: Assessment criteria - based on the reference service factors

NGR	Reference Service Factor	Assessment criteria
47A(15)(a)	Actual and forecast demand for the pipeline service and the number of prospective users of the service	A reference service should have sufficient: <ul style="list-style-type: none"> a) actual and forecast demand and/or b) prospective users.
47A(15)(b)	The extent that the pipeline service is substitutable with another pipeline service that is to be a reference service.	Each reference service should be unique and therefore not substitutable with other reference services.
47A(15)(c)	The feasibility of allocating costs to the pipeline service.	It should be feasible to allocate costs to the reference service. If there are shared costs, it should be feasible to allocate them to the service.
47A(15)(d)	The usefulness of specifying the pipeline service as a reference service in supporting access negotiations and dispute resolution for other pipeline services.	The reference service should provide a point of reference or benchmark ⁶ such that the service is useful in supporting access negotiations and dispute resolution for other pipeline services.
47A(15)(e)	The likely regulatory cost for all parties (including the ERA, users, prospective users and the service provider) in specifying the pipeline service as a reference service.	The regulatory cost associated with the reference service should: <ul style="list-style-type: none"> a) be low; or b) not exceed the expected revenue from providing the reference service; or c) not exceed the benefit of having the service as a reference service.

How each potential pipeline service meets these criteria is summarised in Table 6-2.

Fundamental to this assessment is that the capacity of the AGP available for the provision of firm transportation service is fully contracted to users. 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. At this time, APTNT has no specific plan for expanding the capacity of the pipeline.

Consequently, APTNT’s assessment demonstrates that only the firm transportation service clearly qualifies as a reference service on the AGP.

In our stakeholder engagement, some users or potential users of the AGP supported a greater range of reference services, as discussed in section 5.3.

Depending on future circumstances, APTNT may be able to offer prospective users interruptible transportation services. Given the possible availability of interruptible transportation and customers’ support for this service, APTNT has proposed that both the firm and interruptible transport services continue to be provided as reference services in the 2026-31 Access Arrangement.

Table 6-2: Assessment of each service against the reference service factors

Potential services	Sufficient demand	No Substitute	Feasible to allocate cost	Useful benchmark	Regulatory Cost
Firm transportation	✓	n/a	✓	✓	✓
Interruptible transportation	✓	✗	✗	✗	✗
Parking and loan	✗	✓	✗	✗	✗
In-pipe trade	✗	✓	✗	✗	✗
Interconnection	✗	✓	✗	✗	✗

Green tick (✓) means the service satisfies the reference service factor

Red cross (✗) means the service does not satisfy the reference service factor

Further details on each potential service and the assessment against the reference service factors is explained in each section below.

6.1. Firm transportation service assessment

Demand on the AGP, as with all gas transmission pipelines, is primarily for a firm transportation service.

Although pipelines can provide other types of services, they are designed and built to provide firm transportation. The costs incurred in building and operating a transmission pipeline are largely the costs of providing the firm transportation service. The allocation of costs to firm transportation service is relatively straightforward.

The complete specification of firm transportation service provides a well-defined point of reference against which any prospective user can assess another 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 supporting access negotiations and dispute resolution for other pipeline transportation services which are not reference services.

Furthermore, other pipeline services 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 which are not reference services.

APTNT proposes to continue to offer firm transportation service on the AGP as a reference service. In continuing to offer firm transportation service as a reference service in its 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; or
- increase the costs that users and prospective users will incur in understanding and working with the access regulatory regime as it applies to the AGP.

Firm transportation service is proposed to be a reference service as:

- ✓ High demand for the service
- ✓ Feasible to allocate cost to the service
- ✓ Useful in supporting access negotiations for other pipeline services; and
- ✓ Low regulatory cost for administering the service

6.2. Interruptible transportation service assessment

Users and prospective users of the AGP have previously sought access to interruptible transportation service because:

- capacity for firm transportation service is currently unavailable; or
- to supplement to their existing firm service to meet any short-term requirements.

Interruptible transportation service is clearly substitutable with the firm transportation reference service provided under the AGP Access Arrangement. However, in the absence of spare pipeline capacity for firm transportation service, interruptible transportation service can often be the only alternative transportation service for a prospective user, despite being less reliable due to its lower service priority.

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, and pricing of the service.

If there is insufficient pipeline capacity available on a day to transport the quantity of gas nominated by users of an interruptible transportation service, APTNT must allocate the available capacity to users. Currently, allocation is on an equitable basis, which may mean based on 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 allocation of costs to this service infeasible.

Setting a cost based reference tariff for interruptible transportation service is therefore difficult because the volume of the service which might be provided is inherently difficult to forecast. The forecast volume of service over which the costs of service provision are to be recovered is uncertain, and this volume uncertainty makes uncertain the forecast costs which should be recovered via the tariff.

This uncertainty in service volume has the further implication that different pipeline users will place different valuations on interruptible transportation service. Users are better left to negotiate the extent of interruptibility and the price of interruptible transportation service.

Consequently, 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.

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

The assessment of the interruptible transportation service against the reference service factors of NGR rule 47A(15) clearly demonstrates that it does not warrant being a reference service.

Interruptible transportation service does not qualify as a reference service as it:

- ✘ is usually substitutable with the firm transportation service;
- ✘ not feasible to allocate cost to the service;
- ✘ not useful as a benchmark; and
- ✘ has a high associated regulatory cost.

However, it is currently included as a reference service in the current AGP Access Arrangement, users have declared support for maintaining it as a reference service and there is underlying customer demand for the service. As a result, APTNT is proposing to continue to offer interruptible transportation service as a reference service.

6.3. Parking and loan services assessment

Parking and loan services are not gas transportation services. They are services which provide users of a pipeline with greater flexibility in the way the gas transportation services are used.

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.

APTNT has provided park and loan services to several users of the AGP but is highly constrained in offering these services.

To be able to provide a park service and store gas in the pipeline for a user, APTNT must be able to increase the linepack above the volume required for the provision of firm transportation service and then be able to return the gas to the user, reducing the linepack.

If, as a result of parking gas, the linepack becomes too high then gas cannot be received into the pipeline for firm service transportation. If, as a result of the withdrawal of parked gas, linepack becomes too low then APTNT cannot deliver the volume of gas required by users under their firm service transportation agreements.

When a pipeline has spare capacity for firm transportation service, increasing and decreasing the linepack to provide park and loan services are simple operations. However, when there is no spare capacity, the linepack must be carefully managed to maintain the capability to provide its firm transportation service.

The AGP is a long, narrow diameter pipeline with only one compressor unit, which is located at Warrego, about halfway along its length. The AGP does not have the compressors needed to carefully manage linepack to provide park and loan services and maintain firm transportation service on the fully contracted pipeline.

It is also highly problematic to allocate costs to park and loan services due to this uncertainty and difficulty in forecasting demand for this service.

Furthermore, the terms and conditions, including prices, for parking and loan services cannot serve as benchmarks for the terms and conditions of transportation services. Their specification as reference services is unlikely to provide a point of reference and is unlikely to assist the negotiation of transportation services or the resolution of disputes.

The likely regulatory costs in administering park and loan pipeline services as reference services is also high due to the day to day operational requirements. Given the low demand for these services, the benefit of specifying them as reference services is minimal as users are likely to request park and loan on terms that meet their specific operational needs.

Parking and loan services are not suitable as reference services as:

- ✘ have low and uncertain forecast demand;
- ✘ it is not feasible to allocate cost to the service;
- ✘ provide no useful benchmark for supporting access negotiations; and
- ✘ regulatory costs are expected to exceed benefits.

APTNT has and continues to negotiate firm and interruptible parking and loan services with prospective users upon request.

6.4. In-pipe trade service assessment

The in-pipe trade service provides users with flexibility when utilising the gas transportation services under their transportation agreements. They are not sought as individual services.

Although APTNT has recognised in-pipe trade in some users' gas transportation agreements, it is not a service routinely sought by pipeline users 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. The price for in-pipe trade service, based on this allocation of costs, is posted on the APA Group website.

It is unworkable to determine a specific price for in-pipe trade service on the AGP, in the absence of forecast demand for the service.

Furthermore, 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.

Prior specification of an in-pipe trade service as a reference 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.

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 \$0.012/GJ, capped at \$34,290 per month per gas transportation agreement. APTNT has not 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.

Making in-pipe trade service an AGP reference service is infeasible and unnecessary.

APTNT does not propose to offer in-pipe trade service as a reference service as:

- ✘ low demand for the service;
- ✘ not feasible to allocate cost to the service;
- ✘ not a useful benchmark for supporting access negotiations; and
- ✘ regulatory costs would likely exceed benefits.

APTNT is able to negotiate in-pipe trade service with prospective users of the AGP.

6.5. Interconnection service assessment

The interconnection service is usually the construction of a new receipt point or delivery point on a pipeline.

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

Since 2016, APTNT has provided interconnection services for interconnection of the Tanami Lateral and Northern Gas Pipeline to the AGP. APTNT is also currently in discussions for new receipt and delivery points on the AGP that are planned to be built before or during the next access arrangement period.

An interconnection service is a specific 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. This bespoke nature of the service implies that the prior allocation of costs to interconnection services 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.

The interconnection service's terms and conditions are essentially an engineering and construction agreement. They cannot serve as benchmarks to a prospective user for the terms and conditions of any other services available on the AGP and would not be useful in supporting access negotiations and dispute resolution for other pipeline services.

The net cost in administering reference services that are in low demand would be relatively high compared to a service that is in high demand.

APTNT does not propose to offer interconnection service as a reference service as:

- * low demand for the service;
- * not feasible to allocate cost to the service;
- * not a useful benchmark for supporting access negotiations; and
- * high regulatory costs would likely exceed any benefits.

APTNT negotiates interconnection services with prospective users of the AGP as requested.

7. Reference service proposal

APTNT proposes maintaining its current reference services on the AGP, namely:

- a firm transportation service ; and
- an interruptible reference service.

The **firm transportation service** is a service between any AGP receipt point and 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;
- 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;
- is not obliged to receive from the user at a receipt point, in any hour, a quantity of gas exceeding the maximum hourly quantity (MHQ) 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 MHQ for the receipt point specified in the transportation agreement; and
- 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; and
- may interrupt or curtail service to the user, without incurring any liability to the user, in the following specific and limited circumstances:
 - interruption or curtailment is necessary for safe operation of the pipeline;
 - interruption or curtailment results from planned or unplanned maintenance carried out by the service provider in accordance with the relevant provisions in the user's gas transportation agreement; or
 - interruption or curtailment results from a force majeure event.

The **interruptible transportation service** is only available to the extent that firm transportation service is not available to meet requirements and is a service between any AGP receipt point and delivery point on the pipeline, whereby APTNT:

- receives from a user at a receipt point, on a day when spare capacity is available, a quantity of gas not exceeding the quantities 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 quantities specified for delivery in the user's gas transportation agreement;

- 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.

These service descriptions are not full specifications of APTNT's proposed reference services. The terms and conditions for the reference services will be specified in the AGP Access Arrangement as approved by the AER.