FINAL DECISION

Amadeus Gas Pipeline Access Arrangement 2021 to 2026

April 2021

AUSTRALIAN ENERGY REGULATOR

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Note

This document forms the AER's final decision on the access arrangement that will apply to APT Pipelines (NT) Pty Ltd (APTNT)'s Amadeus Gas Pipeline for the 2021–26 access arrangement period. As all issues were settled at the draft decision stage we have not prepared any attachments to this final decision document. This document should be read with all other parts of the draft decision as our draft decision reasons form the respective parts of this final decision.

We received one confidential submission during the consultation phase on our draft decision and APTNT's revised proposal for the 2021–26 Amadeus Gas Pipeline access arrangement period from Power and Water Corporation Northern Territory (PWC) concerning an expansion of capacity on the Amadeus Gas Pipeline. As the specific content of this submission is confidential we have not published this submission on our website.

Our revisions are reflected in the approved access arrangement, *Amadeus Gas Pipeline access arrangement 2021–26 – Approved Access Arrangement – April 2021*, which gives effect to this final decision.[1,2]

[1] Under rule 62 of the NGR: (1) after considering the submissions made in response to the access arrangement draft decision within the time allowed in the notice, and any other matters the AER considers relevant, the AER must make an access arrangement final decision; (2) an access arrangement final decision is a decision to approve, or to refuse to approve, an access arrangement proposal; and (3) if the access arrangement proposal has been revised since its original submission, the access arrangement final decision relates to the proposal as revised; and (4) an access arrangement final decision must include a statement of the reasons for the decision.

[2] NGR, r. 64(2) provides that the AER's proposal for an access arrangement or revisions is to be formulated with regard to (a) the matters that the Law requires an access arrangement to include, (b) the service provider's access arrangement proposal, and (c) the AER's reasons for refusing to approve that proposal.

Contents

Executive summary

The Australian Energy Regulator (AER) regulates gas transmission and distribution networks in all Australian jurisdictions except Western Australia. As part of this process, regulated gas network businesses must periodically apply to us for a ruling on the network tariffs that in turn influence the expected amount of revenue it will recover from customers for using its network. The National Gas Law and Rules (NGL and NGR) provide the regulatory framework governing gas transmission and distribution networks. Our work under this framework is guided by the National Gas Objective (NGO). We use our insights and expertise to determine how much money the businesses can recover from consumers.

We have done this for the Amadeus Gas Pipeline in the Northern Territory for the 2021–26 access arrangement period, which runs from 1 July 2021 to 30 June 2026 (2021–26 period).

APT Pipelines (NT) Pty Limited (APTNT) operates the Amadeus Gas Pipeline, which plays a major role in energy supply in the Northern Territory, transporting natural gas to Darwin, Alice Springs and regional centres.[3] APTNT is owned by the APA Group (APA).

This final decision sets out the amount of money APTNT can collect from gas consumers for using its network in the 2021–26 period.

We made our draft decision in November 2020 recognising APTNT will need to incur additional asset replacement in the next period to enable the continued operation of a reliable and secure gas supply. We also acknowledged APA's consumer engagement with stakeholders in the Northern Territory which continued after release of our draft decision and development of the revised access arrangement proposal.

In response to our draft decision and further consultation with its stakeholders, APTNT submitted a revised proposal accepting our draft decision in full.

APTNT can recover $97.9 million ($nominal, smoothed) from its customers for the 2021–26 period. This outcome is 18.2 per cent lower than the forecast revenue requirement used to determine reference tariffs in the current, 2016–21 access arrangement period (2016–21 period).

APTNT's proposal for the Amadeus Gas Pipeline is consistent with a pipeline which is about half-way through its physical life, with expenditure predominately for corrective maintenance and replacement because components of the pipeline have either reached the end of their physical lives or are obsolete and can no longer be maintained.

APTNT now has an interruptible service to its list of pipeline services[4,5] The addition of an interruptible service should allow the transportation of gas, particularly from southern producers to Warrego and the Northern Gas Pipeline, at a time when capacity for the firm service for the Amadeus Gas Pipeline is fully contracted under pre-existing agreements.

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[3] Customers of the pipeline's services are called shippers. Shippers or potential shippers act like wholesalers and on-sell gas to customers.

[4] APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal,* July 2020, cl. 2.2.1(b).

[5] This is consistent with our November 2019 reference service proposal decision; AER, *Final Decision, APTNT (Amadeus) 2021–26 Reference Service Proposal*, November 2019.

The key themes of the final decision are:

- ensuring consumers pay no more than they need for safe and reliable gas services
- a marked improvement in consumer engagement by APA
- the inclusion of a new interruptible service
- interest from stakeholders in expanding the capacity on the Amadeus Gas Pipeline.

Ensuring consumers pay no more than they need for safe and reliable gas services

Ensuring consumers pay no more than they need for safe and reliable gas services that they want is a cornerstone of the access arrangement decision process. This involves us assessing whether a business' proposal is a reasonable and realistic forecast of how much money it needs for the safe and reliable operation of the network. We have used a range of materials, including APTNT's proposal, stakeholders' submissions and our own analysis. Additionally, we have engaged directly with APTNT representatives to discuss and seek further information on aspects of its revised proposal.

APTNT's consumer engagement has indicated that energy prices are the number one concern for businesses and consumers in the Northern Territory.[6] In response to these concerns, APTNT has submitted a revised proposal to us, consistent with our draft decision that puts downward pressure on gas network charges in the 2021–26 period.

Key drivers of APTNT's lower revenue in the 2021–26 period, compared to the current 2016–21 period, are lower proposed opex, a lower return on capital and a lower forecast tax allowance.

APTNT's Stakeholder Engagement

APA showed a marked improvement in its consumer engagement supporting this access arrangement compared to engagement in previous access arrangements for other assets.

Our draft decision recognised and congratulated APTNT on its consumer engagement approach in developing its 2021–26 access arrangement proposal. We are encouraged to see APTNT continue its work with stakeholders after the draft decision and hope to see this continue beyond this access arrangement revision as the pipeline evolves, to ensure stakeholder views are reflected in its proposals to us.

Section 1.3 details further consideration of APTNT's consumer engagement program and our framework for assessing consumer engagement. It sets out the considerations that we think can clearly demonstrate whether consumers have been genuinely engaged in the development of the proposal.[7]

A New Interruptible Service

An interruptible service refers to services that are provided on an as available basis, where capacity usually available for the firm service is not consumed but rather made available to other pipeline users. This is an important new service on the Amadeus Gas Pipeline because capacity for firm transportation services is fully contracted to existing pipeline users.[8]

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6 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal, Overview*, July 2020, p. 1.

7 See table 7, AER, *Draft decision, Jemena distribution determination 2021–26*, September 2020, p. 43.

8 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal, Overview*, July 2020.

Our draft decision accepted this additional service, which received support from stakeholders during consultation on the 2021–26 access arrangement proposal.[9] APTNT's revised proposal accepted our draft decision for the interruptible service.[10]

Our final decision is to approve the inclusion of the interruptible service in the 2021–26 access arrangement.

Expanding capacity on the Amadeus Gas Pipeline

We are aware that APA is considering a market expansion with its key network users. A market expansion under the access arrangement would have an impact on APTNT's capital base and future revenue. Our draft decision recognised the interest in expanded capacity shown by stakeholders in the Northern Territory, and considered an expansion could be considered if it were included in the revised proposal, following consultation with stakeholders.

APTNT does not have a specific expansion proposal, developed in sufficient detail, to allow meaningful consultation with stakeholders. APTNT has not included an expansion to the Amadeus Gas Pipeline in its revised proposal and this has not been considered for this final decision on the 2021–26 access arrangement. A market expansion during the 2021–26 period, which is well defined and supported by stakeholder consultation, could be considered separately under the NGR as a future addition to the access arrangement.

Making this final decision

In making this final decision, we have had regard to a range of sources including APTNT's proposal, submissions received, as well as additional analysis undertaken and published by us.

Overall, we are of the opinion that APTNT has provided us with a well-informed proposal, underpinned by sound consumer engagement. We are satisfied that our final decision on ATPNT's 2021–26 access arrangement proposal is likely to be in the long term interests of consumers.

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9 APTNT, *Amadeus Gas Pipeline Consumer Reference Group Roundtable 3a Presentation*, 20 April 2020. The material on APA's consumer engagement for the 2021–26 access arrangement revision can be found at: https://www.apa.com.au/about-apa/our-projects/amadeus-gas-pipeline-access-arrangement.

10 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, p. 22.

1 Our final decision

Our final decision allows APTNT to recover $97.9 million ($nominal, smoothed) from its customers from 1 July 2021 to 30 June 2026.

APTNT's reference tariffs are derived from the total revenue requirement *after* consideration of demand. The Amadeus Gas Pipeline operates under an average price cap. This means that the tariff we determine (including the means of varying the tariff from year to year) is the binding constraint across the 2021–26 access arrangement period, rather than the total revenue requirement set in our decision.[11]

Gas pipelines that are subject to full regulation, like the Amadeus Gas Pipeline, are regulated by us under an approved access arrangement.[12] An access arrangement specifies certain pipeline services (reference services) and the price and non-price terms and conditions on which those reference services will be offered over a five-year period.

To approve an access arrangement, we make regulatory decisions on the revenue that pipeline operators, such as APTNT, can recover from users of its reference services.

APTNT's revised proposal, submitted to us in January 2021,[13] accepted our draft decision.

1.1 What is driving revenue?

The changing impact of inflation over time makes it difficult to compare revenue from one period to the next on a like-for-like basis. To do this, we use 'real' values based on a common year, which have been adjusted for the impact of inflation ($2020–21).[14]

This final decision approves a total revenue for the 2021–26 period that is $20.6 million (18.2 per cent) lower than we approved in our 2016–21 decision.[15]

Figure 1 shows our draft decision for APTNT's smoothed revenue for the 2021–26 period, and its allowed revenues over 2011–21.

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11 Where actual demand across the 2021–26 access arrangement period varies from the demand forecast in the access arrangement, APTNT's actual revenue will vary from the revenue allowance determined in our decision. In general, if actual demand is above forecast demand, APTNT's actual revenue will be above forecast revenue, and vice versa.

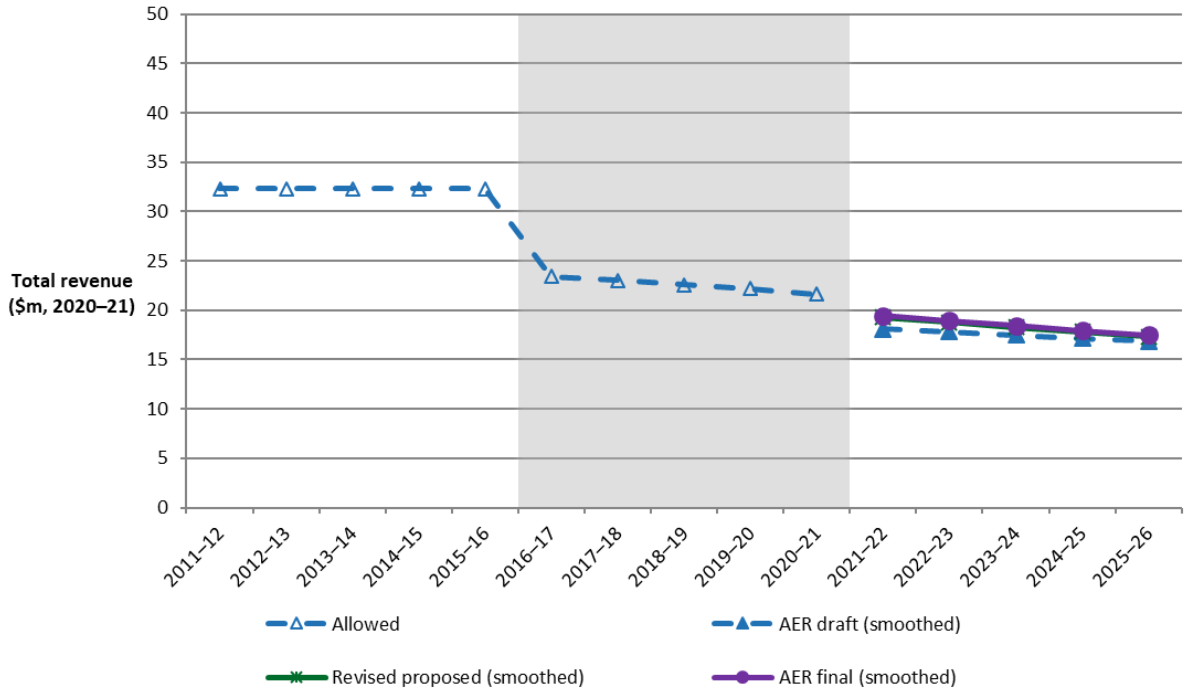
12 The NGL provides for different types of regulation to apply to gas pipelines, based on competition and significance criteria. A 'full regulation' pipeline must periodically submit an access arrangement to the AER, setting out pricing for a reference service sought by a significant part of the market. 'Light regulation' pipelines are not subject to upfront price regulation. The light regulation model is a negotiate-arbitrate approach, placing greater emphasis on commercial negotiation and information disclosure. The AER plays a role only if dispute resolution mechanisms are triggered.

13 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021.

14 That is, 30 June 2021 dollar terms and includes APTNT's estimated actual revenue for 2020–21.

15 The comparison of total revenues between the 2021–26 and 2016–21 periods is based on smoothed revenues. In nominal dollar terms, our final decision total revenues for the 2021–26 period is $14.2 million, or 12.6 per cent, lower than the total revenues approved for the 2016–21 period.

Figure 1 Revenue over time ($million, 2020–21)



Source: AER analysis.

Figure 2 highlights the key drivers of the change in APTNT's allowed revenue from the 2016–21 period compared to what we expect in the 2021–26 period. It shows that our 2021–26 final decision provides for reductions ($2020–21) in the building blocks for:

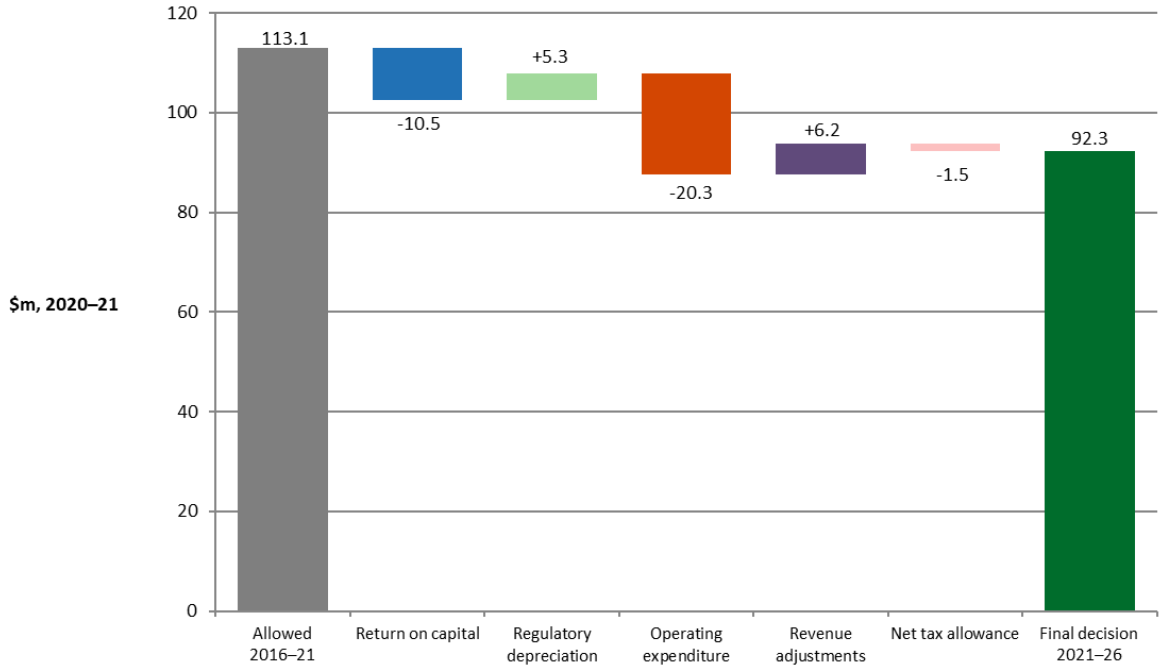
- return on capital, which is $10.5 million (27.9 per cent) lower than 2016–21, driven by decreases in the nominal weighted average cost of capital (WACC) from 6.18 to 4.81 per cent in the first year of the 2016–21 and 2021–26 periods, respectively[16]
- operating expenditure, which is $20.3 million (29.8 per cent) lower than the amount approved for the 2016–21 period
- corporate income tax, which is $1.5 million (94.3 per cent) lower than 2016–21, driven by the implementation of our findings from the 2018 review of the regulatory tax approach, and the higher gamma determined in our 2018 rate of return instrument.

Figure 2 also shows that our decision provides for an increase in the building block for:

- regulatory depreciation, which is $5.3 million (93.8 per cent) higher than the 2016–21 period, driven by a higher opening capital base, a lower forecast inflation and lower remaining asset lives for the 2021–26 period
- a revenue adjustment, which is $6.2 million for the 2021–26 period, reflecting the opex efficiency carryover mechanism (ECM) amounts accrued over the 2016–21 period. There was no revenue adjustments amount approved for the 2016–21 period.

[16] We compare first year values because the nominal WACC is annually updated each year to reflect changes in the cost of debt.

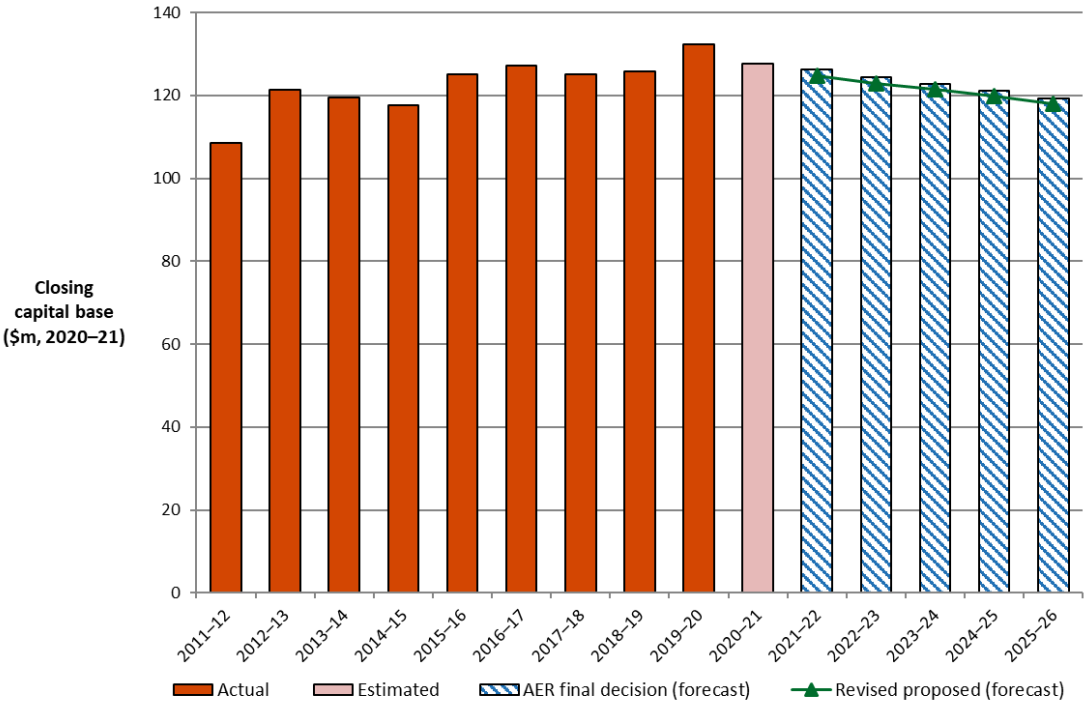
Figure 2 AER's final decision for the 2021–26 period and APTNT's 2016–21 allowed building block costs ($million, 2020–21)



Source: AER analysis.

Figure 3 compares our final decision on APTNT's forecast capital base, to APTNT's actual and proposed forecast capital base. It shows that APTNT's capital base is declining over the 2021–26 period.

Figure 3 Value of APTNT's capital base over time ($million, 2020–21)



Source: AER analysis.

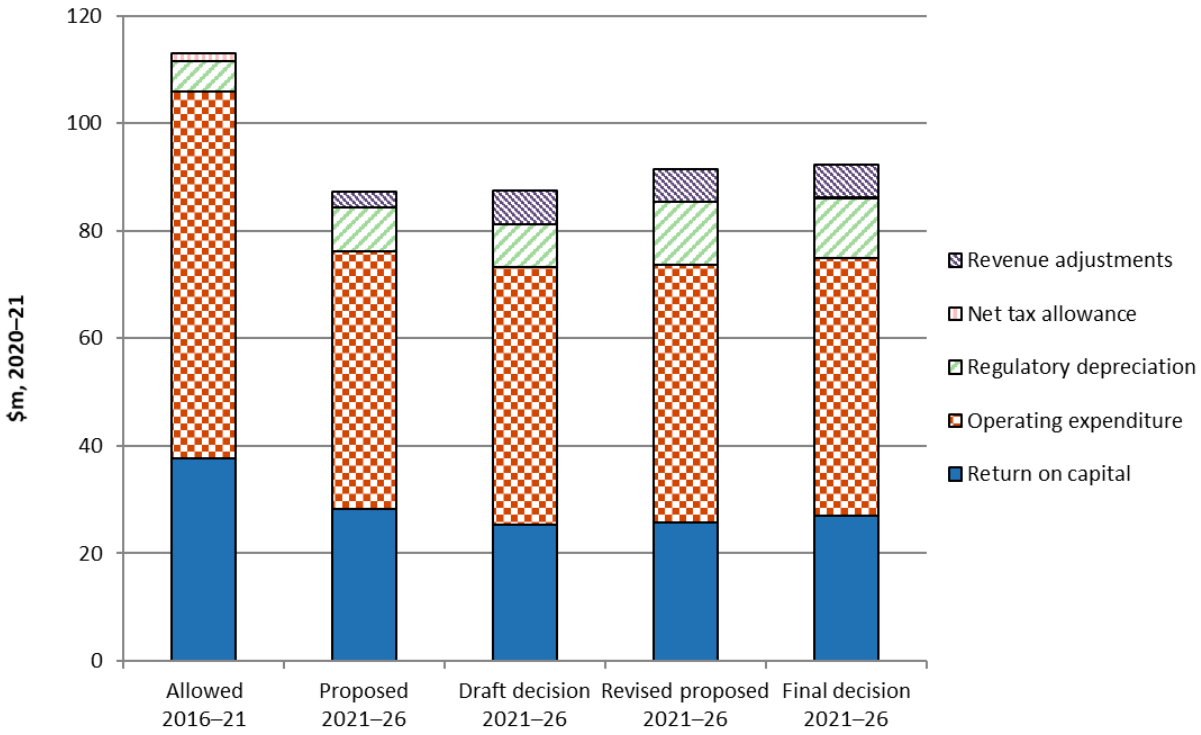
1.2 Key differences between our final decision and APTNT's revised proposal

APTNT has accepted our draft decision, including amendments to the incentive scheme and updating forecasts.[17]

Figure 4 compares the building block revenue from our final decision to APTNT's revised proposal for the 2021–26 period, and to approved revenue for the 2016–21 period.

The biggest contributors to the difference between our final decision revenue and APTNT's revised proposal essentially offset each other. These are the current rate of return (and, therefore, the return on capital) and revenue adjustments. Whilst APTNT has applied the 2018 rate of return instrument and proposes a 4.64 per cent rate of return, currently the risk free rate is higher than at the time of its revised proposal, leading to a rate of return of 4.81 per cent. Consequently, the amount for the return on capital building block is $1.5 million higher compared to APTNT's revised proposal. This change is partially offset by the decrease in the regulatory depreciation amount which is $0.6 million lower compared to APTNT's revised proposal.

Figure 4 AER's final decision on components of total revenue ($million, 2020–21)



Source: AER analysis.

[17] APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021.

1.3 APTNT's consumer engagement

Consumer engagement helps businesses determine how best to provide services that align with consumers' long term-interests. Consumer engagement in this context is about APTNT working openly and collaboratively with consumers and providing opportunities for their views and preferences to be heard and to influence APTNT's decisions.

In the regulatory process, strong consumer engagement can help us test network service providers' expenditure proposals, and can raise alternative views on matters such as service priorities, capex and opex proposals, and tariff structures.

We used a range of considerations to demonstrate whether consumers had been genuinely engaged in the development of APTNT's 2021–26 Amadeus Gas Pipeline access arrangement proposal. The framework used for considering consumer engagement arose from our Victorian electricity decisions.[18] This framework includes the consideration of the nature, breadth and depth of the engagement, and clearly evidencing the impact that consumer engagement had on the proposal and assessment of proposed expenditure outcomes.

In the lead up to submitting its initial proposal, we noted APTNT was clear and transparent with stakeholders when communicating its thinking and plans. As a subsidiary of the APA Group, an ASX-listed company, and a company with confidential contracts, there were some things APTNT could not disclose to stakeholders. However, as we noted in our draft decision, APTNT communicated early with stakeholders about what was and was not open to consumer influence. We consider this helped to set realistic stakeholder expectations upfront. APTNT encouraged a participative style when communicating with stakeholders. In particular, APTNT was influenced by stakeholders in the areas of energy affordability and the design of the interruptible reference service.[19]

When developing its revised proposal, APTNT continued to engage with its Amadeus Consumer Reference Group.[20] This group engaged with APTNT on the development of APTNT's initial proposal in July 2020, having been convened initially to guide development of the reference service proposal which APTNT submitted to us in July 2019. The group included representatives from across the community: consumer advocates, pipeline users and prospective users, gas producers, gas retailers, industry and business groups, land owners, and Northern Territory Government agencies.[21] The group met with APTNT on 15 December 2020 and presented APTNT with its view of our draft decision and APTNT's revised proposal.[22] APTNT released a draft revised proposal to the group for comment prior to submitting its revised proposal to us on 15 January 2021. APTNT received no comments on our draft decision or its revised proposal from the group or from its wider network of stakeholders.

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18 See table 7; AER, *Draft decision, Jemena distribution determination 2021–26, Overview*, September 2020, p. 43.

19 APTNT's revenue proposal clearly illustrates consumer concerns on process were heard and acted upon.

20 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, p. 2.

21 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal, Overview*, July 2020, p. 7.

22 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, p. 2.

Overall, we are of the opinion that ATPNT has put forward a well-informed proposal, underpinned by sound consumer engagement. The proposal incorporated stakeholder views, and after our review, was largely accepted at the draft decision stage, requiring only minor amendments to make the proposal acceptable. APTNT incorporated these minor amendments into its revised proposal for the Amadeus Gas Pipeline Access Arrangement. We consider the targeted stakeholder engagement approach undertaken by APTNT on its initial and revised proposals was well calculated and appropriate.

2 Reference services and tariffs

This section summarises our 2021–26 draft decision on the services covered by APTNT's access arrangement, the reference tariff and reference tariff variation mechanism, and forecast demand.

2.1 Services covered by the access arrangement

The access arrangement must specify the pipeline services APTNT proposes to be reference services having regard to the reference service factors.[23] For each reference service, including services ancillary to the reference services, the access arrangement specifies the reference tariff and the other terms and conditions on which these services will be provided.[24]

APTNT is to provide access to its reference services on the terms set out in its access arrangement, but may negotiate alternative terms and conditions at alternative prices with users. APTNT may also offer other non-reference services (negotiated services) which are not subject to regulation under the access arrangement. We may be called upon to determine the tariff and other conditions of access to services if an access dispute arises.[25]

APTNT's proposed reference service for the 2021–26 access arrangement is consistent with our November 2019 final decision on its July 2019 reference service proposal.[26] There will be two reference services:

- firm haulage
- interruptible haulage.

Our final decision approves the proposed firm and interruptible haulage reference services.

2.2 Reference tariff setting and reference tariff variation mechanism

Our final decision includes decisions on the structure and levels of APTNT's reference tariffs (reference tariff setting) and the mechanism by which those tariffs can vary over the access arrangement period (reference tariff variation mechanism).

Reference tariff setting requires APTNT to explain how it allocates revenues and costs between reference services and other services, and how it determines different tariffs. This involves setting and applying the formula by which APTNT can recover its costs. Our final decision is to approve APTNT's proposed structure of reference tariffs for the 2021–26 period. This includes APTNT's proposed tariff for the interruptible haulage reference service.

Our final decision is to accept APTNT's proposed reference tariff variation mechanism and cost pass through definitions.

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23 NGR, rule 48(1)(c) and rule 47A(15).

24 NGR, rule 48(1)(d).

25 NGL, Chapter 6.

26 AER, *Final Decision, APTNT (Amadeus) 2021–26 Reference Service Proposal*, November 2019.

2.3 Forecast demand

Our final decision accepts APTNT's demand forecasts for the Amadeus Gas Pipeline.

Demand is an important input into the derivation of APTNT's reference tariffs. Under a weighted average price cap, tariffs are determined by dividing cost (as reflected in forecast revenue) by total demand (TJ/day). This means that a decrease in forecast demand has the effect of increasing tariffs, and vice versa. Forecast demand also affects the forecasts of opex and capex that form part of our decision on the total revenue requirement.

In 2019, the Northern Gas Pipeline (NGP), owned by Jemena, was connected to the Amadeus Gas Pipeline at Warrego, providing transport services to the Carpentaria pipeline at Mt Isa. This significantly changed the gas flow configuration of the Amadeus Gas Pipeline, and the capacity of the pipeline has been reassessed with this change.[27] Gas delivered to the NGP flows into Queensland and into the East Coast market. The key drivers of demand for gas transportation for the Amadeus Gas Pipeline are the use of:

- firm transportation service for power generation in the Northern Territory
- firm transportation service under pre-existing agreements for delivery of gas to the NGP and onwards to the East Coast gas market
- interruptible service for the transportation of gas to NGP for the East Coast gas market.[28]

Users with pre-existing agreements have access to capacity at receipt points up to 145 TJ/d.[29] Unused capacity under pre-existing agreements can be made available to other shippers as interruptible services. APTNT forecasts gas volumes to power generation sites to grow from 46.2 TJ/d in 2020–21 to 55.8 TJ/d in 2025–26, based on the average rate of growth in gross state product in the Northern Territory.[30] APTNT forecast a potential capacity of 38.4 TJ/d is available for interruptible services and a forecast demand of 15 TJ/day based on analysis of stakeholder interest and feedback.[31]

We are aware that APTNT is considering a market expansion to increase the capacity of the Amadeus Gas Pipeline with its key network user, PWC. However, in its revised proposal, APTNT did not propose any expansion capex, stating it 'has not yet completed the engineering design work which must precede expansion, and has not concluded negotiation of the gas transportation agreements with prospective users which would support the economic feasibility of an expanded pipeline.'[32] We are aware that other parties have expressed an interest in expanding the capacity of the pipeline. If APTNT proposes to increase the capacity of the Amadeus Gas Pipeline next period, we can assess the market expansion separately under the NGR and consult APTNT on its application requirements.

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27 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Model validation and capacity assessment report - confidential,* July 2020, p. 3.

28 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response,* July 2020, p. 78.

29 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal, Overview*, July 2020, p. 26.

30 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response,* July 2020, p. 94.

31 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Information*, July 2020, p. 15.

32 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, p. 3.

3 Total revenue requirement

The total revenue requirement is a forecast of the efficient cost of providing gas transmission services over the access arrangement period. We determine annual revenue, and the total revenue requirement, in nominal terms. To do this, we take into account expected future inflation to determine nominal price levels in future periods. Our decision uses 5-year inflation expectations to convert revenues to nominal values.

Tariffs are derived from the total revenue requirement after consideration of demand for each tariff category. Our final decision is that APTNT will continue to operate under an average price cap. This means the tariffs we determine (including the means of varying the tariffs from year-to-year) are the binding constraint across the 2021–26 period, rather than the total revenue requirement set in our decision.[33] Tariffs are adjusted each year using 'X factors' – the percentage changes in real weighted average tariffs from year-to-year – as explained further in section 3.3.

3.1 The building block approach

We employ a building block approach to determine APTNT's total revenue requirement. That is, we base the total revenue requirement on our estimate of the efficient costs that APTNT is likely to incur in providing its reference services. The building block costs, as shown in Figure 5, include:[34]

- return on the projected capital base (or return on capital) – to compensate investors for the opportunity cost of funds invested in the business[35]
- depreciation of the projected capital base (or return of capital) – to return the initial investment to investors over time[36]
- forecast opex – the operating, maintenance and other non-capital expenses incurred in the provision of network services
- revenue adjustments – including revenue increments/decrements resulting from the application of incentive schemes
- estimated cost of corporate income tax.

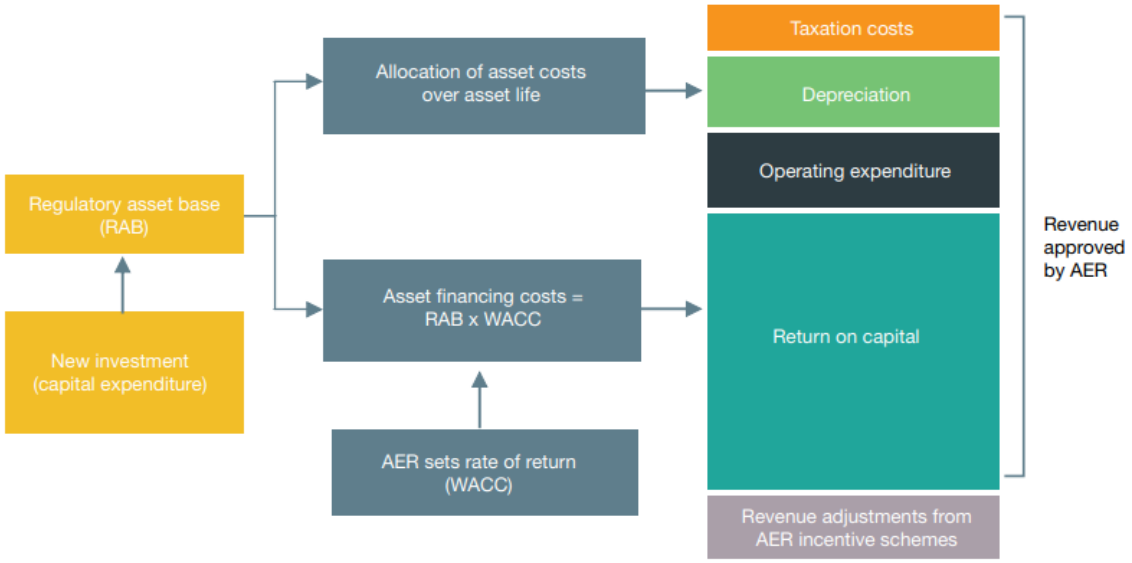
[33] Where actual demand across the 2021–26 access arrangement period varies from the demand forecast in the access arrangement, APTNT's actual revenue will vary from the revenue allowance determined in our decision. In general, if actual demand is above forecast demand, APTNT's actual revenue will be above forecast revenue, and vice versa.

[34] NGR, r. 76.

[35] Note that the forecast capex approved in our decisions affects the projected size of the capital base and, therefore, the revenue generated from the return on capital and depreciation building blocks.

[36] Ibid.

Figure 5 The building block approach to determining total revenue



Source: AER, *State of the Energy Market 2020,* June 2020, p. 123.

We use an incentive approach where, once regulated revenues are set for a five-year period, networks who keep actual costs below the regulatory forecast of costs retain part of the benefit. This incentive framework is a foundation of our regulatory approach and promotes the delivery of the National Gas Objective (NGO). Service providers have an incentive to become more efficient over time, as they retain part of the financial benefit from improved efficiency. Consumers also benefit when efficient costs are revealed and a lower cost benchmark is set in subsequent regulatory periods.

3.2 Final decision on total revenue

Our final decision sets out a number of amendments to the building block inputs making up APTNT's proposal for a total revenue requirement (smoothed) of $96.7 million ($nominal). We expand on these in section 4.

Based on our assessment of the building block costs,[37] our final decision determines a higher smoothed total revenue requirement of $97.9 million ($nominal),[38] which consists of a reduction in real tariffs of 39.1 per cent in 2021–22.[39] Section 3.3 of the *draft decision overview* discusses our approach to revenue smoothing and tariffs.[40]

Table 1 sets out our final decision on APTNT's total revenue requirement, by building block, for each year of the 2021–26 period, the total revenue after equalisation (smoothing) and the X factors for use in the tariff variation mechanism.

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37 Using the building block approach set out in NGR, r. 76.

38 This is calculated by smoothing the unsmoothed building block revenue for the 2021–26 period, as set in this decision.

39 The reason for the large decrease in tariffs in 2021–22 is due to the effect of a large increase in gas demand forecast (about 46 per cent) together with a decrease in the smoothed revenue of 13.5 per cent.

40 AER, *Draft decision, Amadeus Gas Pipeline access arrangement 2021–26, Overview*, November 2020, pp. 23–26.

Table 1 AER's final decision on APTNT's smoothed total revenue and X factors for the 2021–26 period ($million, nominal)

Building block	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Return on capital	6.1	6.0	5.7	5.5	5.3	28.7
Regulatory depreciation	1.9	2.1	2.3	2.6	2.9	11.8
Operating expenditure	9.8	10.1	10.3	10.2	10.4	50.8
Revenue adjustments	2.0	2.6	0.0	0.9	0.8	6.4
Net tax allowance	0.0	0.0	0.0	0.0	0.0	0.1
Total revenue – unsmoothed	**19.9**	**20.8**	**18.4**	**19.3**	**19.5**	**97.8**
Forecast revenue – smoothed	**19.9**	**19.7**	**19.6**	**19.4**	**19.3**	**97.9**
X factors[a]	39.07%	2.65%	2.92%	2.39%	2.65%	n/a
Inflation forecast	2.00%	2.00%	2.00%	2.00%	2.00%	n/a
Nominal price change[b]	-37.85%	-0.71%	-0.98%	-0.44%	-0.71%	n/a

Source: AER analysis.

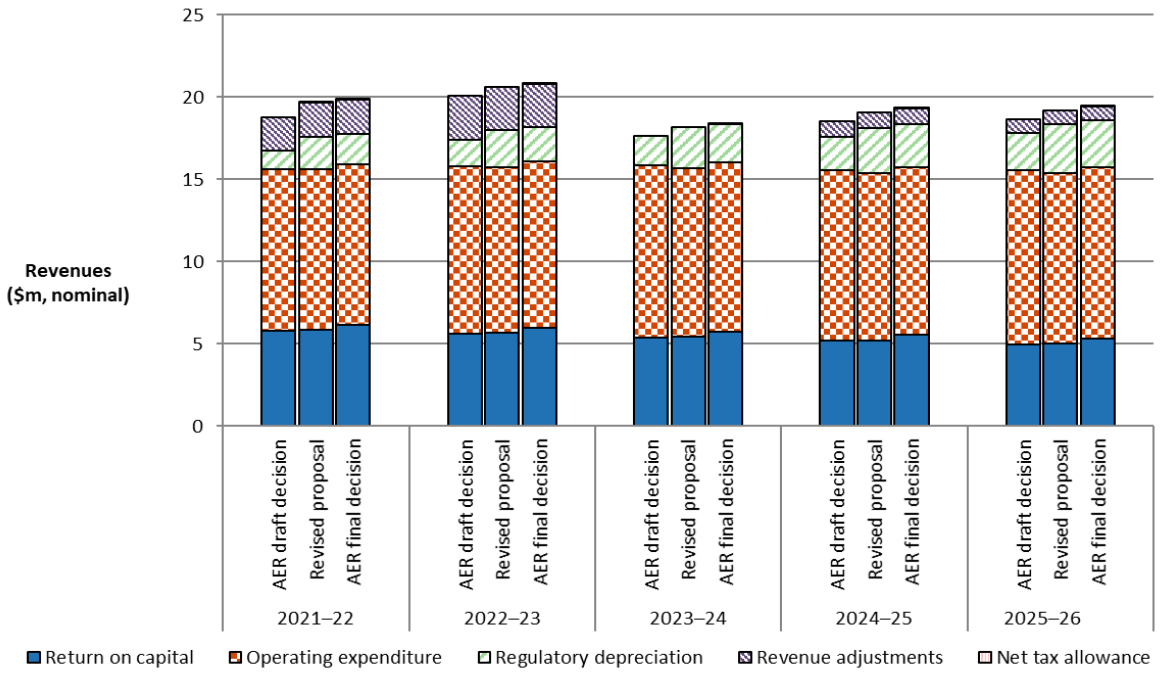
n/a: not applicable.

(a) Under the CPI–X form of control, a positive X factor is a decrease in price (and, therefore, in revenue). The X factor for 2021–22 is indicative only. The final decision establishes 2021–22 tariffs directly, rather than referencing a change from 2020–21 tariffs.

(b) The mathematical formula for a nominal price change under the CPI–X form of control is [(1+CPI)*(1–X factor)] – 1.

Figure 6 shows the effect of our final decision adjustments to APTNT's revised proposed building blocks for the 2021–26 period. It shows increases to the revised proposed building block for the return on capital due to a slightly higher rate of return and forecast inflation.

Figure 6 AER's final decision and APTNT's proposed building block revenue (unsmoothed) ($million, nominal)



Source: AER analysis.

Note: Revenue adjustments includes the ECM carryover amount.

3.3 Revenue smoothing and tariffs

After our assessment of APTNT's total building block revenue (unsmoothed), we need to determine the forecast revenue (smoothed) profile across the 2021–26 period.[41]

APTNT operates under an average price cap[42] as its tariff variation mechanism. This means we determine the average tariff change each year such that the net present value (NPV) of unsmoothed and smoothed revenue is equal across the 2021–26 period.[43] This average tariff change is known as the 'X factor'.

As part of the annual reference tariff variation process, we combine the X factors we have determined in our decision with actual inflation to create reference tariffs for the coming year. This means that the average prices paid by consumers, and therefore the revenues received by APTNT, change with the X factor plus actual inflation.[44]

Table 2 presents our final decision X factors compared to APTNT's revised proposal.

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41 This process of smoothing revenues is described in the NGR as 'revenue equalisation'. See NGR, r. 92.

42 An average tariff cap is where the total revenue is divided by forecast energy capacity to establish the average tariff. For 2021–22 the established average tariff becomes the reference tariff which forms the starting point for adjusting the price path under the CPI–X tariff variation mechanism.

43 See Attachment 10 of our draft decision for information on the mechanics of the tariff variation mechanism.

44 Under the CPI–X form of control, a positive X factor represents a decrease in price (and, therefore, in revenue). Conversely, a negative X factor represents an increase in price (and, therefore, in revenue).

Table 2 Average tariff change (X factors) across the 2021–26 period — AER's final decision and APTNT's revised proposal (per cent)

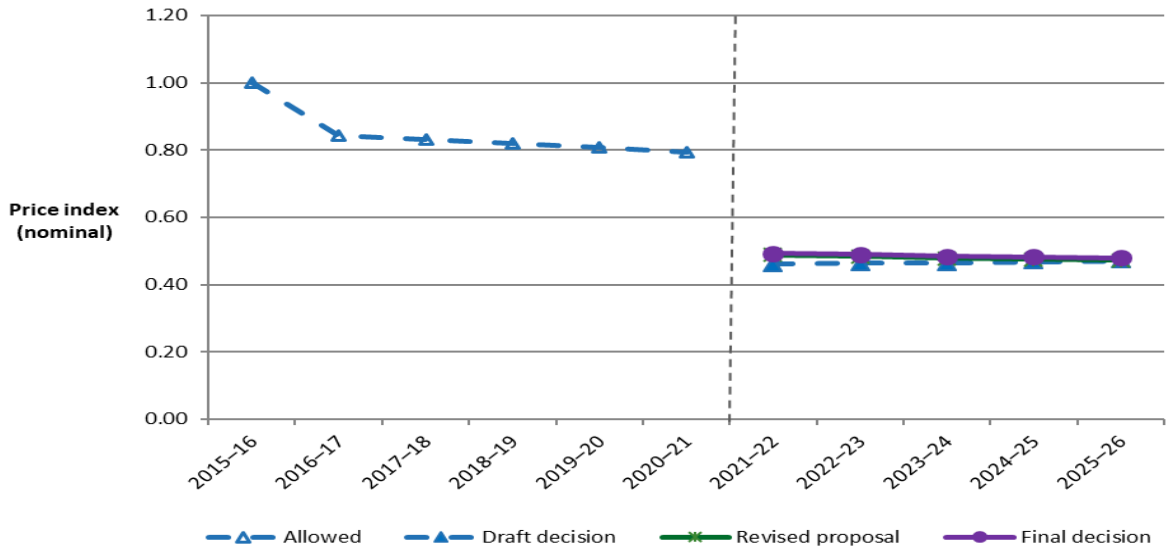
	2021–22	2022–23	2023–24	2024–25	2025–26
AER's final decision					
X factor[a]	39.07%	2.65%	2.92%	2.39%	2.65%
Nominal price change	–37.85%	–0.71%	–0.98%	–0.44%	–0.71%
APTNT's revised proposal					
X factor[a]	39.58%	2.65%	2.92%	2.39%	2.65%
Nominal price change	–38.44%	–0.83%	–1.10%	–0.56%	–0.83%

Source: APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Amended Gas Transmission PTRM,* 15 January 2021; AER analysis.

(a) Under the CPI–X form of control, a positive X factor is a decrease in price (and, therefore, in revenue). For example, a positive X factor of 2.65 per cent in 2022–23, as proposed by APTNT, means a real price decrease of 2.65 per cent that year. After consideration of inflation, this becomes a nominal price decrease of 0.83 per cent. The X factor for 2021–22 is indicative only. The final decision establishes 2021–22 tariffs directly, rather than referencing a change from 2020–21 tariffs.

Figure 7 shows indicative tariff paths for APTNT's reference services across the 2021–26 period. It compares APTNT's revised proposed tariff path with that approved previously for the 2016–21 period, and with this final decision.[45] This provides a broad, overall indication of the average movement in tariffs across the 2021–26 period.

Figure 7 Indicative reference tariff paths for APTNT's reference services from 2016 to 2026 (nominal index)



Source: AER analysis; AER, *Final Decision Amadeus Gas Pipeline access arrangement – PTRM – 2020–21 RoD update*, May 2020; APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement, Attachment 3 – Gas Transmission PTRM,* July 2020.

[45] The tariff path for 2016–26 uses actual inflation outcomes for 2016–21, and expected inflation for 2021–26.

APTNT's revised proposed tariff path for 2021–26 suggests an initial decrease of 38.4 per cent in tariffs ($nominal) in 2021–22, followed by average annual decreases of 0.8 per cent for the remaining years of the 2021–26 period.[46] Our 2021–26 final decision provides for a slightly higher forecast smoothed revenue than APTNT's proposal, in line with our amendments to total unsmoothed revenue. As such, a decrease of 37.9 per cent to tariffs was required at the start of the 2021–26 period, followed by average annual decreases of 0.7 per cent in the remaining four years of the period.

We have reviewed the smoothing profile following our draft decision, balancing the competing objectives as outlined in our draft decision.[47] We are satisfied that our final decision tariff path reflects a balanced consideration of these competing objectives.

46 APTNT's revised proposed nominal tariff path reflects its revised proposed expected inflation of 1.87 per cent.

47 AER, *Draft decision, Amadeus Gas Pipeline access arrangement 2021–26, Overview*, November 2020, pp. 23–26.

4 Key elements of our final decision on revenue

The components of our final decision include the building blocks we use to determine the revenue that APTNT may recover from its users. The following sections summarise our revenue decision by building block. The attachments to our draft decision and the sections below provide a more detailed explanation of our analysis and findings.

4.1 Capital base

The capital base roll forward accounts for the value of APTNT's regulated assets over the access arrangement period. The opening value of the capital base is used to determine the return on capital and return of capital (depreciation) building blocks. To calculate the capital base for a regulatory year within an access arrangement period, the opening value of the capital base is rolled forward by indexing it for inflation, adding any conforming capex, and subtracting depreciation and other possible factors (such as disposals).[48] Following this process, we also arrive at a closing value of the capital base at the end of each regulatory year of an access arrangement period.

Opening capital base as at 1 July 2021

Our final decision approves an opening capital base value of $127.6 million ($nominal) as at 1 July 2021 for APTNT. This amount is $1.6 million (or 1.2 per cent) higher than APTNT's revised proposed opening capital base value of $126.0 million ($nominal) as at 1 July 2021.[49] This reduction is made due to:

- updating the roll forward model (RFM) for 2020–21 actual consumer price index (CPI) that is now available
- a minor correction to 2019–20 asset disposal inputs in the RFM.

In its revised proposal, APTNT adopted our draft decision updates to the opening capital asset base as at 1 July 2021.[50] APTNT's revised proposed opening capital base is $126.0 million ($nominal).[51] This is $0.7 million (or 0.6 per cent) higher than our draft decision. The increase is due to APTNT updating 2019–20 capex with actuals in its revised proposed RFM.

We have assessed APTNT's revision to its capex. In particular, we found that 2019–20 actual asset disposals (as incurred and as commissioned) in the revised proposed RFM were inconsistent with the values presented in the annual reporting regulatory information notice (RIN) for that year. In response to an information request, APTNT has acknowledged that the values in the revised proposed RFM are incorrect.[52] We have therefore updated the asset disposals for 2019–20 in the RFM to be consistent with the annual RIN. We note APTNT stated

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48 The term 'rolled forward' means the process of carrying over the value of the capital base from one regulatory year to the next.

49 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Gas Transmission RFM,* 15 January 2021.

50 AER, *Draft decision, Amadeus Gas Pipeline access arrangement 2021–26, Attachment 2 – Capital base*, November 2020, pp. 11–12.

51 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal,* 15 January 2021, p. 9.

52 APTNT, *Information request #007 – Actual asset disposal inputs in the RFM*, February 2021.

in its revised proposal that it has not updated its estimated capex for 2020–21.[53] We will account for the financial impact of any difference between actual and estimated capex for 2020–21 at the next access arrangement review.

For the reasons discussed in section 4.4 below we accept the revised proposed 2019–20 net capex (subject to the amendment to asset disposals discussed above), and 2020–21 net capex as conforming capex during the 2016–21 access arrangement period. We also consider that actual conforming capex has been properly accounted for in the capital base roll forward, consistent with the requirements in the NGR.[54]

We have also updated the inflation input for 2020–21 with actual CPI in the RFM which became available after APTNT submitted its revised proposal. This update increases the opening capital base value by about $1.6 million (or 1.2 per cent) from the revised proposal, all else being equal.

Table 3 sets out our final decision on the roll forward of APTNT's capital base during the 2016–21 access arrangement period to determine the opening capital base as at 1 July 2021.

Table 3 AER's final decision on APTNT's capital base roll forward for the 2016–21 access arrangement period ($million, nominal)

	2016–17	2017–18	2018–19	2019–20	2020–21[a]
Opening capital base	115.8	119.4	119.7	122.6	131.2
Net capex[b]	5.3	1.9	4.7	10.6	4.4
Indexation of capital base	1.7	2.3	2.1	2.3	1.1
Less: straight-line depreciation[c]	3.5	3.8	4.0	4.2	4.4
Interim closing capital base	119.4	119.7	122.6	131.2	132.4
Difference between estimated and actual capex in 2015–16 capex					–3.7
Return on difference for 2015–16 capex					–1.1
Closing capital base as at 30 June 2021					**127.6**

Source: AER analysis.

(a) Based on estimated capex provided by APTNT.

(b) Net of disposals and adjusted for actual CPI.

(c) Adjusted for actual CPI. Based on forecast capex.

[53] APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, p. 5.

[54] NGR, rr. 77(2)(b), 79(1).

Forecast closing capital base as at 30 June 2026

We approve a forecast closing capital base value of $131.8 million ($nominal) at 30 June 2026 for APTNT.[55] This is $2.2 million (or 1.7 per cent) higher than the $129.5 million ($nominal) in APTNT's revised proposal. Our final decision on the projected closing capital base reflects our changes to the opening capital base as at 1 July 2021, and our final decisions on expected inflation (section 4.2) and forecast depreciation (section 4.3).

Table 4 sets out our final decision on the projected roll forward of the capital base for APTNT over the 2021–26 access arrangement period.

Table 4 AER's final decision on APTNT's projected capital base roll forward for the 2021–26 access arrangement period ($million, nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26
Opening capital base	127.6	128.8	129.5	130.4	131.2
Net capex[a]	3.1	2.8	3.2	3.4	3.5
Indexation of opening capital base	2.6	2.6	2.6	2.6	2.6
Less: straight-line depreciation	4.4	4.7	4.9	5.2	5.5
Closing capital base	**128.8**	**129.5**	**130.4**	**131.2**	**131.8**

Source: AER analysis.

(a) Net of forecast disposals. In accordance with the timing assumptions of the PTRM, the capex includes a half-year WACC to compensate for the six month period before capex is added to the capital base for revenue modelling.

For this final decision, we confirm our draft decision position that the opening capital base as at 1 July 2026 is to be established using the approved depreciation schedules (straight-line) based on forecast capex at the asset class level.[56]

4.2 Rate of return and value of imputation credits

The return each business is to receive on its capital base (the 'return on capital') is a key driver of proposed revenues. We calculate the regulated return on capital by applying a rate of return to the value of the capital base.

We estimate the rate of return by combining the return of the two sources of funds for investment: equity and debt. This allowed rate of return provides the business with a return on capital to service the interest on its loans and give a return on equity to investors.

An accurate estimate of the rate of return is necessary to promote efficient prices in the long-term interests of consumers. If the rate of return is set too low, the network business may not be able to attract sufficient funds to be able to make the required investments in the network

[55] NGR, r. 78.

[56] NGR, r. 90.

and reliability may decline. Conversely, if the rate of return is set too high, the network business may seek to spend too much and consumers will pay inefficiently high tariffs.

As required under the NGL, we apply the AER's Rate of Return Instrument (2018 Instrument) to estimate the rate of return for APTNT.[57]

This leads to a rate of return of 4.81 percent (nominal vanilla) for this final decision. This is 0.17 percentage points higher than our draft decision placeholder estimate of 4.64 per cent (nominal vanilla).[58]

This rate of return, in Table 5 will apply to the first year of the 2021–26 access arrangement period. A different rate of return would apply for the remaining regulatory years of the period. This is because we will update the return on debt component of the rate of return each year in accordance with the 2018 Instrument, to use a 10-year trailing average portfolio return on debt that is rolled-forward each year. Hence, only 10 per cent of the return on debt is calculated from the most recent averaging period with 90 per cent from prior periods.

We also note that APTNT's proposed risk free rate[59] and debt averaging periods have been (and will be) used to estimate its rate of return because they complied with the conditions set out in the 2018 Instrument.[60] These were submitted with the initial proposal and we specify the debt averaging period in confidential appendix A.

Table 5 AER's final decision on APTNT's rate of return (% nominal)

	AER's draft decision (2021–26)	APTNT's revised proposal (2021–26)	AER's final decision (2021–26)	Allowed return over the access arrangement period
Nominal risk free rate	0.91%[a]	0.91%	1.34%[b]	
Market risk premium	6.1%	6.1%	6.1%	
Equity beta	0.6	0.6	0.6	
Return on equity (nominal post–tax)	4.57%	4.57%	5.00%	Constant (%)
Return on debt (nominal pre–tax)	4.69%[a]	4.69%	4.69%[c]	Updated annually
Gearing	60%	60%	60%	Constant (60%)
Nominal vanilla WACC	4.64%	4.64%	4.81%	Updated annually for return on debt
Expected inflation	2.37%	1.87%	2.00%	Constant (%)

Source: AER analysis; AER, *Draft Decision, Amadeus Gas Pipeline Access Arrangement 2021–26*, *Overview*, November 2020, p. 30; APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement Information*, 15 January 2021, pp. 20, 31.

(a) Calculated using a placeholder averaging period of 20 business days ending 31 August 2020.

(b) Calculated using an averaging period of 20 business days ending 26 February 2021.

(c) We use the proposed debt averaging period. The return on debt has been updated for this averaging period.

[57] NGL, s30D, see https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/rate-of-return-instrument-2018/final-decision.

[58] AER, *Draft decision, Amadeus Gas Pipeline access arrangement 2021–26, Overview*, November 2020, p. 29.

[59] This is also known as the return on equity averaging period.

[60] AER, *Rate of Return Instrument*, December 2018, cll. 7–8, 23–25, 36.

4.2.1 Debt and equity raising costs

In addition to providing for the required rate of return on debt and equity, we provide an allowance for the transaction costs associated with raising debt and equity. We include debt raising costs in the opex forecast because these are regular and ongoing costs. We include equity raising costs in the capex forecast because these costs are incurred once and would be associated with funding the particular capital investments.

APTNT's revised proposal forecast zero equity raising costs in the post-tax revenue model (PTRM).[61] We have updated our estimates for this access arrangement period based on the benchmark approach using updated inputs. This results in zero equity raising costs.

Our final decision is to accept the method used in APTNT's revised proposal which uses an annual rate of 8.1 basis points per annum (bppa).[62] We have considered this annual rate and found that our alternative benchmark estimate (9.5 bbpa) is not materially different from APTNT's revised proposal.

4.2.2 Imputation credits

Our final decision applies a value of imputation credits ('gamma') value of 0.585, as set out in the 2018 Instrument.[63] This was the result of extensive analysis and consultation conducted as part of the 2018 rate of return review.[64] APTNT's revised proposal has adopted the value of gamma set out in the 2018 Instrument.[65]

4.2.3 Expected inflation

We estimate an expected inflation of 2.00 per cent (see Table 6 for calculations) based on the approach adopted in our final position paper from our 2020 *Review of the treatment of inflation* (inflation review).[66] APTNT supported the new approach to estimating expected inflation, and advocated that the AER adopt the new approach in its final decisions.[67]

Table 6 Final decision on APTNT's forecast inflation (%)

	Year 1	Year 2	Year 3	Year 4	Year 5	Geometric average
Expected inflation	1.50%	1.75%	2.00%	2.25%	2.50 %	2.00%

Source: AER analysis; *RBA Statement on Monetary Policy*, February 2021.

61 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Amended Gas Transmission PTRM,* 15 January 2021.

62 See section 4.5 for our final decision on opex (which encompass debt raising cost); APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement Information*, 15 January 2021; APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Amended Gas Transmission PTRM*, 15 January 2021.

63 AER, *Rate of return instrument*, December 2018, cl. 27.

64 AER, *Rate of return instrument explanatory statement*, December 2018, pp. 307–382.

65 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Amended Gas Transmission PTRM*, 15 January 2021.

66 AER, *Final position, Regulatory treatment of inflation*, December 2020.

67 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement Information*, 15 January 2021, p. 2.

Our previous approach to estimate expected inflation used a 10 year average of the RBA's headline rate forecasts for 1 and 2 years ahead, and the mid-point of the RBA's target band—2.5 per cent—for years 3 to 10. The period of 10 years matches the term of the rate of return.

Our inflation review considered that this should be augmented by:[68]

- shortening the target inflation horizon from ten years to a term that matches the regulatory period (typically five years)
- applying a linear glide-path from the RBA's forecasts of inflation for year 2 to the mid-point of the inflation target band (2.5 per cent) in year 5.

The key reasons for these changes are:[69]

- there was a mismatch between our estimate of expected inflation over a 10 year term, and our roll forward of the capital base, which is done over a 5 year term. We consider that shortening the inflation term to match the regulatory period, although creating a mismatch with the term of the rate of return, is the more critical mismatch to resolve. This is because of the sustained decline in the required rate of return and the increased difference between 5 and 10 year inflation expectations due to short-term fluctuations in inflation expectations
- applying a glide-path acknowledges that it is likely to take longer than previously for inflation to revert to the mid-point of the RBA's target band following periods of sustained low or high inflation.

We considered that these changes will provide service providers a reasonable opportunity to more accurately recover their efficient costs in an increasingly changing market to better serve consumers with the energy services they want in the long term. Broadly, this was because we take out what we expect to put back into the capital base through our regulatory models.

4.3 Regulatory depreciation

When determining the total revenue for APTNT, we include an amount for the depreciation of the projected capital base (otherwise referred to as 'return of capital').[70] Regulatory depreciation is used to model the nominal asset values over the 2021–26 access arrangement period and the depreciation amount in the total revenue requirement.[71]

Our final decision determines a regulatory depreciation amount of $11.8 million ($nominal) for APTNT for the 2021–26 access arrangement period. This represents a reduction of $0.6 million (or 4.9 per cent) from APTNT's revised proposed regulatory depreciation amount of $12.4 million ($nominal).[72] The key reasons for the change compared to the revised proposal are:

- we determined a higher opening capital base as at 1 July 2021 compared to the revised proposed value (section 4.1)

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68 AER, *Final position, Regulatory treatment of inflation*, December 2020, p. 6.

69 AER, *Final position, Regulatory treatment of inflation*, December 2020, p. 6.

70 NGR, r. 76(b).

71 The regulatory depreciation amount is the net total of the straight-line depreciation less the inflation indexation of the capital base.

72 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Attachment 3 – Gas Transmission PTRM,* July 2020.

- we determined a higher expected inflation rate for the 2021–26 period for this final decision compared to the revised proposed value (section 4.2.3). In the draft decision, we applied a placeholder expected inflation rate of 2.37 per cent per annum as the inflation review was still underway. APTNT's revised proposal adopted a placeholder expected inflation rate of 1.87 per cent per annum, based on the approach set out in the inflation review's final position paper. This resulted in an increase of $2.9 million (or 33.5 per cent) to the regulatory depreciation amount compared to the draft decision, all else being equal. For this final decision, we apply an expected inflation rate of 2.0 per cent that has been determined based on the method set out in the latest version of the PTRM, which implemented the inflation review final position. This reduced the forecast regulatory depreciation amount by $0.7 million (or 6.0 per cent) from the revised proposed amount, all else being equal. Our final decision on the expected inflation is discussed in section 4.2.

Table 7 sets out our final decision on APTNT's forecast regulatory depreciation for the 2021–26 period.

Table 7 AER's final decision on APTNT's forecast regulatory depreciation for the 2021–26 period ($million, nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Straight-line depreciation	4.4	4.7	4.9	5.2	5.5	24.7
Less: indexation on opening capital base	2.6	2.6	2.6	2.6	2.6	12.9
Regulatory depreciation	**1.9**	**2.1**	**2.3**	**2.6**	**2.9**	**11.8**

Source: AER analysis.

Standard and remaining asset lives as at 1 July 2021

For this final decision, we accept APTNT's existing asset classes and its straight-line depreciation method used to calculate the regulatory depreciation amount, which is consistent with our draft decision. We also accept APTNT's revised proposed standard asset lives for its asset classes in respect of the forecast capex to be incurred for the 2021–26 period. They are consistent with APTNT's initial proposal and our draft decision.

We confirm our draft decision position to accept APTNTs revised proposed weighted average method to calculate the remaining asset lives as at 1 July 2021 for depreciating its existing assets. This method is a continuation of the approved approach used in the 2016–21 access arrangement and applies the approach as set out in our RFM. In accepting the weighted average method, we have updated the remaining asset lives to reflect our amendments to the opening capital base. We note that the updated remaining asset lives did not result in a material change to the regulatory depreciation amount.

Table 8 sets out our final decision on the standard and remaining asset lives for APTNT over the 2021–26 access arrangement period. We are satisfied the standard and remaining asset lives approved in this final decision will result in a depreciation schedule that reflects the depreciation criteria of the NGR.[73]

[73] NGR, r. 89(1).

Table 8 AER's final decision on APTNT's standard and remaining asset lives for the 2021–26 access arrangement period (years)

Asset class	Standard asset life	Remaining asset life as at 1 July 2021
Pipelines	80.0	55.9
Compressors	30.0	10.0
Meter station	50.0	37.0
SCADA	15.0	8.8
O&M facilities	10.0	7.0
Buildings	40.0	28.9
Corporate assets (IT software)	n/a	n/a
Land and easement	n/a	n/a
Leased assets	n/a	11.4

Source: AER analysis.

n/a Not applicable. We have not assigned a standard asset life and remaining asset life to the 'Land and easement' asset class because the assets allocated to it are non-depreciating assets. We have not assigned a standard asset life to the asset classes of 'Corporate assets (IT Software)' and 'Leased assets' because there are no new capex being allocated to these asset classes in the future. We have not assigned a remaining asset life to the 'Corporate assets (IT software)' asset class because it has no opening capital base value as at 1 July 2021.

4.4 Capital expenditure

Capital expenditure (capex) refers to the capital costs and expenditure incurred in the provision of pipeline services.[74] This investment mostly relates to assets with long lives. APTNT recovers the costs of these assets through the return on capital and depreciation building blocks. In this way, APTNT recovers the financing cost and depreciation associated with these assets over the expected life of these assets.

Our final decision includes an assessment of APTNT's actual capex in the 2016–21 period (which forms part of its opening capital base)[75] and its forecast capex for the 2021–26 period (which forms part of its projected capital base).[76]

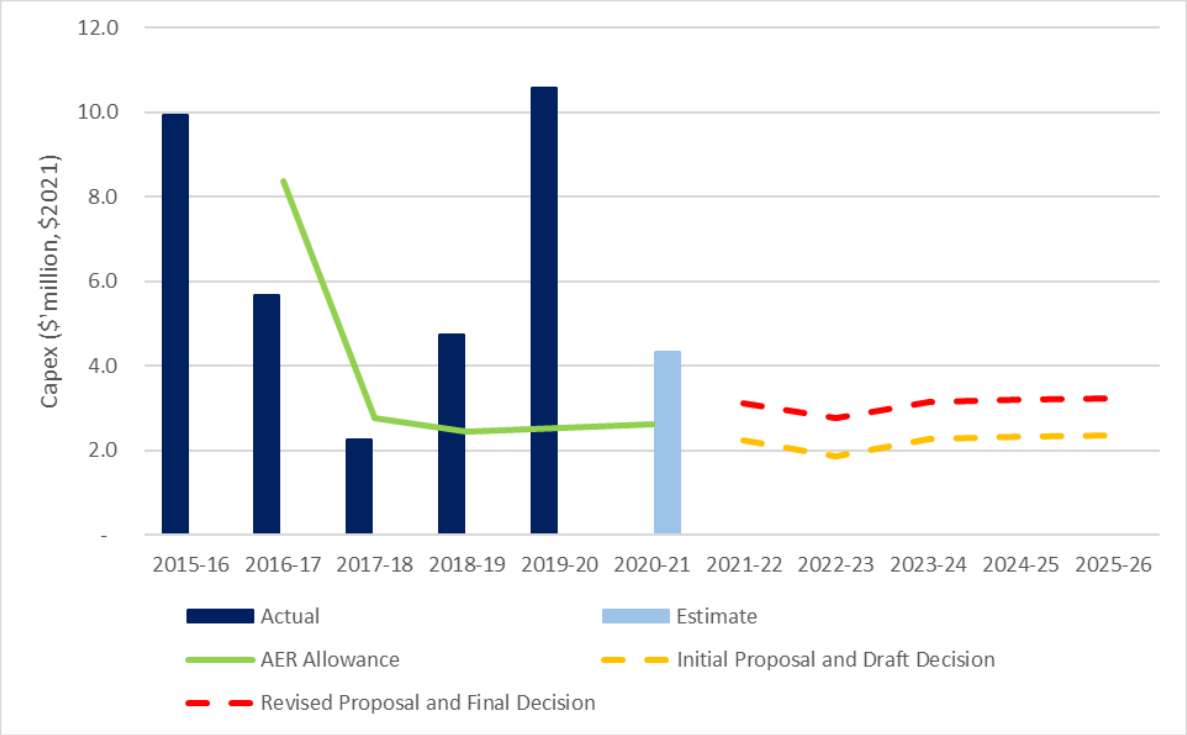
Figure 8 compares APTNT's past and proposed forecast capex, and the forecasts approved by us in our previous 2016–21 decision and this 2021–26 final decision.

74 NGR, r. 69.

75 NGR, r. 77.

76 NGR, r. 78(b).

Figure 8 AER's final decision compared to APTNT's past and proposed capex ($million, 2020–21)



Source: AER analysis.

4.4.1 Conforming capex for the 2016–21 period

APTNT expects to spend a total net capex of $27.0 million ($2020–21) for the 2016–21 period. This is 50 per cent more than the amount included in the AER's decision for this period. We approve this figure as conforming capex under rule 79(1) of the NGR.

We have reviewed APTNT's actual capex for 2019–20 in this final decision for the 2021–26 final decision, and will review 2020–21 as part of our review of APTNT's 2026–31 access arrangement.

In approving APTNT's submitted expenditure for the 2016–21 period in our draft decision, we considered the following factors relating to APTNT's overspend:

- APTNT submitted $4.9 million ($2020–21) for capitalised overheads where there was no AER approved amount for this category
- the application of Australian accounting standard AASB16 leases resulted in a one-off adjustment of $4.1 million ($2020–21) in capitalised lease payments in 2019–20
- there was an unforeseen project of $2.2 million ($2020–21) for the installation of pressure control equipment in Warrego due to interconnection to the Northern Gas Pipeline.

In its revised proposal, APTNT updated its 2020–21 forecast from $9.9 million ($2020–21) to $10.6 million ($2020–21) based on the actual capital expenditure for that year. The slight increase in expenditure is primarily the result of additional main line valve actuator replacements and workshop equipment requirements.

While we were of the view that capitalised overheads should have been forecast by APTNT and accounted for in our 2016–21 decision, we are satisfied that these costs, along with the other overspend expenditure items, remain consistent with the NGR and meet the requirements as conforming capex.

4.4.2 Conforming capex for the 2021–26 period

In our draft decision, we approved $11.1 million ($2020–21) of APTNT's proposed total net capex for 2021–26 as conforming capex. This is $16.0 million (59 per cent) below APTNT's actual and estimated spend for the 2016–21 period. We requested APTNT provide forecasts of asset disposals and capitalised corporate overheads for the 2021–26 period in its revised proposal.

APTNT has provided further information and updated its forecast in its revised proposal to include asset disposals and capitalised corporate overheads for the 2021–26 period.

Table 9 shows approved capex for the 2021–26 access arrangement period by category.

Table 9 AER approved capital expenditure by category over the 2021–26 access arrangement period ($million, 2020–21)

Category	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Expansion	-	-	-	-	-	-
Replacement	1.4	1.5	1.8	1.6	1.3	7.6
Non-system	0.8	0.4	0.5	0.8	1.1	3.5
Capitalised overheads	0.9	0.9	0.9	0.9	0.9	4.4
Gross total capex	**3.1**	**2.8**	**3.1**	**3.2**	**3.2**	**15.5**
Contributions	-	-	-	-	-	-
Asset disposals	0.1	0.1	0.1	0.1	0.1	0.6
Net total capex	**3.0**	**2.6**	**3.0**	**3.1**	**3.1**	**14.8**

Source: AER Analysis.

Note: The figures in the table represent 'as incurred' expenditures. Table may not sum due to rounding.

APTNT did not propose any expansion capex in its revised proposal, despite interest from stakeholders to expand the pipeline capacity. See section 2.3 for further details on the associated demand.

Overall, we are satisfied with the additional information provided in the revised proposal, and accept a total net capex of $14.8 million ($2020–21) for the 2021–26 period.

4.5 Operating expenditure

Operating expenditure (opex) is the operating, maintenance and other non-capital expenses, incurred in the provision of pipeline services.

Our final decision is to accept APTNT's revised proposal for a total opex forecast of $47.9 million ($2020–21),[77] including debt raising costs, for the 2021–26 access arrangement period. This is the same amount proposed by APTNT's in its initial proposal and which we accepted in our draft decision as we were satisfied the proposed amount complies with the opex criteria, and satisfies the criteria for forecasts and estimates.

APTNT's revised proposal did not make any changes to its initial opex proposal. We have not identified any new information, including updates to inputs, which impacts upon our reasoning as set out in the draft decision.

Our final decision represents a 19.4 per cent decrease from APTNT's actual and estimated opex expenditure in the 2016–21 access arrangement period, and a 30 per cent reduction from the approved opex forecast for the 2016–21 access arrangement.[78] Table 10 sets out the total opex approved in this final decision.

Table 10 AER final decision on total opex for the 2021–26 access arrangement period ($million, 2020–21)

	2021–22	2022– 23	2023–24	2024–25	2025–26	Total
APTNT's revised proposal and our final decision	9.6	9.7	9.7	9.4	9.4	47.9

Source: APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement, Attachment 5 – Operating Expenditure Model,* July 2020; AER analysis.

Note: Numbers may not add up due to rounding. Includes debt raising costs.

4.5.1 Efficiency carryover mechanism for the 2021–26 period

An efficiency carryover mechanism (ECM) is intended to provide a continuous incentive for service providers to pursue efficiency improvements in opex, and provide for a fair sharing of these between service providers and network users.

Our final decision is to approve a carryover amount totalling $6.2 million ($2020–21) from the application of the ECM in the 2016–21 access arrangement period. This is the same carryover amount we calculated in our draft decision[79] and was accepted by APTNT in its revised proposal.[80]

Table 11 shows our final decision on the carryover amounts APTNT accrued during the 2016–21 period.

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77 APTNT*, 2021–26 Access Arrangement Proposal – Attachment 5 Operating Expenditure Model*, July 2020.

78 Difference is calculated based on the five year 2016–21 period unlagged inflation.

79 AER, *Draft decision – Amadeus Gas Pipeline access arrangement 2021–26*, *Attachment 8 – Efficiency carryover mechanism*, November 2020, p. 1.

80 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, pp. 18–20.

Table 11 AER's final decision on carryover amounts for the 2021–26 period ($million, 2020–21)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
AER's final decision	2.0	2.5	–	0.9	0.8	6.2

Source: AER, Draft decision – Amadeus Gas Pipeline access arrangement 2021–26, Attachment 8 – Efficiency carryover mechanism, November 2020, p. 1.

Note: Numbers may not add up due to rounding. Differences of '0.0' and '–0.0' represent small variances and '–' represents no variance.

4.6 Corporate income tax

Our determination of the total revenue for APTNT includes the estimated cost of corporate income tax for APTNT's 2021–26 access arrangement period.[81] Under the post-tax framework, a corporate income tax amount is calculated as part of the building blocks assessment.

Our final decision on APTNT's estimated cost of corporate income tax is $0.09 million ($nominal) over the 2021–26 access arrangement period. This decision is marginally higher than APTNT's revised proposed amount of $0.02 million ($nominal). This is also higher than our draft decision of zero corporate income tax.

The estimated corporate income tax is impacted by our decision on various building block components. In particular, the higher forecast corporate income tax in our final decision for APTNT is due to:

- our final decision to apply an updated rate of return on equity (section 4.2)[82]
- our final decision on the expected inflation rate to apply over the 2021–26 period, as a result of our implementation of the findings of our 2020 *Review of treatment of inflation*[83] (section 4.2.3)[84]
- our final decision to marginally lower the revised proposed opening TAB value as at 1 July 2021.[85]

We accept APTNT's revised proposed amount of forecast immediate expensing of capex, consistent with our draft decision. We will collect actual data relating to this expenditure in our annual reporting RIN to further inform our decision on the amount of forecast immediate expensing of capex in the next determination for APTNT.

Table 12 sets out our final decision on the estimated cost of corporate income tax for APTNT over the 2021–26 access arrangement period.

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81 NGR, r. 76(c).

82 All else equal, a higher rate of return on equity will increase the cost of corporate income tax because it increases the return on the equity portion of the capital base, a component of the taxable income.

83 AER, *Final position paper – Regulatory treatment of inflation*, December 2020.

84 All else equal, a higher expected inflation rate will decrease the cost of corporate income tax because it decreases the forecast regulatory depreciation, a component of the taxable income.

85 All else equal, a lower opening TAB value will decrease the tax depreciation, a component of the tax expense and increase the cost of corporate income tax.

Table 12 AER's final decision on APTNT's cost of corporate income tax for the 2021–26 access arrangement period ($million, nominal)

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Tax payable	0.09	0.04	0.03	0.03	0.02	0.22
Less: value of imputation credits	0.05	0.02	0.02	0.02	0.01	0.13
Net corporate income tax amount	**0.04**	**0.02**	**0.01**	**0.01**	**0.01**	**0.09**

Source: AER analysis.

Opening tax asset base as at 1 July 2021

For our final decision, we determine an opening TAB value as at 1 July 2021 of $43.4 million ($nominal). This value is $0.02 million less than APTNT's revised proposal.

APTNT's revised proposal adopted our draft decision[86] and also updated the 2019–20 estimated capex with actuals.[87] APTNT stated in its revised proposal that it has not updated its estimated capex for 2020–21.

For the reasons discussed in section 4.1, we have updated the 2019–20 actual asset disposals (as incurred and as commissioned) for the 'O&M facilities' asset class in the RFM to be consistent with the annual RIN resulting in a reduction of $0.02 million ($nominal) to APTNT's revised proposed 2019–20 actual capex. We will update the 2020–21 estimated capex for actuals at the next access arrangement review.

Table 13 sets out our final decision on the roll forward of APTNT's TAB values over the 2016–21 access arrangement period.

Table 13 AER's final decision on APTNT's TAB roll forward for the 2016–21 access arrangement period

	2016–17	2017–18	2018–19	2019–20	2020–21[a]
Opening TAB	34.5	38.7	38.7	38.6	42.7
Capital expenditure[b]	6.7	2.8	2.9	7.4	4.3
Less: tax depreciation	2.4	2.8	3.0	3.2	3.7
Closing TAB	**38.7**	**38.7**	**38.6**	**42.7**	**43.4**

Source: AER analysis.

(a) Based on estimated capex.

(b) Net of disposals.

[86] AER, *Draft decision – Amadeus Gas Pipeline access arrangement 2021–26*, *Attachment 7 – Corporate income tax*, November 2020, p. 15.

[87] APTNT, Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Gas Transmission RFM, 15 January 2021.

Standard and remaining tax asset lives as at 1 July 2021

For this final decision, we accept APTNT's revised proposed standard tax asset lives for all of its asset classes. They are consistent with our draft decision, and we confirm our position that standard asset lives are broadly consistent with the values prescribed by the Commissioner for taxation in ATO ruling 2020/3 and the ITAA.[88]

Consistent with the draft decision, we accept APTNT's revised proposal to use the weighted average method for calculating the remaining tax asset lives as at 1 July 2021. This method is a continuation of the approved approach used in the 2016–21 access arrangement period and applies the approach as set out in our RFM. We therefore accept APTNT's revised proposed remaining tax asset lives, subject to an update to the remaining tax asset life for the 'O&M facilities' asset class to reflect our amendment to the opening TAB value.

Table 14 sets out our final decision on the standard and remaining tax asset lives for APTNT. We are satisfied that the standard and remaining tax asset lives provide an estimate of the tax depreciation amount that would be consistent with the tax expenses used to estimate the annual taxable income for a benchmark efficient service provider.[89]

Table 14 AER's final decision on APTNT's standard and remaining tax asset lives as at 1 July 2021 (years)

Asset class	Standard tax asset life[a]	Remaining tax asset life as at 1 July 2021[b]
Pipelines	20.0	13.7
Compressors	20.0	n/a
Meter station	20.0	15.3
SCADA	15.0	13.1
O&M facilities	10.0	7.0
Buildings	40.0	n/a
Corporate assets (IT software)	n/a	n/a
Land and easement	n/a	n/a
Leased assets	n/a	11.4

Source: AER analysis.

(a) All new assets use the diminishing value method of tax depreciation.

(b) Used for straight-line method of tax depreciation.

n/a Not applicable. We have not assigned a standard tax asset life and remaining tax asset life to the 'Land and easement' asset class because the assets allocated to it are non-depreciating. We have not assigned a standard tax asset life to the 'Corporate assets (IT software)' and 'Leased assets' asset classes because they have no new capex allocated to them for the 2021–26 access arrangement period. We have not assigned a remaining tax asset life to the "Compressors', 'Buildings and 'Corporate assets (IT software)' asset classes because they have no opening TAB value as at 1 July 2021.

[88] ATO, *Taxation Ruling TR2020/3 – Income tax: effective life of depreciating assets (applicable from 1 July 2020).* p. 181. They are also consistent with the statutory cap on the effective life of 20 years for gas pipeline assets under the ITAA.

[89] NGR, r. 87A(1).

5 Incentive schemes to apply for 2021–26

5.1 Efficiency carryover mechanism

As noted in section 4.5.1 an efficiency carryover mechanism (ECM) is intended to provide a continuous incentive for service providers to pursue efficiency improvements in opex, and provide for a fair sharing of these between service providers and network users.

Carryover amounts from the 2016–21 period

APTNT accepted our draft decision in its revised proposal to calculate the ECM carryovers for the 2016–21 regulatory control period.[90]

Application of the ECM for the 2021–26 period

APTNT accepted our revisions to the ECM in its revised proposal.[91] The ECM is set out in clause 7.1 of APTNT's 2021–26 Access Arrangement.[92]

Our final decision is to approve the application of an ECM to APTNT in the 2021–26 period. We made minor amendments to APTNT's proposed ECM in our draft decision[93] to be consistent with version 2 of the efficiency benefit sharing scheme (EBSS) for electricity service providers and other gas distribution businesses.[94] In particular, we changed the ECM formula to reflect the chosen base year (2017–18) for our opex forecast.

To ensure continuous incentives, the length of the carryover period for the 2021–26 access arrangement period will be the same as the length of the following access arrangement period. The next access arrangement period on the Amadeus Gas Pipeline will be five years, starting from 1 July 2026.

In applying the ECM to APTNT in the 2021–26 period, consistent with APTNT's proposal, we will exclude:

- debt raising costs
- cost categories that are not forecast using a single year revealed cost approach in the access arrangement period commencing on 1 July 2026
- any cost that we determine, as part of a decision on revisions to apply to this Access Arrangement, to exclude from the operation of the efficiency carryover mechanism because we are satisfied it would not promote the National Gas Objective.

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90 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Access Arrangement – Amended Gas Transmission PTRM,* 15 January 2021.

91 APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021, pp. 18–20.

92 APTNT, *Revised Proposal Amadeus Gas Pipeline 2021–26 Revised Access Arrangement,* 15 January 2021, clause 7.1, pp. 33–35.

93 AER, *Draft decision, Amadeus Gas Pipeline access arrangement 2021–26*, *Attachment 8, Efficiency carryover mechanism*, November 2020, p. 1.

94 AER, *Efficiency benefit sharing scheme for electricity network service providers*, November 2013.

We set out in Table 15 the forecast opex we will use to calculate efficiency gains and losses for the 2021–26 period, including forecast debt raising costs.

Table 15 AER's final decision on APTNT's forecast opex for the ECM for the 2021–26 access arrangement period ($million, 2020–21)

	2017–18	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26
Total forecast opex	14.1	13.4	9.6	9.7	9.7	9.4	9.4
Less debt raising costs	–0.1	–0.1	–0.1	–0.1	–0.1	–0.1	–0.1
Less capitalisation policy change	–	–0.4	–	–	–	–	–
Forecast opex for the ECM	**14.0**	**12.9**	**9.5**	**9.7**	**9.6**	**9.4**	**9.4**

Source: AER, *Amadeus Gas Pipeline final decision - Post tax revenue model*, April 2021; AER analysis.

Note: Numbers may not add up due to rounding.

6 Non-tariff components

The non-tariff components are as follows:

- the terms and conditions for the supply of reference services
- queuing requirements – a process or mechanism for establishing an order of priority between prospective users of spare and/or developable capacity
- extension and expansion requirements – the method for determining whether an extension or expansion is a part of the covered pipeline and the effect this will have on tariffs
- capacity trading requirements – the arrangements for users to assign contracted capacity and change receipt and delivery points
- change of receipt or delivery point by the user – the process or mechanism for changing a user's receipt or delivery point
- a review submission date and a revision commencement date.

Together, we refer to these as the non-tariff components of the access arrangement.[95]

Our draft decision approved the amendments that APTNT proposed to its terms and conditions for the supply of gas.[96] We also approved APTNT's proposed non-tariff components for queuing requirements, extension and expansion requirements, capacity trading requirements, change of receipt or delivery point by the user, and the review submission and revision commencement dates.[97]

APTNT's revised proposal adopted our draft decision without further amendment.[98]

Our final decision is to approve APTNT's non-tariff components, including the terms and conditions for the supply of gas.

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[95] Attachment 11 of our draft decision sets out our findings on the non-tariff components in further detail.

[96] AER, *Draft decision, APTNT access arrangement 2021–26, Overview,* November 2020, p. 42 and AER, *Draft decision, APTNT access arrangement 2021–26, Attachment 11,* November 2020, p. 4.

[97] AER, *Draft decision, APTNT access arrangement 2021–26, Attachment 11,* November 2020, pp. 7–10.

[98] APTNT, *Amadeus Gas Pipeline response to AER Draft Decision on proposed Access Arrangement revision 2021–26*, 15 January 2021.

Shortened forms

Shortened form	Extended form
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGP	Amadeus Gas Pipeline
APTNT	APT Petroleum Pipelines Northern Territory
capex	Capital expenditure
CESS	Capital expenditure sharing scheme
CPI	Consumer price index
EBSS	Efficiency benefit sharing scheme
ECM	Efficiency carryover mechanism
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
opex	Operating expenditure
PWC	Power and Water Corporation Northern Territory
PTRM	Post-tax revenue model
RFM	Roll forward model
RIN	Regulatory information notice
TAB	Tax asset base
WACC	Weighted average cost of capital