DRAFT DECISION
Amadeus Gas Pipeline
Access Arrangement

2021 to 2026

Attachment 6
Operating expenditure

November 2020

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165
Email: AERInquiry@aer.gov.au

AER reference: 65198

Note

This attachment forms part of the AER's draft decision on the access arrangement that will apply to APT Pipelines (NT) Pty Ltd (APTNT)'s Amadeus Gas Pipeline for the 2021–2026 access arrangement period. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Services covered by the access arrangement

Attachment 2 – Capital base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency carryover mechanism

Attachment 9 – Reference tariff setting

Attachment 10 – Reference tariff variation mechanism

Attachment 11 – Non-tariff components

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6 Operating expenditure

Operating expenditure (opex) is the operating, maintenance and other non-capital expenses, incurred in the provision of pipeline services. Forecast opex is one of the building blocks we use to determine a service provider's total revenue requirement.

This attachment outlines our assessment of APTNT's proposed opex forecast for the Amadeus Gas Pipeline for the 2021–26 access arrangement period.

6.1 Draft decision

Our draft decision is to accept APTNT's proposal for a total opex forecast of $47.9 million ($2020–21), including debt raising costs, for the 2021–26 access arrangement period, as submitted to us July 2020.[1] Our alternative estimate is higher than APTNT's proposal. Therefore, we are satisfied APTNT's forecast opex meets the opex criteria[2] and the requirements for forecasts and estimates.[3]

Our draft decision represents a 19.4 per cent decrease compared to APTNT's opex expenditure in the 2016–21 access arrangement period. It is 30 per cent lower than the approved opex forecast for the 2016–21 access arrangement.[4]

Figure 6.1 compares the opex forecast we approve in this draft decision (equal to APTNT's proposal) to the forecast we approved for 2016–21 and APTNT's actual opex in that period. The figure shows our approved opex forecast for 2021–26 is in-line with estimated expenditure in 2020–21.

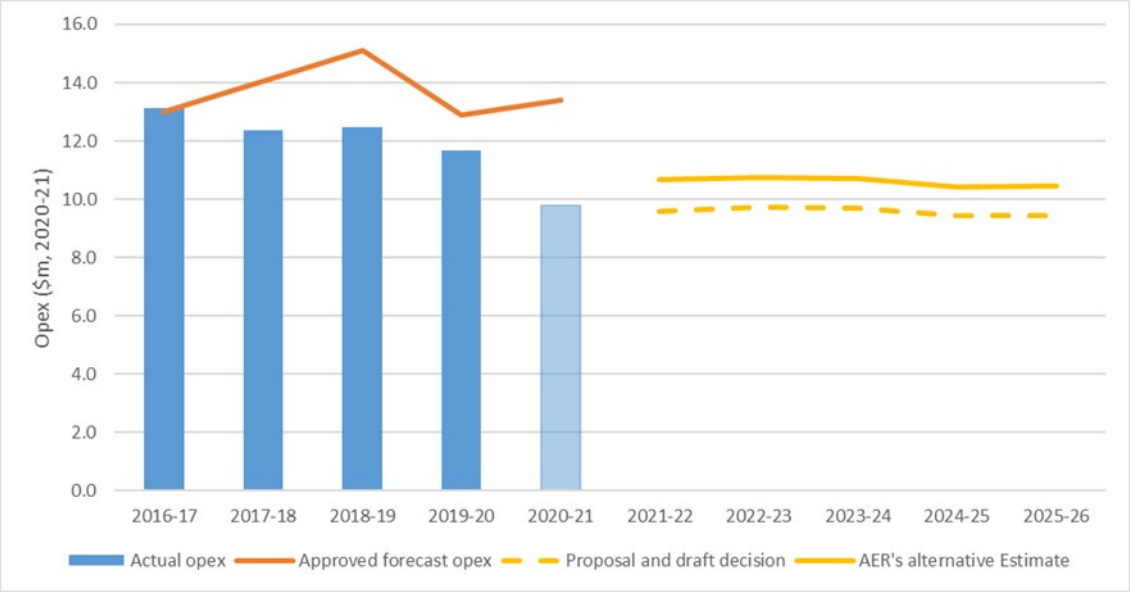
1 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal*, July 2020, p. 42.

2 NGR, r. 91.

3 NGR, r. 74.

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

Figure 6.1 Our draft decision compared to APTNT's 2016–21 opex and proposed opex ($million, 2020–21)



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

Note: Includes debt raising costs.

Table 6.1 sets out APTNT's proposal, our alternative estimate and the differences between them.

Table 6.1 AER's alternative estimate compared to APTNT's opex proposal for the 2021–26 access arrangement period ($million, 2020–21)

	APTNT proposal	AER alternative estimate	Difference
Based on reported opex in 2017–18	61.0	61.9	0.9
Efficiency adjustment	0.0	0.0	–
Base year adjustments	–2.2	–2.2	–
2017–18 to 2020–21 increment	–3.3	–3.3	0.0
Remove category specifics	–17.7	–4.1	13.6
Output growth	0.0	0.0	–
Price growth	0.4	0.1	–0.2
Productivity growth	–0.6	–0.8	–0.2
Step changes	0.6	0.0	–0.6
Category specific forecasts	9.3	1.1	–8.2
Debt raising costs	0.3	0.3	0.0
Total opex	**47.9**	**53.1**	**5.2**

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.

The key differences between APTNT's opex proposal and our alternative estimate are:

- we have not included corporate costs as a category specific forecast as proposed by APTNT in our alternative estimate. We have not removed this cost from base opex as we do not consider it warrants being treated as a category specific forecast
- for labour price growth, we have not used the proposed Deloitte Access Economics (Deloitte) forecast undertaken in 2019. We have used the most up-to-date forecast prepared by Deloitte which factors in the impacts of COVID–19
- we have not included the step change proposed by APTNT in our alternative estimate as we do not consider it is material.

6.2 APTNT's proposal

In applying our base-step-trend approach to forecast opex, APTNT:

- used reported opex in 2017–18 as the base for forecasting its opex over the 2021–26 period. If no other adjustments were made, this would lead to a base opex of $61.0 million ($2020–21)
- then adjusted its base opex by:
    - removing category specific forecasts of corporate costs, in-line inspection costs and excavation costs. This reduced its opex forecast by $17.7 million ($2020–21)
    - calculating the 2017–18 to 2020–21 opex increment (to arrive at the starting point for its forecast).[5] This reduced its opex forecast by $3.3 million ($2020–21)
    - removing lease capitalisation costs from the base year. This reduced its opex forecast by $2.2 million ($2020–21)
- applied its overall rate of change forecast to its adjusted base opex, decreasing it by $0.2 million ($2020–21). This includes price growth of $0.4 million ($2020–21), and productivity growth reducing forecast opex by $0.6 million ($2020–21). APTNT has not forecast any output growth
- proposed one step change that increased its opex forecast by a total of $0.6 million ($2020–21)
- proposed three opex category specific forecasts of corporate costs ($8.2m), in-line inspection costs ($1.1 million) and excavation costs ($0.0 million). This increased its opex forecast by $9.3 million ($2020–21)
- proposed debt raising costs of $0.3 million ($2020–21).

[5] This increment is necessary to ensure we measure incremental efficiency gains accurately. This is discussed in: AER, *Better Regulation, Explanatory Statement, Expenditure forecast assessment guideline*, November 2013, pp. 62–65.

This resulted in APTNT proposing a total opex forecast of $47.9 million ($2020–21) for the 2021–26 period (see Table 6.2) which is 19.9 per cent lower than APTNT's actual and estimated opex for the 2016–21 period.

Table 6.2 APTNT's proposed opex for the 2021–26 access arrangement period ($million, 2020–21)

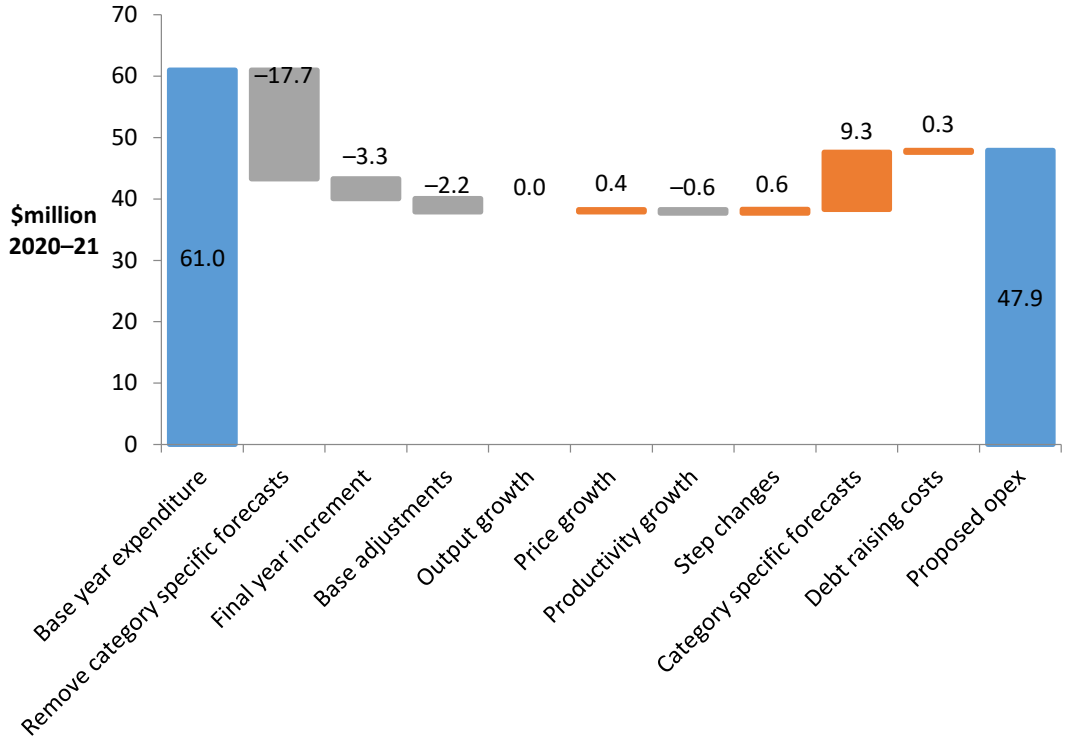
	2020–21	2021– 22	2022–23	2023–24	2024–25	Total
Total opex, excluding debt raising costs	9.5	9.7	9.6	9.4	9.4	**47.6**
Debt raising costs	0.0	0.0	0.0	0.0	0.0	**0.3**
Total opex, including debt raising costs	9.6	9.7	9.7	9.4	9.4	**47.9**

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.

Figure 6.2 shows the different components that make up APTNT's opex forecast for the 2021–26 period.

Figure 6.2 APTNT's forecast opex ($million, 2020–21)



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

6.2.1 Stakeholder views

We have not received any submissions from stakeholders on APTNT's 2021–26 proposal which raised issues on opex.

6.3 Assessment approach

Our role is to decide whether or not to accept a business' forecast opex. We approve the business' forecast opex if we are satisfied that it meets with the opex criteria. The opex criteria require that:

> Operating expenditure must be as such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.[6]

In deciding whether forecast opex meets the opex criteria, we also apply the forecasting and estimate requirements under the National Gas Rules (NGR):

> A forecast or estimate must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.[7]

We use a form of incentive based regulation to assess the business' forecast opex over the access arrangement period at a total level. To do so, we develop an alternative estimate of total opex using a 'top-down' forecasting method, known as the 'base–step–trend' approach.[8]

Once we have developed our alternative estimate of total opex, we compare it with the business' total opex forecast to form a view on the reasonableness of the business' proposal. If we are satisfied the business' total forecast meets the NGR requirements, we accept the forecast. If we are not satisfied, we substitute the business' forecast with our alternative estimate.

In making this decision, we take into account the reasons for the difference between our alternative estimate and the business' forecast, and the materiality of that difference. We also take into consideration the interrelationships between the opex forecast and other constituent components of our decision, such that our decision is likely to contribute to the achievement of the National Gas Objective (NGO).[9]

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6 NGR, r. 91.

7 NGR, r. 74(2).

8 A 'top-down' approach forecasts total opex at an aggregate level, rather than forecasting individual projects or categories to build a total opex forecast from the 'bottom up'.

9 NGL, s. 28(1).

6.3.1 Incentive regulation and the 'top-down' approach

Incentive regulation is designed to prevent network businesses from exploiting their natural monopoly position by setting prices in excess of efficient costs.[10] A key feature of the regulatory framework is that it is based on incentivising networks to be as efficient as possible. We apply incentive-based regulation across the energy networks we regulate, including gas networks. More specifically for opex, we rely on the efficiency incentives created by both ex ante revenue regulation (where an opex allowance is granted over a multi-year regulatory period) and the efficiency carryover mechanism (ECM).[11]

The incentive-based regulatory framework partially overcomes the information asymmetries between the regulated businesses and us.[12] It is intended to align the commercial goals of the network businesses to the objectives of the regulatory regime—especially the long term interests of consumers (the NGO).

Incentive regulation aligns these goals by encouraging regulated businesses to reduce costs below our forecast, in order for them to make higher profits, and 'reveal' their costs in doing so. The information revealed by the businesses allows us to develop better expenditure forecasts over time. Revealed opex reflects the efficiency gains made by a business over time. As a network business becomes more efficient, this translates to lower forecasts of opex in future access arrangements, which means consumers also receive the benefits of the efficiency gains made by the business. Incentive regulation therefore aligns the business' commercial interests with consumer interests.

The Productivity Commission explains:

> Under incentive regulation, the regulator forecasts efficient aggregate costs over the upcoming regulatory period (of usually five years), which it uses to set a revenue allowance for that period. The business makes higher profits if it reduces costs below those forecast by the regulator. In doing so, the business reveals the efficient costs of delivering the service, which would then influence the regulator's determination in the next period. Accordingly, incentive regulation encourages efficiency while reducing the risks that networks use their monopoly positions to set unreasonably high prices.[13]

Incentive regulation is designed to leave the day-to-day decisions to the network businesses.[14] It allows the network businesses the flexibility to manage their assets and labour as they see fit to comply with the opex criteria[15] and achieve the NGO.[16]

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10 Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, April 2013, p. 188.

11 The approach we apply to assessing a business' opex (and which we have applied in this decision) is more fully described in the Expenditure Assessment Guideline and its accompanying explanatory materials, which are published on the AER's website.

12 Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, April 2013, p. 189.

13 Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1*, *No. 62*, April 2013, p. 27.

14 Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, April 2013, pp. 27–28.

Our general approach is to assess whether opex, in aggregate, is sufficient to satisfy the opex criteria over the access arrangement period, rather than to assess individual opex projects or programs. To do so, we develop an alternative estimate of total opex using the ‘base–step–trend’ forecasting approach (section 6.3.2). This is generally a 'top-down' approach, but there may be circumstances where we need to use ‘bottom-up’ analysis, particularly in relation to our base opex assessment and for step changes.[17]

6.3.2 Building an alternative estimate of total forecast opex

As a comparison tool to assess a business’ opex forecast, we develop an alternative estimate of the business' total opex requirements in the forecast period, using the base–step–trend forecasting approach. We apply the forecasting and estimate requirements under the NGR.[18]

If a business adopts a different forecasting approach to derive its opex forecast, we develop an alternative estimate and assess- any differences with the business’ forecast opex.

Figure 6.3 summarises the base–step–trend forecasting approach.

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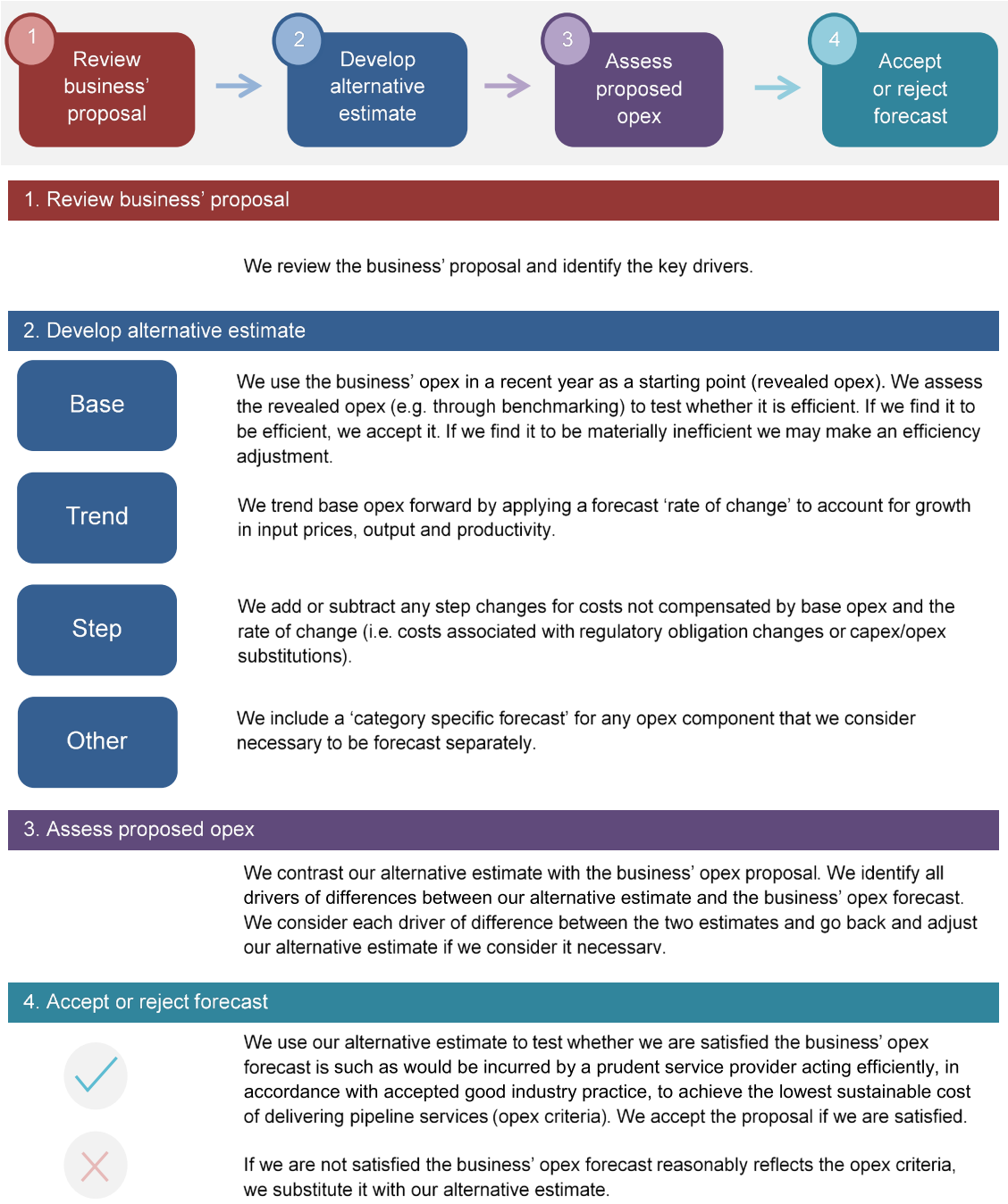
15 NGR, rr. 91.

16 NGL, s. 28(1).

17 A 'top-down' approach forecasts total opex at an aggregate level, rather than forecasting individual projects or categories to build a total opex forecast from the 'bottom up'.

18 NGR, r. 74(2).

Figure 6.3 AER's opex assessment approach



6.3.2.1 Base opex

If we find the business is operating efficiently, our preferred methodology is to use the business' historical or 'revealed' costs in a recent year as a starting point for our opex forecast.

We do not simply assume the business' revealed opex is efficient. It may include an ongoing level of inefficient expenditure. We use the business' actual opex in a single year as the starting point for our alternative estimate. This is the base opex.

We rely on the incentives under revenue regulation and any applicable efficiency incentive scheme to determine whether a business' 'revealed' opex is efficient.[19] We also assess the evidence the business submits to demonstrate the efficiency of its base opex.

To the extent that it is available, we may use benchmarking to test the efficiency of the base opex. Benchmarking is a way of determining how well a network business is performing against its peers and over time, and provides valuable information on what is 'best practice'.

If there are indications the business' revealed opex is inefficient, we may apply an efficiency adjustment to derive a base opex that complies with the opex criteria.

We consider revealed opex in the base year is generally a good indicator of opex requirements over the next access arrangement period because the level of *total opex* is relatively stable from year to year. This reflects the broadly predictable and recurrent nature of opex.

A business may experience fluctuations in particular categories of opex, and the composition of total opex can change, from year-to-year. While many operations and maintenance activities are recurrent and non-volatile, some opex projects follow periodic cycles that may or may not occur in any given year, and some opex projects are non-recurrent.

Even if disaggregated opex categories have high volatility, the total opex varies to a lesser extent because new or increasing components of opex are generally offset by decreasing costs or discontinued opex projects. Further, we expect the regulated business to manage the inevitable 'ups and downs' in the components of opex from year-to-year—to the extent they do not offset each other— by continually re-prioritising its work program, as would be expected in a workably competitive market. Our incentive-based, revealed cost, framework incentivises them to do so.

We also note that any volatility of total opex from year-to-year does not typically affect our choice of the appropriate base year when an ECM applies. A consequence of the operation of the ECM is that the forecast opex allowance (including ECM rewards and penalties) is largely uninfluenced by the choice of base year. For example, although using a base year with unusually high opex would typically result in an increased opex forecast, this would be offset by a lower ECM reward (or a greater penalty).

If the business has demonstrated its ability to satisfy its obligations and service demand using its revealed costs, any further adjustments to base opex risk introducing a bias into the forecast—including through bottom-up type assessments. We therefore carefully scrutinise any such proposed adjustments.

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[19] NGR, r. 71(1). We may infer opex is efficient without embarking on a detailed investigation, from the operation of an incentive mechanism.

6.3.2.2 Rate of change

We trend base opex forward by applying our forecast 'rate of change'. We estimate the rate of change by forecasting the expected growth in input prices, outputs and productivity. We consider that the rate of change takes into account almost all relevant sources of opex growth.

We forecast input price growth using a composition of labour and non-labour price change forecasts. To determine the input price weights for labour and non-labour prices, we have regard to the input price weights of a prudent and efficient benchmark business. Consistent with incentive regulation, this provides the business an incentive to adopt the most efficient mix of inputs throughout the access arrangement period but does not prevent the business from adopting its own mix of inputs.

We forecast output growth to account for the annual increase in output of services provided. The output measures used should, ideally, be the same measures used to forecast productivity growth. Productivity measures the change in output for a given amount of input. If the output measures differ from the productivity measures, they would be internally inconsistent and we cannot compare them like for like.

The output measures we typically use for gas distribution businesses are customer numbers, mains length, and energy throughput. We do not typically adjust forecast output growth for economies of scale because we account for these in our forecast of productivity growth.

Our forecast of opex productivity growth captures the sector-wide, forward-looking, improvements in good industry practice that should be implemented by efficient distributors as part of business-as-usual operations. For gas distribution, we generally base our estimate of productivity growth on recent productivity trends.

6.3.2.3 Step changes and category-specific forecasts

Lastly, we add or subtract any components of opex that are not adequately compensated for in base opex or the rate of change, but which should be included in the forecast total opex to meet the opex criteria. These adjustments are in the form of 'step changes' or 'category-specific forecasts'.

Step changes

Step changes should not double count costs included in other elements of the total opex forecast. For example, the costs of increased volume or scale should be compensated for through the output growth component of the rate of change and, as such, should not be accommodated through a step change. In addition, forecast productivity growth may account for the cost of increased regulatory obligations over time—that is, 'incremental changes in obligations are likely to be compensated through a lower productivity estimate that accounts for higher costs resulting from changed

obligations.'[20] Therefore, we consider only new costs that do not reflect the historic 'average' change as accounted for in the productivity growth forecast require step changes.

To increase its opex forecast, a regulated business has an incentive to identify new costs not reflected in base opex or costs increasing at a greater rate than the rate of change. It has no corresponding incentive to identify those costs that are decreasing or will not continue. Information asymmetries make it difficult for us to identify those future diminishing costs. Therefore, simply demonstrating that a new cost will be incurred—that is, a cost that was not incurred in the base year—is not a sufficient justification for introducing a step change. There is a risk that including such costs would upwardly bias the total opex forecast.

The test we apply is whether the step change is needed for the opex forecast to comply with the opex criteria.[21] Our starting position is that only exceptional circumstances would warrant the inclusion of a step change in the opex forecast because they may change a business' fundamental opex requirements. Two typical examples are:

- a material change in the business' regulatory obligations
- an efficient and prudent capex/opex substitution opportunity.

We may accept a step change if a material 'step up' or 'step down' in expenditure is required by a network business to prudently and efficiently comply with a new, binding regulatory obligation that is not reflected in the productivity growth forecast. This does not include instances where a business has identified a different approach to comply with its existing regulatory obligations that may be more onerous, or where there is increasing compliance risks or costs, the business must incur to comply with its regulatory obligations. Often when a new regulatory obligation is imposed on a business, it will incur additional expenditure to comply. The business may be expected to continue incurring such costs associated with the new regulatory obligation into future access arrangement periods; hence, an increase in its opex forecast may be warranted.

We expect the business to provide evidence demonstrating the material impact the change of regulatory obligation has on its opex requirements, and robust cost–benefit analysis to demonstrate the proposed step change expenditure is prudent and efficient to meet the change in regulatory obligations.

By contrast, proposed opex projects designed to improve the operation of the business, which we consider as discretionary in the absence of any legal requirement, should be funded by base opex and trend components, together with any savings or increased revenue that they generate—rather than through a step change. Otherwise, the business would benefit from a higher opex forecast *and* the efficiency gains.

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[20] AER, *Expenditure forecast assessment guideline, Explanatory statement*, November 2013, p. 52.

[21] NGR, r. 91.

We may also accept a step change in circumstances where it is prudent and efficient for a network business to increase opex in order to reduce capital costs. We would typically expect such capex/opex trade-off step changes to be associated with replacement expenditure (or repex). The business should provide robust cost–benefit analysis to demonstrate clearly how increased opex would be more than offset by capex savings.

In the absence of a change to regulatory obligations or a legitimate capex/opex trade-off opportunity, we would accept a step change under limited circumstances. We would consider whether the costs associated with the step change are unavoidable and material—such that base opex, trended forward by the forecast rate of change, would be insufficient for the business to recover its efficient and prudent costs. We would also consider whether the business would continue to incur the costs of a proposed step change in future access arrangement periods.

Category specific forecasts

A category specific forecast is a forecast of an opex item or activity that is assessed and forecast independently from base opex, and is not subject to the ECM.

A category specific forecast may be justified if, as a result of including a specific opex category in the base opex, total opex becomes so volatile that it undermines our assumption that total opex is relatively stable and follows a predictable path over time.

We may also use category specific forecasts to avoid inconsistency or double counting within our regulatory decision. For example, we forecast debt raising costs separately to provide consistency with the forecast of the cost of debt in the rate of return building block of total revenue.

Absent such exceptions, we expect that base opex, trended forward by the rate of change, will allow the business to recover its prudent and efficient costs. This is a reasonable assumption given that the business has operated in the past with that level of opex, demonstrating that it is able to operate prudently and efficiently in meeting all its existing regulatory obligations, including its safety and reliability standards.

We consider it is also reasonable to expect the same outcome looking forward with the increase provided through the trend growth in the base opex. Some costs may go up, and some costs may go down—so despite potential volatility in the cost of certain individual opex activities, total opex is generally relatively stable over time.

For similar reasons as noted above in relation to step changes, we consider providing a category specific forecast for opex items identified by the business that may upwardly bias the total opex forecast. By applying our revealed cost approach consistently and carefully scrutinising any further adjustments, we avoid this potential bias.

6.3.3 Interrelationships

In assessing APTNT's total forecast opex, we also took into account other components of its access arrangement proposal that could interrelate with our opex decision. The matters we considered in this regard included:

- the operation of the opex incentive mechanism in the 2016–21 access arrangement period, which provided APTNT an incentive to reduce opex in the base year
- the impact of cost drivers that affect both forecast opex and forecast capex, including forecast labour price growth
- our assessment of the rate of return, to ensure there is consistency between our determination of debt raising costs and the rate of return building block
- interactions and trade-offs between the opex and capex proposals, including APTNT's proposal to capitalise lease costs.

6.4 Reasons for draft decision

Our draft decision is to accept APTNT's forecast opex of $47.9 million ($2020–21), including debt raising costs, for the 2021–26 period.[22]

Our alternative estimate of total opex ($53.1 million, $2020–21) is higher than APTNT's forecast opex ($47.9 million, $2020–21).[21] Therefore, we are satisfied that APTNT's proposal satisfies the opex criteria.[23]

Table 6.3 sets out APTNT's proposal, our alternative estimate and the differences between them.

[22] APTNT, Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal, July 2020, p. 42.

[23] NGR, r. 91

Table 6.3 AER's alternative estimate compared to APTNT's opex proposal for the 2021–26 access arrangement period ($million, 2020–21)

	APTNT proposal	AER alternative estimate	Difference
Based on reported opex in 2017–18	61.0	61.9	0.9
Efficiency adjustment	0.0	0.0	0.0
Base year adjustments	–2.2	–2.2	0.0
2017–18 to 2020–21 increment	–3.3	–3.3	0.0
Remove category specifics	–17.7	–4.1	13.6
Output growth	0.0	0.0	0.0
Price growth	0.4	0.1	–0.2
Productivity growth	–0.6	–0.8	–0.2
Step changes	0.6	0.0	–0.6
Category specific forecasts	9.3	1.1	–8.2
Debt raising costs	0.3	0.3	0.0
Total opex	**47.9**	**53.1**	**5.2**

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.

We briefly discuss the components of our alternative estimate below. Full details of our alternative estimate are set out in our opex model, which is available on our website.

6.4.1 Base opex

We have relied on APTNT's opex in 2017–18 to forecast its opex over the 2021–26 access arrangement period, consistent with APTNT's proposal.

We do not have standardised data for the gas network service providers in order to do our own economic benchmarking or category analysis review to assess the efficiency of the revealed base year. Instead, we rely on analysis of APTNT's historical trends.

APTNT's opex was subject to the incentives of an ex ante regulatory framework, including the application of an efficiency carryover mechanism in the 2016–21 period. Typically, where a service provider is subject to these incentives, we are satisfied there is a continuous incentive for a service provider to make efficiency gains and it does not have an incentive to increase its opex in the proposed base year.[24]

[24] NGR, r. 71(1).

Proposed base year opex represented a significant reduction to actual and estimated opex compared to other years in the current period.[25] Based on this, and in the absence of any evidence to the contrary, we have not identified any evidence that APTNT's proposed 2017–18 base year is inefficient.

Table 6.4 sets out our estimate of base opex, which we explain further in the sections below.

Table 6.4 AER's forecast of base opex ($million, 2020–21)

	Our base opex
Reported 2017–18 opex	12.4
Add estimated change in opex between the base year and the final year (final year increment)	–0.7
Estimated final year opex	**11.7**
Remove category specific forecasts	0.8
Remove base adjustments	0.4
Base opex	**10.5**

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.

APTNT proposed a number of adjustments to its base year opex to ensure that it reflects the efficient and recurrent level of opex over the forecast period.[26] These are discussed below.

Category Specific Forecasts

APTNT proposed removing $3.5 million ($2020–21) from base opex for corporate costs ($3.1 million), in-line inspection costs ($0.4 million) and excavation costs ($0.0 million). As discussed below in section 6.4.4, we have included in-line inspection and excavation costs as opex category specific forecasts. We have included corporate costs as part of base opex in our alternative estimate.

We have also removed debt raising costs from base opex in our alternative estimate.

Base Adjustments

APTNT proposed removing $0.4 million ($2020–21) from base opex for lease capitalisation cost. We have removed an amount of $0.4 million ($2020–21) from our

[25] APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Attachment 5 – Operating Expenditure Model*, July 2020; APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Workbook 1 – Forecast*, July 2020.

[26] APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Attachment 5 – Operating Expenditure Model*, July 2020.

alternative estimate. Our estimate of lease costs is based on lease costs incurred in the base year (2017–18), whereas APTNT used revealed lease costs in 2018–19. Our standard approach for forecasting base adjustments is to use revealed costs from the base year.

Final year Increment

APTNT proposed removing $0.7 million ($2020–21) from base opex in calculating the final year increment (being the difference between the forecast opex for 2017–18 and 2020–21) to derive the starting point for its opex forecast. We have included the same amount in our alternative estimate.

6.4.2 Rate of change

Once we estimate opex in the final year of the current period, we apply a forecast annual rate of change to forecast opex for the 2021–26 access arrangement period. This accounts for forecast growth in prices, output and productivity.

We have applied a forecast average annual rate of change of –0.3 per cent. This is lower than APTNT's forecast of –0.2 per cent. We compare both forecasts in Table 6.5.

Table 6.5 AER's alternative rate of change and APTNT's proposed forecast annual rate of change in opex for the 2021–26 access arrangement period (per cent)

	2021–22	2022–23	2023–24	2024–25	2025–26
APTNT's proposal					
Input price growth	0.33	0.26	0.33	0.33	0.33
Output growth	0	0	0	0	0
Productivity growth	0.50	0.50	0.50	0.50	0.50
Opex rate of change	**–0.17**	**–0.24**	**–0.17**	**–0.17**	**–0.17**
AER's alternative rate of change					
Input price growth	0.17	–0.24	0.00	0.31	0.63
Output growth	0	0	0	0	0
Productivity growth	0.50	0.50	0.50	0.50	0.50
Opex rate of change	**–0.33**	**–0.74**	**–0.50**	**–0.19**	**0.12**

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.

6.4.2.1 Forecast price growth

We have applied a real average annual price growth of 0.2 per cent in our alternative estimate. It compares to APTNT's proposed average annual price growth of 0.3 per cent in its opex forecast.[27]

Our price growth forecast is a weighted average of forecast labour price growth and non-labour price growth:

- to forecast labour price growth, we used the most up-to-date wage price index utilities forecast (August 2020 forecast) for the Northern Territory by Deloitte Access Economics (Deloitte)[28]. We have not used the proposed labour price index (WPI) forecast from Deloitte, undertaken in 2019, as it is out of date and does not factor in the impacts of COVID–19. Thus, it would no longer reflect a realistic expectation of labour prices in the current economic environment.
- based on advice from Deloitte,[29] we have added 0.5 per cent to their August 2020 yearly forecasts of labour price growth to account for the legislated superannuation guarantee increases[30] in our labour price growth forecasts. This is discussed further below.
- both we and APTNT did not forecast any non-labour real price growth.[31]

We weight the forecast price growth to account for the proportion of opex that is labour and the proportion that is non-labour. Our labour and non-labour price weights reflect the benchmark efficient mix of labour services and other costs required to provide transmission services. APTNT's used the same weightings.

We have accounted for the legislated increases in the superannuation guarantee in our labour price growth forecasts

Under the *Minerals Resource Rent Tax Repeal and Other Measures Bill 2014 (Cth)*, Schedule 6— Superannuation Guarantee Charge percentage, the superannuation guarantee is scheduled to increase incrementally from 9.5 per cent on 1 July 2020 to 12 per cent on 1 July 2025.

APTNT did not include an additional allowance for the legislated superannuation guarantee increases to its labour price growth forecasts. As the superannuation

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27 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, p. 47.

28 Deloitte Access Economics, *Labour price growth forecasts prepared for the Australian Energy Regulator*, August 2020.

29 Deloitte Access Economics, *Impact of changes to the superannuation guarantee on forecast labour price growth*, 24 July 2020, p. 4.

30 Under the *Minerals Resource Rent Tax Repeal and Other Measures Bill 2014 (Cth)*, Schedule 6— Superannuation Guarantee Charge percentage, the superannuation guarantee is scheduled to increase incrementally from 9.5 per cent on 1 July 2020 to 12 per cent on 1 July 2025.

31 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Attachment 5 – Operating Expenditure Model*, July 2020.

guarantee increases are currently legislated in place we consider it is appropriate to consider how they should be factored into forecasts of labour price growth.

We sought advice from Deloitte on how to best account for the superannuation guarantee increases. It noted that there is extensive research suggesting that increases in payroll taxes or compulsory contributions levied on employers are passed onto employees. This research suggests that the increases to the superannuation guarantee will likely result in slower WPI growth than would otherwise have been the case. Deloitte advised that the superannuation guarantee increases should be added to the forecast WPI growth rates, but only if those WPI growth rates take into account the superannuation guarantee changes.[32] Consequently we have added the legislated superannuation guarantee increases to Deloitte's WPI growth forecasts to forecast labour price growth.[33]

6.4.2.2 Forecast output growth

We did not include output growth in our alternative estimate. This is consistent with APTNT's opex forecast.[34]

We are satisfied with this forecast given pipeline capacity is not forecast to change, there is no plan to extend the AGP or add new delivery points to the pipeline in the upcoming regulatory period.[35]

We note that APTNT has discussed expansion options for the AGP with the Power and Water Corporation (PWC).[36] If an expansion is proposed in the revised proposal forecast output growth will subsequently change.

6.4.2.3 Forecast productivity

We have included average annual productivity growth of 0.5 per cent in our alternative estimate. This is consistent with APTNT's opex forecast. [37]

In the absence of specific productivity forecasts for gas transmission, we are satisfied with APTNT's forecast change in productivity based on historical estimates for utilities and non-utilities.[38]

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32 Deloitte Access Economics, *Impact of changes to the superannuation guarantee on forecast labour price growth*, 24 July 2020, p. 4.

33 Deloitte Access Economics, *Impact of changes to the superannuation guarantee on forecast labour price growth*, 24 July 2020, pp. 4–5.

34 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, p. 46.

35 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, p. 46.

36 PWC, *Submission to AER - AGP Access Arrangement 2021–2026*, 24 August 2020.

37 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, p. 48.

38 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, p. 49.

6.4.3 Step changes

APTNT proposed one step change totalling $0.6 million ($2020–21) for audit and review costs. We did not include this step change in our alternative estimate.

Table 6.6 APTNT's proposed step change and our draft decision ($million, 2020–21)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
APTNT's proposal and draft decision	0.1	0.1	0.1	0.1	0.1	0.6
AER's alternative estimate	0.0	0.0	0.0	0.0	0.0	0.0
Difference	–0.1	–0.1	–0.1	–0.1	–0.1	–0.6

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.

We discuss our assessment of the proposed audit and review step change below.

6.4.3.1 Audit and review

APTNT proposed a step change of $0.6 million ($2020–21) for the costs to keep and provide audited historical financial information for each of the years from 2011–12 to 2018–2019 to the AER. This is a new obligation in response to a regulatory information notice issued to APTNT on 1 April 2020.[39]

We consider the driver for this step change proposal is a new regulatory obligation. However, we propose not to include this step change in our alternative estimate on the basis of materiality. The proposed step change represents 1.2 per cent of total proposed (and approved) forecast opex. To determine whether to include a step change or not, the test we apply is whether the step change is needed for the opex forecast to comply with the opex criteria.[40] Our starting position is that only exceptional circumstances would warrant the inclusion of a step change in the opex forecast because they may change a business' fundamental opex requirements. We do not consider this proposed step change is a material 'step up' in expenditure which changes APTNT's fundamental opex requirements.

6.4.4 Category specific forecasts

APTNT proposed category specific forecasts for corporate costs, in-line inspection costs, excavation costs and debt-raising costs. We have included a category specific forecast for in-line inspection, excavation and debt-raising costs in our alternative estimate. We have not included a category specific forecast for corporate costs in our

[39] APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, pp. 50–51.

[40] NGR, r. 91.

alternative estimate. Table 6.7 sets out APTNT's proposed category specific forecasts and our draft decision. In our alternative estimate we have included corporate costs in base opex.

We note APTNT, in removing category specific costs from base opex, removed forecast opex from 2020–21.[41] Our standard approach is to remove reported costs from the base year (2017–18).

Table 6.7 AER's draft decision and APTNT's proposed category specific opex forecasts for the 2021–26 access arrangement period ($million, 2020–21)

	APTNT's proposal	AER's draft decision	Difference
Debt raising costs	0.3	0.3	**0.0**
Corporate costs	8.2	0.0	**–8.2**
In-line inspection costs	1.1	1.1	**0.0**
Excavation costs	0.0	0.0	**0.0**
Total	**9.6**	**1.4**	**–8.2**

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.

We discuss our assessment of the proposed category specific costs below.

6.4.4.1 Corporate Costs

APTNT proposed a category specific forecast of $8.2 million ($2020–21) for the expected costs of head office functions.[42]

We do not consider it is appropriate to include a category specific forecast for corporate costs in our alternative estimate. As set out in section 6.3.2.3, a category specific cost may be justified if the inclusion of a specific cost would undermine the assumption that opex is relatively stable and follows a predictable path. Corporate costs are a 'business-as-usual' expense for APTNT which are forecast to be constant.[43] As such, we see no reason to remove these costs from base opex and forecast them separately.

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41 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Attachment 5 – Operating Expenditure Model*, July 2020.

42 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal*, July 2020, p. 42.

43 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Attachment 5 – Operating Expenditure Model*, July 2020.

6.4.4.2 In-line inspection and excavation costs

APTNT proposed a category specific forecast of $1.1 million ($2020–21) for the expected costs of using a remotely controlled inspection tool to collect data on the internal condition of the pipeline.[44] It also proposed a category specific forecast of $0.0 million ($2020–21) for expected excavation costs.[45]

We acknowledge that in-line inspection costs have varied from year to year historically, therefore the costs incurred in the base year may not reflect the costs required in the forecast period. However, we note that total opex in the current period is more stable when in-line inspection costs are included.

Despite this, we have included in-line inspection and excavation costs in our alternative estimate as category specific forecasts to be consistent with their exclusion (as pigging costs) from the efficiency carryover mechanism in the current access arrangement period.[46] This ensures that APTNT will not be rewarded for efficiency gains that are not passed on to consumers through a lower opex forecast.

However, we will reconsider if this cost should be forecast separately in future determinations. We have not explicitly excluded 'pigging costs' from the ECM for the 2021–26 access arrangement period.[47]

6.4.4.3 Debt raising costs

We have included debt raising cost of $0.3 million ($2020–21) in our alternative opex forecast for the 2021–26 access arrangement period, consistent with APTNT's proposal.

Debt raising costs are transaction costs incurred each time a business raises or refinances debt. Our preferred approach is to forecast debt raising costs using a benchmarking approach rather than a service provider's actual costs in a single year. This provides for consistency with the forecast of the cost of debt in the rate of return building block. We discuss this in Attachment 3 of this draft decision.

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44 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal*, July 2020, p. 42.

45 APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement Revision Proposal*, July 2020, p. 42.

46 AER, *Access Arrangement for the Amadeus Gas Pipeline*, May 2016, p. 34.

47 AER, *Draft Decision, Amadeus Gas Pipeline Access Arrangement 2021–26, Attachment 8 – Efficiency carryover mechanism*, November 2020, p. 13.

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
AGP	Amadeus Gas Pipeline
APTNT	APT Petroleum Pipelines Northern Territory
CPI	Consumer price index
EBSS	Efficiency benefit sharing scheme
ECM	Efficiency carryover mechanism
NER	National Electricity Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
opex	Operating expenditure
PTRM	Post-tax revenue model
RBA	Reserve Bank of Australia
RIN	Regulatory Information Notice
WPI	Wage price index