

# Draft Decision

## Roma to Brisbane Pipeline Access Arrangement 2022 to 2027

### Attachment 6 Operating expenditure

November 2021

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## Note

This attachment forms part of the AER's draft decision on the access arrangement that will apply to APT Petroleum Pipelines Pty Limited (APTPPL)'s Roma to Brisbane Pipeline for the 2022–2027 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

Attachment 12 – Demand

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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 APTPPL's proposed opex forecast for the Roma to Brisbane Pipeline (RBP) for the 2022–27 access arrangement period (2022–27 period).

### 6.1 Draft decision

We do not accept APTPPL's updated opex forecast of \$107.5 million (\$2021–22) for the RBP for the 2022–27 period, as submitted to us on 30 September 2021.<sup>1</sup> APTPPL's initial RBP proposal included forecast total opex of \$97.6 million (\$2021–22).<sup>2</sup> We are not satisfied APTPPL's updated forecast opex meets the opex criteria<sup>3</sup> and the requirements for forecasts and estimates.<sup>4</sup>

Our draft decision is to include our alternative estimate of total opex forecast of \$94.2 million (\$2021–22) for the RBP. This is \$13.3 million (12.3 per cent) lower than APTPPL's updated forecast and largely reflects that we do not consider we currently have sufficient information to assess the proposed transformation and technology (T&T) step change (see further discussion at section 6.4.3). We are satisfied that our alternative estimate of forecast opex reasonably reflects the opex criteria.

Table 6.1 sets out APTPPL's initial proposal, its updated proposal, our alternative estimate that is the basis for the draft decision and the difference between our draft decision and the updated proposal.

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<sup>1</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>2</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Attachment 5 – Opex model*, July 2021.

<sup>3</sup> National Gas Rules (NGR), r. 91.

<sup>4</sup> NGR, r. 74.

**Table 6.1 Comparison of APTPPL's RBP proposals and our draft decision on opex (\$million, 2021–22)**

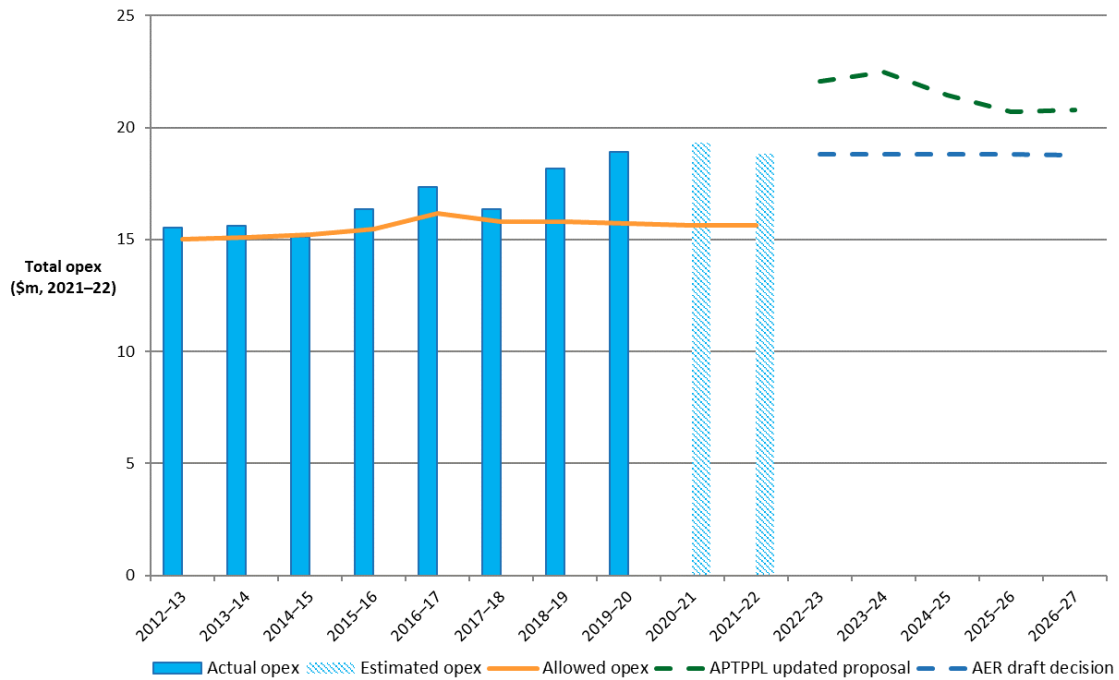
Opex category	APTPL proposal	APTPL updated proposal	AER draft decision	Difference (\$)
Base (reported opex in 2019–20)	92.6	92.6	94.5	1.9
Base year adjustments	-3.2	-1.3	-1.3	0.0
Final year increment	0.9	0.9	-0.3	-1.2
Trend: Output growth	-	-	-	-
Trend: Real price growth	1.1	1.1	1.4	0.2
Trend: Productivity growth	-	-	-1.4	-1.4
Step change	5.0	13.0	-	-13.0
Category specific forecasts	-	-	-	-
<b>Total opex (excluding debt raising costs)</b>	<b>96.4</b>	<b>106.3</b>	<b>92.9</b>	<b>-13.4</b>
Debt raising costs	1.2	1.2	1.4	0.2
<b>Total opex (including debt raising costs)</b>	<b>97.6</b>	<b>107.5</b>	<b>94.2</b>	<b>-13.3</b>
<b>Percentage difference to proposal</b>				<b>-12.3%</b>

Source: APTPPL, *Roma to Brisbane Pipeline 2022–27, Attachment 5 – Opex model*, July 2021; APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021; AER analysis.

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

Figure 6.1 compares the opex forecast we approve in this draft decision to APTPPL's updated proposal, the forecasts we approved for 2012–22 and APTPPL's actual opex in that period.

**Figure 6.1 Historical and forecast opex (\$million, 2021–22)**



Source: AER analysis.

Note: Includes debt raising costs.

The key drivers of our lower alternative total opex forecast compared to APTPPL’s updated opex proposal for the RBP are that:

- We have not included the \$13.0 million (\$2021–22) T&T step change in our alternative estimate. This is because, despite making further inquiries, we do not currently have sufficient information to assess the prudence and efficiency of this proposed step change. We encourage APTPPL to include further information and evidence relating to these costs in its revised proposal.
- We have forecast a productivity growth rate of 0.5 per cent per year compared to APTPPL which forecast zero productivity growth for the 2022–27 period. This reduced our alternative estimate by \$1.4 million (\$2021–22).
- We have calculated the final year increment by following the standard approach set out in our *Expenditure forecast assessment guideline* (the Guideline)<sup>5</sup>, which ensures consistency between opex and the efficiency carryover mechanism (ECM). This reduced our alternative estimate by \$1.2 million (\$2021–22).

<sup>5</sup> AER, *Better Regulation, Expenditure forecast assessment guideline*, November 2013, pp. 22–23.

However, these reductions have been partially offset by:

- Our base year opex, which is \$1.9 million (\$2021–22) higher than APTPPL’s proposal as we have updated it for 2020–21 actual inflation.
- Our real annual price growth forecast, which is \$0.2 million (\$2021–22) higher than APTPPL’s proposal as we have updated for the latest Deloitte wage price index (WPI) forecast from June 2021 to calculate our alternative estimate.

## 6.2 APTPPL’s proposal

APTPPL used a 'base–step–trend' approach to forecast opex for the 2022–27 period, consistent with our preferred approach.

APTPPL originally proposed a total opex forecast of \$97.6 million (\$2021–22) for the RBP for the 2022–27 period.<sup>6</sup> This included a placeholder forecast for the T&T step change of \$5.0 million.<sup>7</sup> APTPPL updated its opex forecast to \$107.5 million (\$2021–22)<sup>8</sup> after it finalised its T&T program and submitted an updated step change proposal of \$13.0 million.

In applying our base-step-trend approach to forecast opex for the RBP for the 2022–27 period, APTPPL’s updated proposal:<sup>9</sup>

- Used reported opex in 2019–20 as the base for forecasting its opex over the 2022–27 period. If no other adjustments were made, this would lead to a base opex of \$92.6 million (\$2021–22).
- Then adjusted its base opex by:
  - Removing debt raising costs. This reduced its opex forecast by \$1.3 million.
  - Calculating the 2019–20 to 2021–22 opex increment (to arrive at the starting point for its forecast). This increased its opex forecast by \$0.9 million.
- Applied its price growth to its adjusted base opex, increasing it by \$1.1 million. APTPPL has not forecast any output or productivity growth.
- Proposed one step change for T&T expenditure that increased its opex forecast by a total of \$13.0 million.
- Proposed debt raising costs of \$1.2 million.

This resulted in APTPPL proposing an updated total opex forecast of \$107.5 million (\$2021–22) for the 2022–27 period (see Table 6.2) which is 17.3 per cent higher than APTPPL’s actual and estimated opex for the RBP for the 2017–22 period.

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<sup>6</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Attachment 5 – Opex model*, July 2021.

<sup>7</sup> APTPPL, Response to information request AER IR002, 3 August 2021, pp. 5–6.

<sup>8</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>9</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.



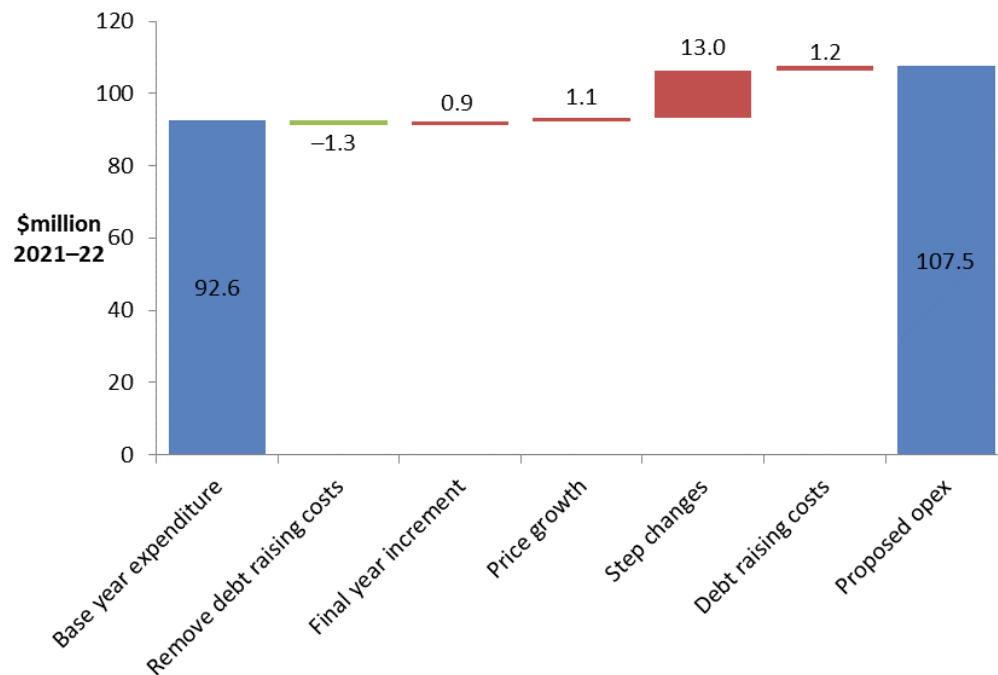
**Table 6.2 APTPPL’s updated proposed opex for the RBP for the 2022–27 period (\$million, 2021–22)**

	2022–23	2023–24	2024–25	2025–26	2026–27	Total
Total opex, excluding debt raising costs	21.8	22.2	21.2	20.5	20.6	106.3
Debt raising costs	0.2	0.2	0.2	0.2	0.2	1.2
<b>Total opex, including debt raising costs</b>	<b>22.1</b>	<b>22.5</b>	<b>21.5</b>	<b>20.7</b>	<b>20.8</b>	<b>107.5</b>

Source: APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

Figure 6.2 shows the different components that make up APTPPL’s opex forecast for the 2022–27 period.

**Figure 6.2 APTPPL’s RBP forecast opex (\$million, 2021–22)**



Source: APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021; AER analysis.

### 6.2.1 Stakeholder views

We have not received any submissions from stakeholders on the RBP 2022–27 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 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.<sup>10</sup>

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

A forecast or estimate must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.<sup>11</sup>

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.<sup>12</sup>

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).<sup>13</sup>

### 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.<sup>14</sup> 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 ECM.<sup>15</sup>

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<sup>10</sup> NGR, r. 91(1). Rule 91(2) also provides that the forecast of required operating expenditure of a pipeline service that is included in the full access arrangement must be for expenditure that is allocated between services in accordance with Rule 93.

<sup>11</sup> NGR, r. 74(2).

<sup>12</sup> 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'.

<sup>13</sup> NGL, s. 28(1)(a); National Gas Law (NGL), s. 23.

<sup>14</sup> Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, April 2013, p. 188.

<sup>15</sup> 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](#).

The incentive-based regulatory framework partially overcomes the information asymmetries between the regulated businesses and us.<sup>16</sup> 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<sup>17</sup>).

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.<sup>18</sup>

Incentive regulation is designed to leave the day-to-day decisions to the network businesses.<sup>19</sup> It allows the network businesses the flexibility to manage their assets and labour as they see fit to comply with the opex criteria<sup>20</sup> and achieve the NGO.<sup>21</sup>

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.

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<sup>16</sup> Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, April 2013, p. 189.

<sup>17</sup> The NGO is set out under the National Gas Law (NGL), s. 23 which is: “...to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.”

<sup>18</sup> *Ibid.*, p. 27.

<sup>19</sup> *Ibid.*, pp. 27–28.

<sup>20</sup> NGR, r. 91.

<sup>21</sup> NGL, s. 28(1)(a) and s. 23.

### 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.<sup>22</sup>

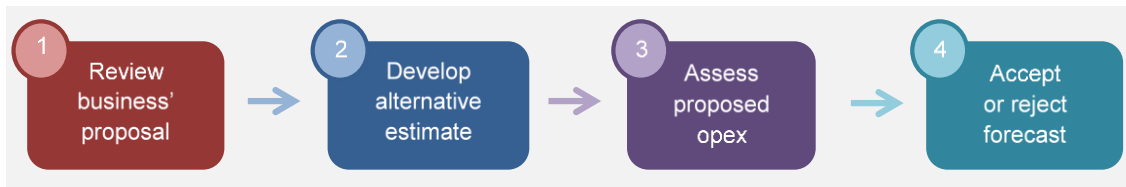
If a business adopts a different forecasting approach to derive its opex forecast, we develop an alternative estimate and assess- any differences with the business' forecast opex.

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

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<sup>22</sup> NGR, r. 74.

**Figure 6.3 AER’s opex assessment approach**



**1. Review business' proposal**

We review the business' proposal and identify the key drivers.


**2. Develop alternative estimate**


<b>Base</b>	We use the business' opex in a recent year as a starting point (revealed opex). We assess the revealed opex (e.g. through benchmarking) to test whether it is efficient. If we find it to be efficient, we accept it. If we find it to be materially inefficient we may make an efficiency adjustment.
<b>Trend</b>	We trend base opex forward by applying a forecast 'rate of change' to account for growth in input prices, output and productivity.
<b>Step</b>	We add or subtract any step changes for costs not compensated by base opex and the rate of change (i.e. costs associated with regulatory obligation changes or capex/opex substitutions).
<b>Other</b>	We include a 'category specific forecast' for any opex component that we consider necessary to be forecast separately.

**3. Assess proposed opex**

We contrast our alternative estimate with the business' opex proposal. We identify all drivers of differences between our alternative estimate and the business' opex forecast. We consider each driver of difference between the two estimates and go back and adjust our alternative estimate if we consider it necessary.

**4. Accept or reject forecast**

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We use our alternative estimate to test whether we are satisfied the business' opex forecast is 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 (opex criteria). We accept the proposal if we are satisfied.
- 

If we are not satisfied the business' opex forecast reasonably reflects the opex criteria, we substitute it with our alternative estimate.

**6.3.3 Interrelationships**

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

- The operation of the ECM in the 2017–22 period, which provided APTPPL 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 APTPPL's proposal to capitalise lease costs and expense its IT cloud costs.

## 6.4 Reasons for draft decision

Our draft decision is to not accept APTPPL's updated total opex forecast of \$107.5 million (\$2021–22), including debt raising costs, for the 2022–27 period.<sup>23</sup>

We are not satisfied APTPPL's forecast opex meets the opex criteria<sup>24</sup> and the requirements for forecasts and estimates.<sup>25</sup> We consider that some forecasts and estimates have not been arrived at on a reasonable basis or do not represent the best forecast or estimate possible in the circumstances.<sup>26</sup> Consequently, we are not satisfied that the resulting total opex forecast meets the opex criteria.<sup>27</sup>

We consider that our alternative estimate of total forecast opex of \$94.2 million (\$2021–22), including debt raising costs, for the RBP for the 2022–27 period meets the opex criteria. This is \$13.3 million (12.3 per cent) lower than APTPPL's updated opex forecast of \$107.5 million, including debt raising costs, for the 2022–27 period.

Table 6.3 sets out APTPPL's proposal, its updated proposal, our alternative estimate that is the basis for the draft decision and key differences (to the updated proposal).

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<sup>23</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>24</sup> NGR, r. 91.

<sup>25</sup> NGR, r. 74.

<sup>26</sup> NGR, r. 91.

<sup>27</sup> NGR, r. 74.

**Table 6.3 Comparison of APTPPL’s RBP proposals and our draft decision on opex (\$million, 2021–22)**

	APTPL’s proposal	APTPL’s Updated proposal	AER draft decision	Difference
Base (reported opex in 2019–20)	92.6	92.6	94.5	1.9
Base year adjustments	-3.2	-1.3	-1.3	0.0
Final year increment	0.9	0.9	-0.3	-1.2
Trend: Output growth	-	-	-	-
Trend: Real price growth	1.1	1.1	1.4	0.2
Trend: Productivity growth	-	-	-1.4	-1.4
Step changes	5.0	13.0	-	-13.9
Category specific forecasts	-	-	-	-
<b>Total opex (excluding debt raising costs)</b>	<b>96.4</b>	<b>106.3</b>	<b>92.9</b>	<b>-13.4</b>
Debt raising costs	1.2	1.2	1.4	0.2
<b>Total opex (including debt raising costs)</b>	<b>97.6</b>	<b>107.5</b>	<b>94.2</b>	<b>-13.3</b>
<b>Percentage difference to proposal</b>				<b>-12.3%</b>

Source: APTPL, *Roma to Brisbane Pipeline 2022–27, Attachment 5 – Opex model*, July 2021; APTPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021; AER analysis.

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

The main drivers for the differences are set out in section 6.1 and we 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 used APTPL’s opex in 2019–20 as the base year, which is year three of the 2017–22 period, to forecast its opex over the 2022–27 period, consistent with APTPL’s proposal.<sup>28</sup>

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 APTPL’s historical trends.

APTPL’s opex was subject to the incentives of an ex-ante regulatory framework, including the application of an ECM in the 2017–22 period. Typically, where a service

<sup>28</sup> APTPL, *Roma to Brisbane Pipeline 2022–27 Access arrangement, Overview*, July 2021, p. 25.

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.<sup>29</sup>

APTPPL’s actual opex for 2019–20 is \$3.2 million higher than our approved opex forecast for that year. In response to our information request<sup>30</sup>, APTPPL explained the majority of this increase is due to an eight year agreement implemented in 2019–20 to provide compression services at Wallumbilla. These services are required to maintain the safety and integrity of the pipeline since there was insufficient pressure to maintain the required capacity due to pressure reductions on the DN250 pipeline. APTPPL considered that this opex solution was the least cost option.

Based on this, and in the absence of any evidence to the contrary, we have not identified any evidence that APTPPL’s proposed 2019–20 base year is materially inefficient.

Our alternative estimate for the reported 2019–20 opex is \$0.4 million higher than APTPPL’s proposal, as we applied an additional six months of consumer price index (CPI) to forecast end-of-year dollars (\$2021–22) rather than mid-year dollars. We also updated the actual CPI for 2020–21, as it has now been published by the Australian Bureau of Statistics (ABS).<sup>31</sup> This CPI value is higher than APTPPL’s estimated CPI for 2020–21 used in its proposal.

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

**Table 6.4 AER’s RBP forecast of base opex (\$million, 2021–22)**

	Our base opex
<b>Reported 2019–20 opex</b>	<b>18.9</b>
Final year increment	–0.1
<b>Estimated final year opex</b>	<b>18.8</b>
Remove category specific forecasts <sup>a</sup>	–0.3
Remove base adjustments <sup>b</sup>	–
<b>Base opex</b>	<b>18.6</b>

Source: AER analysis.

- (a) Refers to debt raising costs.
- (b) APTPPL’s initial proposal included a base adjustment of -\$0.4 million to account for the capitalisation of leases. APTPPL has subsequently withdrawn this base adjustment in its updated proposal after identifying an error in its initial proposal opex model and we have not included this in our alternative estimate.

<sup>29</sup> NGR, r. 71(1).

<sup>30</sup> APTPPL, Response to information request AER IR002 – Question 1, 24 August 2021, p. 4.

<sup>31</sup> ABS, *Catalogue number 6401.0, Consumer price index – June 2021*, 28 July 2021.



### 6.4.1.1 Adjustments to base opex

Adjustments are required to base year opex to ensure that it reflects the efficient and recurrent level of opex over the forecast period. These are discussed below.

- We have removed debt raising costs from base opex in our alternative estimate, consistent with APTPPL's proposal.<sup>32</sup>
- APTPPL's initial proposal included a negative adjustment to base opex of \$0.4 million to comply with the new accounting standard AASB16 relating to capitalisation of leases.<sup>33</sup> However, APTPPL subsequently identified an error in its opex model and submitted that its total opex for 2019–20 was already exclusive of lease costs subject to AASB16 and that it incorrectly included this base adjustment in its proposed opex model.<sup>34</sup> Accordingly, it didn't include this base adjustment in its updated proposal<sup>35</sup> and we have not included this base adjustment in our alternative estimate for the draft decision.

### 6.4.1.2 Estimate of 2021–22 opex

The final year increment is the estimated change in opex between the base year (2019–20) and the final year (2021–22) of the current (2017–22) period. We need to estimate opex for the final year of the current period because we will not have a reported opex amount at the time of our final decision in April 2022.

APTPPL proposed a final year increment of \$0.2 million (\$2021–22) to derive the starting point for its opex forecast. It estimated the final year opex by applying its forecast rate of change directly to base year opex. This is inconsistent with how we estimate opex for 2021–22 in the ECM.

Our alternative estimate of the final year increment is –\$0.1 million (\$2021–22) which is \$0.2 million lower than APTPPL's proposal. To calculate our alternative estimate of the final year increment, we have followed the approach as set out in the Guideline<sup>36</sup> which ensures consistency with how we estimate opex for 2021–22 in the ECM. It is important our final year estimate is the same as that used in the ECM. This allows the service provider to retain incremental efficiency gains made after the base year through its opex forecast. We have estimated 2021–22 opex as follows:

$$A_{2021-22}^* = F_{2021-22} - (F_b - A_b) + \text{non-recurrent efficiency gain}_b$$

Where:

- $A_{2021-22}^*$  is the estimate of actual opex for the final year of the 2017–22 period

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<sup>32</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>33</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Attachment 5 – Opex model*, July 2021.

<sup>34</sup> APTPPL, Response to information request AER IR002, 3 August 2021, p. 4.

<sup>35</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>36</sup> AER, *Better Regulation, Expenditure forecast assessment guideline*, November 2013, pp. 22–23.

- $F_{2021-22}$  is the allowed opex forecast for the final year of the 2017–22 period
- $F_b$  is the allowed opex forecast for the base year, 2019–20
- $A_b$  is the amount of reported opex in the base year, 2019–20
- *non – recurrent efficiency gain<sub>b</sub>* is the non-recurrent efficiency gain in the base year.

We have used 2019–20 as the base year and have not identified any necessary adjustment for non-recurrent efficiency gains in the base year. Applying this approach, we have calculated estimated opex of \$18.6 million (\$2021–22) for 2021–22.

## 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 2022–27 period. This accounts for forecast growth in prices, output and productivity.

We have applied a forecast average annual rate of change of –0.01 per cent. This is lower than APTPPL’s forecast of 0.45 per cent. We compare both forecasts in Table 6.5.

**Table 6.5 Forecast rate of change, per cent**

	2022–23	2023–24	2024–25	2025–26	2026–27
<b>APTPPL’s proposal</b>					
Input price growth	0.24	0.33	0.54	0.73	0.44
Output growth	–	–	–	–	–
Productivity growth	–	–	–	–	–
<b>Overall rate of change</b>	0.24	0.33	0.54	0.73	0.44
<b>AER draft decision</b>					
Input price growth	0.46	0.46	0.57	0.59	0.39
Output growth	–	–	–	–	–
Productivity growth	0.50	0.50	0.50	0.50	0.50
<b>Overall rate of change</b>	-0.04	-0.04	0.07	0.09	-0.11
<b>Overall difference</b>	-0.28	-0.37	-0.47	-0.64	-0.55

Source: APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021; AER analysis.

### 6.4.2.1 Forecast price growth

We have applied a real average annual price growth of 0.49 per cent in our alternative estimate. APTPPL’s proposed an average annual price growth of 0.45 per cent in its

opex forecast.<sup>37</sup> This increases our alternative estimate of total opex by \$1.4 million (\$2021–22), as compared to the \$1.1 million (\$2021–22) proposed by APTPPL.

APTPL's proposal has taken the real WPI growth escalator from Powerlink's 2022–27 regulatory proposal opex model. APTPL stated that it selected Powerlink's proposal as it has the same regulatory period (2022–27) and geography (Queensland) as the RBP. APTPL recognised these inputs would be updated as we progress through our determinations for both RBP and Powerlink.<sup>38</sup>

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

- To forecast labour price growth we have used the forecast of growth in the WPI for the Queensland electricity, gas, water and waste services (utilities) industry. Specifically, we have used an average of forecasts from our consultant Deloitte and the BIS Oxford forecasts submitted by Powerlink, which was adopted by APTPL.<sup>39</sup> Because it did not have the Deloitte forecasts we have used, Powerlink instead used Deloitte's forecasts of the Australian utilities industry that we published with our draft decisions for the Victorian distributors for its second WPI forecast.<sup>40</sup>
- Both we and APTPL did not forecast any non-labour real price growth.<sup>41</sup>
- We applied input price weights of 62.1 per cent and 37.9 per cent for labour and non-labour, respectively in our alternative estimate. This is consistent with the implied input price weights used in APTPL's proposal.<sup>42</sup>

Consequently, we and APTPL have applied the same approach to forecast price growth. The differences between our real price growth forecasts and APTPL's is that we have used updated forecasts for WPI growth from Deloitte that are specific to the Queensland utilities industry.<sup>43</sup> Both we and APTPL added the impact of the legislated increases in the superannuation guarantee, which is not captured in the WPI.

We have shown these differences in Table 6.6 below.

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<sup>37</sup> APTPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>38</sup> APTPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2* (Public), July 2021, pp. 37–38.

<sup>39</sup> Powerlink, *Revenue proposal 2023–27*, January 2021, p. 109; APTPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2* (Public), July 2021, pp. 37–38.

<sup>40</sup> Powerlink, *Revenue proposal 2023–27*, January 2021, p. 107.

<sup>41</sup> APTPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

<sup>42</sup> APTPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021; AER analysis.

<sup>43</sup> Deloitte Access Economics, *Wage Price Index forecasts*, 23 June 2021, p. xii.

**Table 6.6 Forecast labour price growth, per cent**

	2022–23	2023–24	2024–25	2025–26	2026–27
<b>APTPPL proposal</b>					
Deloitte	-0.8	-0.5	-0.1	0.5	0.5
BIS Oxford Economics	0.6	0.5	0.8	0.8	0.9
<b>Average, excluding superannuation guarantee increases</b>	-0.1	0.0	0.4	0.6	0.7
SG increase	0.5	0.5	0.5	0.5	-
<b>Average, including superannuation guarantee increases</b>	<b>0.4</b>	<b>0.5</b>	<b>0.9</b>	<b>1.1</b>	<b>0.7</b>
<b>AER draft decision</b>					
Deloitte	-0.1	0.0	0.0	0.1	0.4
BIS Oxford Economics	0.6	0.5	0.8	0.8	0.9
<b>Average, excluding superannuation guarantee increases</b>	0.2	0.2	0.4	0.4	0.6
SG increase	0.5	0.5	0.5	0.5	-
<b>Average, including superannuation guarantee increases</b>	<b>0.7</b>	<b>0.7</b>	<b>0.9</b>	<b>0.9</b>	<b>0.6</b>
<b>Difference</b>	<b>0.3</b>	<b>0.2</b>	<b>0.0</b>	<b>-0.2</b>	<b>-0.1</b>

Source: APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021; APTPPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2 (Public)*, July 2021, pp. 37–38; AER analysis.

Note: Differences of '0.0' and '-0.0' represent small variances and '-' represents no variance

#### 6.4.2.2 Forecast output growth

We did not include output growth in our alternative estimate. This is consistent with APTPPL's opex forecast.<sup>44</sup>

We are satisfied with this forecast given pipeline capacity is not forecast to change as there is no plan to extend the RBP during the 2022–27 access arrangement period.<sup>45</sup> This is also consistent with APTPPL's capex proposal, which does not include any expansion capex in the 2022–27 period.<sup>46</sup>

<sup>44</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2 (Public)*, July 2021, p. 37.

<sup>45</sup> *Ibid.*, p. 37.

<sup>46</sup> *Ibid.*, p. 21.

### 6.4.2.3 Forecast productivity

We have included average annual productivity growth of 0.5 per cent in our alternative estimate.

APTPPL has not forecast any productivity growth. It has submitted that there has been no easing of regulatory obligations or industry best practice requirements on RBP in recent history; therefore, it is impossible that productivity changes resulting from regulation or best industry practice could be greater than zero.<sup>47</sup>

We note that APTPPL proposed a productivity factor of 0.5 per cent in its 2021–26 opex proposal for the Amadeus gas transmission pipeline (Amadeus). In the proposal for Amadeus, APTPPL stated<sup>48</sup>:

- In the absence of specific productivity forecasts for gas transmission, the AER's forecast of 0.5 per cent for electricity distributors, which is in the mid-range of estimates for utilities and non-utilities, was an appropriate forecast.
- The AER's forecast is likely to capture at least some of the productivity changes due to new regulatory obligations and requirements, and it does not appear to include productivity change compensated for by the forecast change in real labour prices.

In response to our information request asking for the reason for the different approach between Amadeus and RBP, APTPPL submitted that RBP is a different asset as it is ageing and passes through growing urban areas. APTPPL claimed this is likely to result in growing opex in the future, which would be greater than any potential efficiency gains through improved use of technology or processes.<sup>49</sup>

We are not convinced by APTPPL's reasons for not applying a forecast productivity growth for RBP. Given both RBP and Amadeus are gas transmission pipelines owned and operated by APTPPL, we expect both transmission pipelines should have similar productivity growth. Therefore, we have applied a forecast productivity growth of 0.5 per cent for our alternative estimate. This has decreased our draft decision opex forecast by \$1.4 million compared to APTPPL's proposal.

### 6.4.3 Step changes

We have not included any step changes in our alternative estimate of opex. APTPPL proposed one step change totalling \$13.0 million (\$2021–22) for T&T costs in its updated proposal.<sup>50</sup> It submitted that this step change included costs associated with replacing existing IT systems with cloud-based services along with cyber security

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<sup>47</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2* (Public), July 2021, p. 38.

<sup>48</sup> APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, July 2020, pp. 48–49.

<sup>49</sup> APTPPL, Response to information request AER IR002, 3 August 2021, p. 5.

<sup>50</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Updated opex model*, 30 September 2021.

requirements resulting from the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*.<sup>51</sup>

APTPPL's initial proposal included a placeholder forecast for the T&T step change of \$5.0 million.<sup>52</sup> At the time it was explained that this step change was only for replacing existing IT systems with cloud-based services.<sup>53</sup> APTPPL's initial proposal did not include any costs related to new cyber security obligations resulting from the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*.

We have not included the \$13.0 million (\$2021–22) T&T step change in our alternative estimate. This is because, despite making further inquiries, we do not currently have sufficient information to assess the prudence and efficiency of the proposed T&T step change. We encourage APTPPL to include further information and evidence relating to these costs in its revised proposal. In particular, we require APTPPL to explain:

- Why the T&T costs should be classified as a step change?
- How the proposed T&T costs reflect prudent and efficient opex?
- How the T&T costs have been estimated for the 2022–27 period?
- What is the timing and certainty of the implementation of the proposed T&T program?
- How has APTPPL's total T&T expenditure been allocated to RBP?

In developing our alternative estimate, we typically include step changes for cost drivers such as new regulatory obligations or efficient capex/opex trade-offs. As we explain in the Guideline, we will generally include a step change if the efficient base opex and the rate of change in opex of an efficient service provider do not already include the proposed cost for such items.<sup>54</sup>

Based on the information provided by APTPPL, we consider the T&T step change consists of two separate potential step changes. One for IT cloud (capex/opex trade off) and another for cyber security (new regulatory obligation). This is because these costs have different drivers and hence require separate assessments. We further discuss the information we require from APTPPL in its revised proposal to perform our assessment of the proposed costs associated with the T&T step changes below.

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<sup>51</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Information paper – Transformation & technology*, 7 October 2021, pp. 6–9.

<sup>52</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Attachment 5 – Opex model*, July 2021.

<sup>53</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2* (Public), July 2021, p. 40.

<sup>54</sup> AER, *Better Regulation, Expenditure forecast assessment guideline*, November 2013, p. 24.

### 6.4.3.1 IT cloud

#### Migration of existing IT cloud-based services from capex to opex

APTPPL submitted in its proposal that the International Financial Reporting Interpretations Committee (IFRIC) has clarified how arrangements in respect of a specific part of cloud technology, Software-as-a-Service (SaaS), should be accounted for. It clarified that<sup>55</sup>

- SaaS arrangements are likely to be service arrangements (opex), rather than intangible or leased assets (capex). This is because the customer typically only has a right to receive future access to the supplier's software running on the supplier's cloud infrastructure and therefore the supplier controls the intellectual property (IP) of the underlying software code.
- However, in limited circumstances SaaS arrangements would be considered as capex where certain configuration and customisation activities undertaken in implementing SaaS arrangements may give rise to a separate asset where the customer controls the IP of the underlying software code.

APTPPL proposed that due to this clarification by IFRIC it is allocating its IT cloud costs from capex to opex.<sup>56</sup> However, it is not clear in APTPPL's updated proposal what proportion of the IT cloud costs are associated with existing SaaS arrangements which were previously reported as capex and are now required to be reported as opex given the accounting standard clarification.

We require APTPPL to clearly identify in its revised proposal which existing SaaS arrangements that it capitalised in the current 2017–22 period will need to be expensed in the upcoming 2022–27 period due to the IFRIC clarification. We also require APTPPL to demonstrate that it has removed these costs from its capex forecast.

#### Routine upgrades and maintenance of IT systems

APTPPL submitted that routine upgrades and maintenance are another driver for technology costs.<sup>57</sup> APTPPL has not identified how much of its proposed \$13.0 million T&T step change is associated with routine upgrades and maintenance costs.

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.<sup>58</sup> Our starting position is that only exceptional events would warrant the inclusion of a step change in the opex forecast because they may change a business' fundamental opex

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<sup>55</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Information paper – Transformation & technology*, 7 October 2021, p. 6.

<sup>56</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2 (Public)*, July 2021, pp. 41–42.

<sup>57</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Information paper – Transformation & technology*, 7 October 2021, p. 9.

<sup>58</sup> NGR, r. 91.

requirements.<sup>59</sup> Typically, we would not consider costs associated with routine upgrades and maintenance as a material 'step up' in expenditure which changes a network's fundamental opex requirements. Therefore, further information needs to be provided by APTPPL as to why these costs should be included as a step change.

### **Replacement of legacy IT systems with cloud-based technology**

APTPL submitted that it has a number of legacy IT systems that are reaching the end of their technical life and need to be replaced with cloud-based technology. APTPL has not identified how much of its proposed \$13.0 million step change is associated with these costs.

In recent decisions for other networks, we have included in our alternative estimates step changes to replace critical IT applications that are reaching end-of-life or needing upgrades, with a migration to cloud-based services occurring that is an efficient capex/opex trade-off.<sup>60</sup> In these instances, there was robust analysis provided to demonstrate clearly how the proposed option was the most efficient solution, with increased opex offset by capex savings.

However, APTPL has not provided us with a capex/opex trade-off analysis in either its initial proposal or its updated proposal.<sup>61</sup> Therefore, we are unable to assess whether APTPL's proposed step change costs for replacement of legacy IT systems with cloud-based technology is an efficient capex/opex trade-off. Consequently, we have not included these costs in our draft decision.

In order to assess this step change in our final decision, we require APTPL to demonstrate that the proposed opex solution reflects prudent and efficient expenditure. We encourage APTPL to conduct a thorough assessment of its IT environment and assess different IT options carefully which would enable it to maintain its network.

We expect the revised proposal to:

- Set out the different options considered by APTPL to maintain its IT environment.

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<sup>59</sup> AER, *Better Regulation, Expenditure forecast assessment guideline*, November 2013, p. 24.

<sup>60</sup> AER, *Draft Decision, AusNet Services Transmission Determination 2022–27, Attachment 6 Operating expenditure*, June 2021, pp. 27–28; AER, *Final Decision, AusNet Services Distribution Determination 2021–26, Attachment 6 Operating expenditure*, April 2021, pp. 49–51; AER, *Final Decision, Powercor Distribution Determination 2021–26, Attachment 6 Operating expenditure*, April 2021, pp. 35–36; AER, *Final Decision, CitiPower Distribution Determination 2021–26, Attachment 6 Operating expenditure*, April 2021, p. 33; AER, *Final Decision, United Energy Distribution Determination 2021–26, Attachment 7 Operating expenditure*, April 2021, p. 32; AER, *Final Decision, SA Power Networks Distribution Determination 2020–25, Attachment 6 Operating expenditure*, June 2020, p. 23.

<sup>61</sup> APTPL, *Roma to Brisbane Pipeline 2022–27 – Reset RIN response Schedule 2* (Public), July 2021, p. 44; APTPL, Response to information request AER IR002, 3 August 2021, pp. 5–6.



- Explain how the preferred option is a capex/opex trade-off and results in the lowest total expenditure of the options examined. Assumptions used in this analysis should be explained and justified.
- Demonstrate a corresponding reduction to its capex to support the underlying proposition that the substitution is efficient.
- Clarify if the costs included are ongoing or one-off costs.
- Identify potential cost savings from enhancing the platform and demonstrate how they have been appropriately accounted for.
- Include any other relevant supporting information.

#### 6.4.3.2 Cyber security

APTPPL submitted in its updated proposal that the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*, when passed through parliament, will significantly increase the obligations and effort required by APTPPL to establish and maintain compliance with managing security-related risks.<sup>62</sup> Consequently, APTPPL's updated proposal includes cyber security costs as part of the T&T step change. APTPPL did not include any cyber security costs for the T&T step change in its initial proposal.

APTPPL's updated proposal describes the projects it will invest in to bring it in line with its expectations of the requirements under the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*.<sup>63</sup> However, it is not clear how much of the \$13.0 million of the T&T step change relates to these costs and what the individual costs are for each of the projects APTPPL has identified to meet the requirements in the new legislation.

Our draft decision is to not include a forecast for the proposed cyber security costs for the T&T step change in our alternative estimate. We do not consider sufficient information has been provided by APTPPL to allow us to assess the prudence and efficiency of the cyber security costs.

If the *Security Legislation Amendment (Critical Infrastructure) Bill 2020* is passed, we consider it prudent for APTPPL to improve its cyber maturity in line with the requirements introduced by the legislation and that a step change may be required to fund additional investment to achieve this outcome. Our usual practice is to consider legislative changes once the changes have been passed. However, in recent decisions<sup>64</sup> we have been open to including in our alternative estimates step changes

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<sup>62</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Information paper – Transformation & technology*, 7 October 2021, pp. 6–9.

<sup>63</sup> APTPPL, *Roma to Brisbane Pipeline 2022–27, Information paper – Transformation & technology*, 7 October 2021, pp. 15–19.

<sup>64</sup> AER, *Draft Decision, AusNet Services Transmission Determination 2022–27, Attachment 6 Operating expenditure*, June 2021, pp. 20–22; AER, *Final Decision, Jemena Distribution Determination 2021–26, Attachment 6 Operating expenditure*, April 2021, pp. 50–51.

for cyber security in the absence of new legislation being passed. This reflects the current context of the evolving threat of cyber security risk, the Australian Government's recent warning<sup>65</sup> to organisations to take action to mitigate these risks of increased frequency and sophistication of cyber-attacks and the Australian Energy Sector Cyber Security Framework developed through collaboration with industry and government stakeholders.<sup>66</sup> Therefore, if the *Security Legislation Amendment (Critical Infrastructure) Bill 2020* is not passed by the time the revised proposal is due, then to consider the prudence of any proposed cyber step change we would need to APTPPL to show why it's proposed additional cyber capabilities represent the actions of a prudent operator, given the context of the evolving threat of cyber risk and what is understood about cyber security requirements which are likely to be imposed by future legislation. This could in part be demonstrated via gap analysis which shows the current gap between current and anticipated future cyber security maturity levels.

To assess the efficiency of the proposed cyber security costs, we would need to test the reasonableness of the actions, inputs, investments and costs proposed by APTPPL. However, based on the information provided by APTPPL in its updated proposal, we have been unable to do so. Specifically, we require further information from APTPPL in its revised proposal to understand:

- How it has conducted its self-assessment to identify the gaps between its current level of cyber maturity and the level required by the *Security Legislation Amendment (Critical Infrastructure) Bill 2020*.
- How the proposed cyber security costs address the capability gaps it has identified, with a mapping of the proposed costs against the capability gaps and improvement actions required.
- How it undertook a business case assessment to evaluate the viability, costs and benefits of different options to determine the preferred option.

#### 6.4.4 Category specific forecasts

APTPPL proposed category specific forecasts for debt-raising costs, which we have also included in our alternative estimate.

##### 6.4.4.1 Debt raising costs

We have included debt raising costs of \$1.4 million (\$2021–22) in our alternative estimate for the 2022–27 period. This is \$0.2 million higher than APTPPL's proposed debt raising costs.

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

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<sup>65</sup> Prime Minister of Australia, *Statement on malicious cyber activity against Australian networks*, June 2020. Available at <https://www.pm.gov.au/media/statement-malicious-cyber-activity-against-australian-networks>.

<sup>66</sup> AEMO, *Australia Energy Sector Cyber Security Framework – Framework Overview*, May 2021. Available at <https://aemo.com.au/en/initiatives/major-programs/cyber-security/aescsf-framework-and-resources>.

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.

## A. Shortened forms

Shortened form	Extended form
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
APTPPL	APT Petroleum Pipelines Pty Limited
Capex	Capital expenditure
CPI	Consumer Price Index
ECM	Efficiency carryover mechanism
IFRIC	International Financial Reporting Interpretations Committee
IP	Intellectual property
IT	Information technology
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
Opex	Operating expenditure
RBP	Roma to Brisbane Pipeline
RIN	Regulatory information notice
SaaS	Software-as-a-Service
T&T	Transformation and technology
The Guideline	Expenditure forecast assessment guideline
WPI	Wage Price Index