

Draft Decision

APA Victorian Transmission System (VTS)

Access Arrangement 2023 to 2027
(1 January 2023 to 31 December 2027)

Attachment 6 Operating Expenditure

June 2022

© Commonwealth of Australia 2022

This work is copyright. In addition to any use permitted under the *Copyright Act 1968* all material contained within this work is provided under a Creative Commons Attributions 3.0 Australia licence with the exception of:

- the Commonwealth Coat of Arms
- the ACCC and AER logos
- any illustration diagram, photograph or graphic over which the Australian Competition and Consumer Commission does not hold copyright but which may be part of or contained within this publication.

The details of the relevant licence conditions are available on the Creative Commons website as is the full legal code for the CC BY 3.0 AU licence.

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Tel: 1300 585 165

AER reference: AER202216

Amendment record

Version	Date	Pages
1	30 June 2022	33

Note

This attachment forms part of the AER’s draft decision on the access arrangement that will apply to APA’s Victorian Transmission System (VTS) for the 2023–27 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 – Operating expenditure incentive mechanism

Attachment 9 – Reference tariff setting

Attachment 10 – Reference tariff variation mechanism

Attachment 11 – Non-tariff components

Attachment 12 – Demand

Contents

6	Operating Expenditure	5
6.1	Draft decision	5
6.2	APA’s proposal for the VTS	7
6.2.1	Stakeholder views	9
6.3	Assessment approach	10
6.3.1	Incentive regulation and the 'top-down' approach	11
6.3.2	Building an alternative estimate of total forecast opex	12
6.3.3	Interrelationships	13
6.4	Reasons for draft decision	14
6.4.1	Base opex	15
6.4.2	Rate of change	18
6.4.3	Step changes	21
6.4.4	Category specific forecasts	29
6.5	Revisions	32
A	Shortened forms	33

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 APA’s proposed opex forecast for the Victorian Transmission System (VTS) for the 2023–27 access arrangement period.

6.1 Draft decision

We do not accept APA’s proposal for VTS of forecast opex of \$180.3 million (\$2022) for the 2023–27 access arrangement period.¹ We are not satisfied APA’s forecast opex meets the opex criteria² and the requirements for forecasts and estimates.³

Our draft decision is to include our alternative estimate of total opex forecast of \$172.5 million (\$2022) for the VTS.⁴ This is \$7.8 million (\$2022) (or 4.3%) lower than APA’s proposal for VTS for the 2023–27 access arrangement period and we are satisfied this reasonably reflects the opex criteria. The key area of difference leading to our alternative estimate of total opex being lower than APA’s proposal for VTS is that we have only included \$6.0 million of the total step change value of \$27.6 million (\$2022) proposed by APA. As set out below, this reflects that in some cases we have not received sufficient information to be satisfied the proposed step changes would be incurred by a prudent service provider acting efficiently. We are open to receiving this information in APA’s revised proposal for VTS.

Table 6-1 sets out APA’s opex proposal for the VTS, our alternative estimate that is the basis for the draft decision, and the difference between our draft decision and APA’s proposal for the VTS.

¹ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

² National Gas Rules (NGR), r. 91.

³ NGR, r. 74.

⁴ This includes debt raising costs.

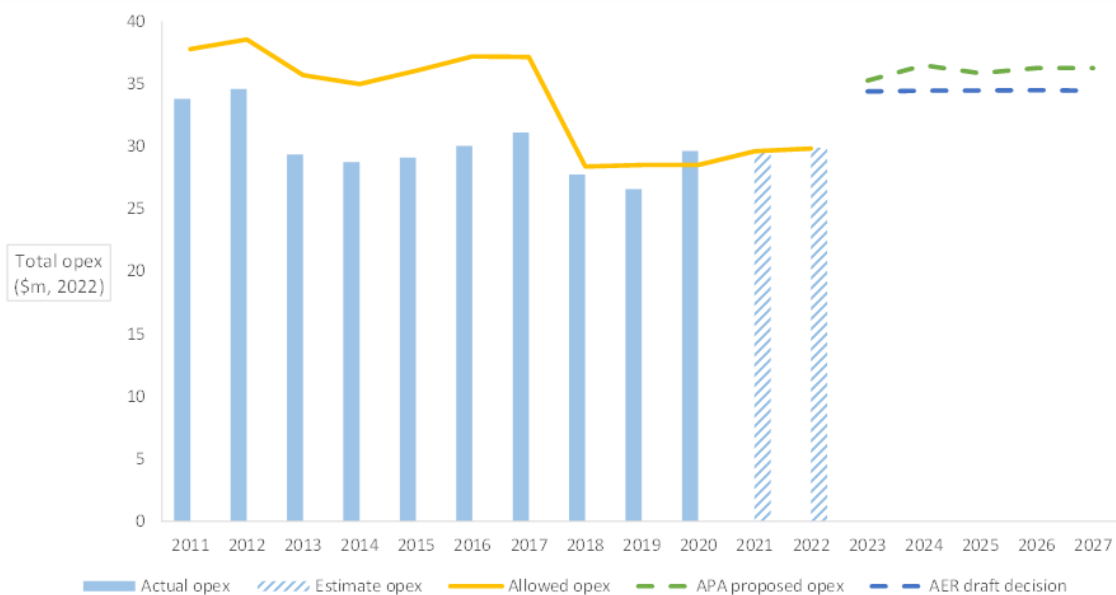
Table 6-1 Comparison of APA’s VTS proposal and our draft decision on opex (\$million, 2022)

	APA proposal for VTS	AER draft decision	Difference to APA proposal
Base (reported opex in 2019–20)	147.1	156.9	9.8
Base year adjustments	-0.4	-0.4	-
Final year increment	-	6.9	6.9
Trend: Output growth	-	-	-
Trend: Real price growth	-	1.2	1.2
Trend: Productivity growth	-	-1.3	-1.3
Total step changes	27.6	6.0	-21.6
Total category specific forecasts	3.0	-	-3.0
Total opex (excluding debt raising costs)	177.3	169.3	-8.0
Debt raising costs	3.0	3.2	0.2
Total opex (including debt raising costs)	180.3	172.5	-7.8
Percentage difference to APA proposal			-4.3%

Source: APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 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 for VTS we approve in this draft decision for the 2023–27 access arrangement period (the blue dashed line) to APA’s proposal (the green dashed line), as well as the forecasts we approved in past decisions (the orange line) and APA’s actual and estimated opex in the past and current access arrangement periods (the blue bars).

Figure 6-1 Historical and forecast opex (\$million, 2022)



Source: AER analysis
 Note: Includes debt raising costs.

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

- We have not included the Transformation of Technology (ToT) step change (\$9.4 million (\$2022)) in our alternative estimate. This is because we did not receive sufficient evidence to substantiate the drivers (end-of-life and/or service improvements) or to assess the efficiency of the proposed costs. We encourage APA to include further information in its revised proposal that clearly identifies the drivers and evidence of efficiency, such as market responses to requests for proposal.
- We have included \$4.1 million (\$2022) for the Security of Critical Infrastructure (SoCI) step change in our alternative estimate. This is less than the \$6.6 million (\$2022) proposed by APA.
- We have not included the proposed opex related to operating and maintaining the augmented South West Pipeline (SWP) (\$3.9 million (\$2022)). This is because the SWP capital expenditure (capex) which we have included in our draft decision reflects an alternative approach to what was included in the initial proposal. Opex costs of \$1.25 million (\$2022) have been proposed for this alternative approach but not in a reasonable time for us to determine the efficiency of these costs for the draft decision.⁵ As a result the efficiency of these cost will be assessed with APA’s revised proposal for VTS, noting that costs may be relatively minor as the asset will be new and used relatively minimally for peak demands. We encourage APA to include information about the magnitude of these costs and their efficiency in its revised proposal. We have included the step change for ongoing opex related to the Western Outer Ring Main (WORM) capex project, reflecting these costs are considered prudent and efficient.

However, these lower forecasts for our alternative estimate have been partially offset by:

- Higher base year opex, which is \$9.8 million (\$2022) more than APA’s proposal for the VTS, as we have updated it for the forecast inflation for December 2022.⁶
- Inclusion of the final year increment, reflecting the standard approach set out in our *Expenditure forecast assessment guideline* (the Guideline)⁷, which ensures consistency between opex and the operating expenditure incentive mechanism (OEIM). This increases our opex alternative estimate by \$6.9 million (\$2022).

6.2 APA’s proposal for the VTS

APA’s proposal for the VTS applied a ‘base-step-trend’ approach to forecast opex for the 2023–2027 access arrangement period, consistent with our preferred approach.⁸

APA proposed a total opex forecast of \$180.3 million (\$2022) for the VTS for the 2023–27 access arrangement period.⁹ This included:

⁵ APA VTS, *Business Case AA6 – SWP Expansion – Winchelsea 2nd Unit – Final*, 17 May 2022, p. 14.

⁶ RBA, *Statement on Monetary Policy, Forecast Table - May 2022*, 5 May 2022.

⁷ AER, *Expenditure forecast assessment guideline for electricity transmission*, November 2013. pp. 22-23.

⁸ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 56.

⁹ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

- Using reported opex in 2020 as the base for forecasting its opex over the 2023–27 period. This led to base opex of \$147.1 million (\$2022).
- Adjusting its base opex by removing debt raising costs, reducing its opex forecast by \$0.4 million (\$2022).
- Not forecasting any output, price or productivity growth.
- Proposing step changes for ToT, ongoing opex for capex related projects, meeting SoCI legislative changes, acquisition of carbon offset certificates and an increase in property tax expenditure, that increased its opex forecast by a total of \$27.6 million (\$2022).
- Proposing category specific forecasts for allowances and access arrangement costs, that increased its opex forecast by a total of \$3.0 million (\$2022), and debt raising costs of \$3.0 million (\$2022).

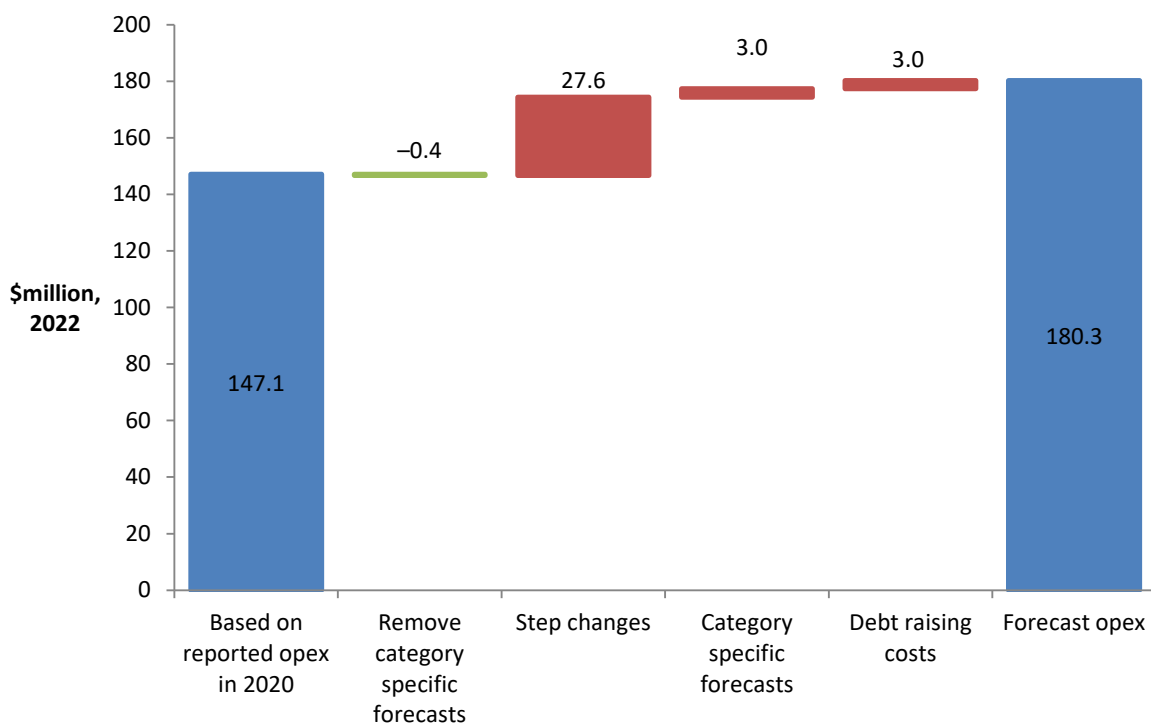
Table 6-2 APA’s proposed opex for the VTS for the 2023–27 period (\$million, 2022)

	2023	2024	2025	2026	2027	Total
Total opex, excluding debt raising costs	34.7	35.9	35.3	35.7	35.70	177.3
Debt raising costs	0.6	0.6	0.6	0.6	0.6	3.0
Total opex, including debt raising costs	35.3	36.5	35.9	36.3	36.3	180.3

Source: APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

Figure 6-2 shows the different components that make up APA’s opex forecast for VTS for the 2023–27 period.

Figure 6-2 APA’s proposal for the VTS forecast opex (\$million, 2022)



Source: APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021; AER analysis.

APA's total opex forecast for the VTS of \$180.3 million (\$2022) for the 2023–27 period is \$28.5 million (\$2022), or 18.8%, higher than the amount we determined in our 2018-22 decision for VTS¹⁰ and \$26.6 million (\$2022), or 17.3%, higher than its actual / estimated spend over the 2018–22 access arrangement period.¹¹

6.2.1 Stakeholder views

We received several submissions from stakeholders that raised issues relevant to APA's forecast of total opex for VTS for the 2023–27 access arrangement period.

CCP28 sought evidence about whether opex in the base year (2020) is not materially inefficient, noting that VTS underspent its opex in 2018 and 2019 relative to the AER's last decision and overspent in 2020.¹² CCP28 also noted from discussions with APA its base year may change when actual data is available for 2021 after April 2022. Similar concerns were raised by Energy Users Association of Australia (EUAA)¹³ and the Victorian Community Organisations.¹⁴

CCP28 raised concerns over the zero growth for output, price and productivity included in the proposal.¹⁵ CCP28 suggested that a consumer-centric business should aim to have increases in productivity such as those which occur with technological improvements. It noted that it would have expected APA to have linked growth in productivity to its ToT step change. AGL also recommended AER consider growth in the trend components for our alternative assessment.¹⁶

CCP28 made the observation that there is limited information in APA's opex proposal overview about the step changes, and that while APA's RIN response lists the step change, the detail to support these step changes is not easy to find.¹⁷ It also noted there had been very little stakeholder engagement on the step changes and made specific recommendations in relation to each step change. In our assessment of the step changes CCP28's advice was:

- to apply scrutiny to the increase in opex related to the WORM capex project, the associated opex, and its timing.
- that it did not support APA's SWP capex proposal.
- to assess the evidence supporting the prudence of the land tax step change.

¹⁰ AER, *APA VTS - Final decision post tax revenue model*, November 2017 and AER analysis.

¹¹ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021 and AER analysis.

¹² CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, p. 51.

¹³ EUAA, *Submission, APA Gas Transmission Access Arrangements*, 18 February 2022, p. 2.

¹⁴ Victorian community organisations, *Joint submission to the Australian Energy Regulator (AER) from Victorian community organisations 2023–2027 APA Victorian Gas Transmission System Access Arrangement*, 14 February 2022, p. 18.

¹⁵ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, pp. 51-53.

¹⁶ AGL, *APA Victorian Transmission System 2023–27 Access Arrangement Proposal*, 18 February 2022, p. 2.

¹⁷ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, p. 53.

- to assess the methodology in establishing the material risk for the SoCI step change and its apportionment to the VTS business.
- to assess the evidence of the prudence and efficiency of the proposed ToT step change costs, and that the AER should also confirm the capex / opex trade off.
- that it did not support APA’s carbon offsets step change.

These observations around the information provided in relation to step changes and the limited stakeholder engagement were also made by EUAA.¹⁸ Red Lumo¹⁹ and the Victorian Community Organisations²⁰ also recommend applying scrutiny to additional capex such as the WORM and SWP projects, and the related opex, to mitigate the risk of asset stranding of new assets. Viva Energy Australia²¹ and Lochard Energy²² supported these capex projects.

We have taken these submissions into account in developing the positions set out in this draft decision.

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.²³

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.²⁴

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.²⁵

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

¹⁸ EUAA, Submission, *APA Gas Transmission Access Arrangements*, 18 February 2022, pp. 2 and 10.

¹⁹ Red Lumo, *RE: APA Victorian Transmission System - Access Arrangement 2023-27*, 18 February 2022, pp. 1-2.

²⁰ Victorian community organisations, *Joint submission to the Australian Energy Regulator (AER) from Victorian community organisations 2023–2027 APA Victorian Gas Transmission System Access Arrangement*, 14 February 2022, p. 12-15.

²¹ Viva Energy Australia, *Submission APA VTS AA 2023-27*, 18 February 2022, p. 3.

²² Lochard Energy, *Submission APA VTS AA 2023-27*, 18 February 2022. p. 1.

²³ 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 reference services in accordance with Rule 93.

²⁴ NGR, r. 74(2).

²⁵ A ‘top-down’ approach forecasts total opex at an aggregate level, rather than forecasting all individual projects or categories to build a total opex forecast from the ‘bottom up’.

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).²⁶

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.²⁷ 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 OEIM.²⁸

The incentive-based regulatory framework partially overcomes the information asymmetries between the regulated businesses and us.²⁹ 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).³⁰

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 any 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

²⁶ NGL, s. 28(1)(a); NGL, s. 23.

²⁷ Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, 9 April 2013, p. 188.

²⁸ 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.

²⁹ Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, 9 April 2013, p. 189.

³⁰ The NGO is set out under the 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."

next period. Accordingly, incentive regulation encourages efficiency while reducing the risks that networks use their monopoly positions to set unreasonably high prices.³¹

Incentive regulation is designed to leave the day-to-day decisions to the network businesses.³² It allows the network businesses the flexibility to manage their assets and labour as they see fit to comply with the opex criteria³³ and achieve the NGO.³⁴

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 all individual opex projects or programs. As noted above, 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.

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.³⁵

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.

³¹ Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, 9 April 2013, p. 27.

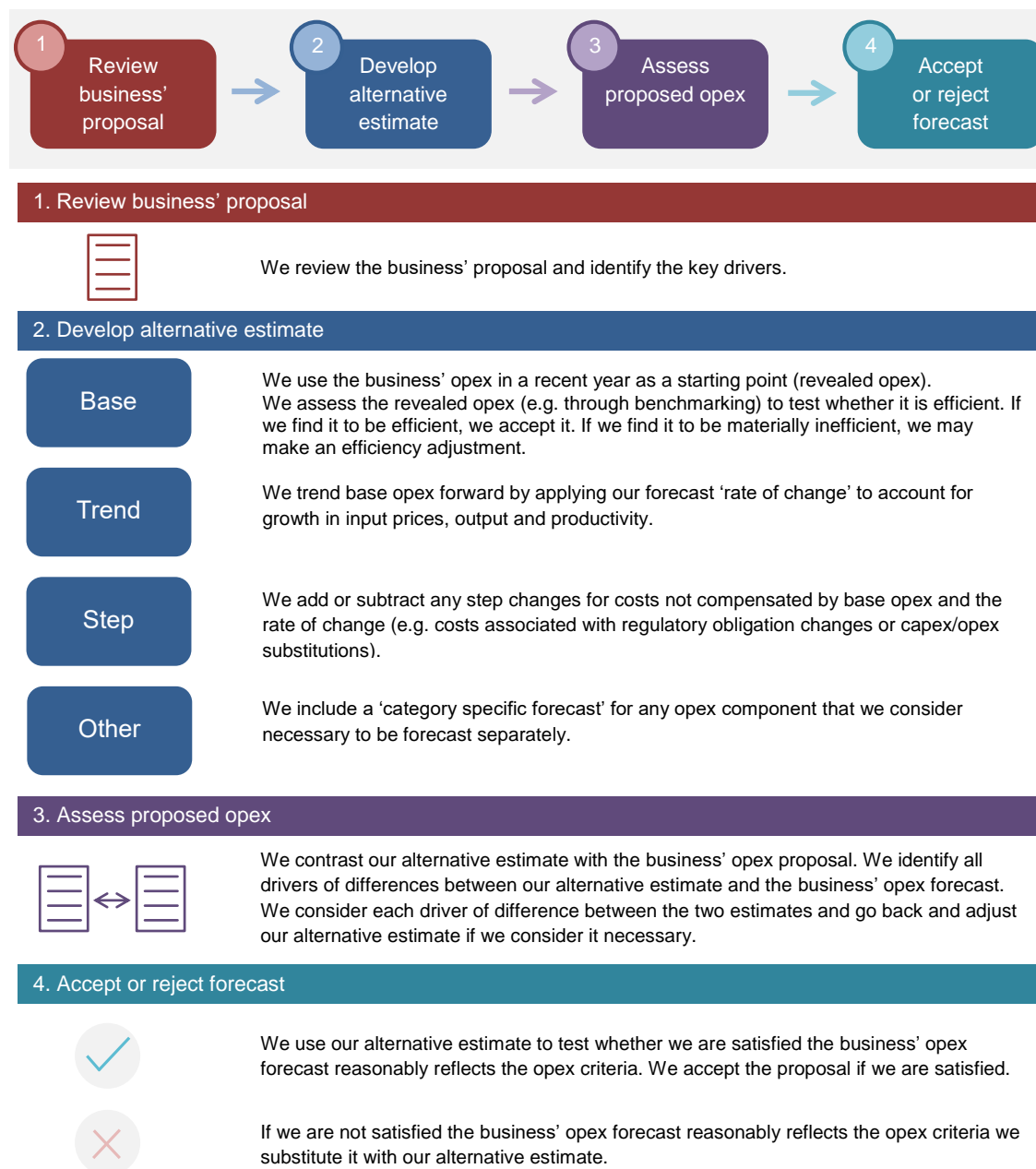
³² Productivity Commission, *Electricity Network Regulatory Frameworks, volume 1, No. 62*, 9 April 2013, pp. 27–28.

³³ NGR, r. 91.

³⁴ NGL, s. 28(1)(a) and s. 23.

³⁵ NGR, r. 74.

Figure 6-3 Our opex assessment approach



6.3.3 Interrelationships

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

- The capex proposals related to the step changes for the WORM capex project, the SWP capex project, the ToT capex and the SoCI capex under the new regulatory obligations.
- The operation of the OEIM in the 2018–22 period, which provided APA 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, include APA’s proposal to expense its IT cloud costs.

6.4 Reasons for draft decision

Our draft decision is to not accept APA’s proposal for VTS total opex forecast of \$180.3 million (\$2022), including debt raising costs, for the 2023–27 access arrangement period.³⁶

We consider that based on the information currently available to us, our alternative estimate of total forecast opex of \$172.5 million (\$2022), including debt raising costs, for the VTS for the 2023–27 access arrangement period reasonably meets the opex criteria. This is \$7.8 million (\$2022) (or 4.3%) lower than APA opex forecast of \$180.3 million, including debt raising costs, for the 2023–27 period.

Table 6-3 sets out APA’s proposal, our alternative estimate that is the basis for the draft decision, and key differences. As can be seen, for some step changes and category specific forecasts we have included a forecast of zero. In some instances this reflects that we have not received sufficient information to be satisfied these costs would be incurred by a prudent service provider acting efficiently. Where this is the case, we have set this out below and we are open to receiving this information in APA’s revised proposal for the VTS.

³⁶ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

Table 6-3 Comparison of APA’s VTS proposals and our draft decision on opex (\$million, 2022)

	APA proposal for VTS	AER draft decision	Difference to APA proposal
Base (reported opex in 2019–20)	147.1	156.9	9.8
Base year adjustments	-0.4	-0.4	-
Final year increment	-	6.9	6.9
Trend: Output growth	-	-	-
Trend: Real price growth	-	1.2	1.2
Trend: Productivity growth	-	-1.3	-1.3
Total Trend	-	-0.1	-0.1
Step change: Transformation of Technology	9.4	-	-9.4
Step change: Augmentation and Expansion related opex	7.0	1.9	-5.1
Step change: Security of Critical Infrastructure	6.6	4.1	-2.4
Step change: Increase in VTS property tax	3.1	-	-3.1
Step change: Acquisition of carbon offset certificates	1.5	-	-1.5
Total Step change	27.6	6.0	-21.6
Forecast: Access Arrangement costs	2.0	-	-2.0
Forecast: Allowances	1.0	-	-1.0
Total Category specific forecasts	3.0	-	-3.0
Total opex (excluding debt raising costs)	177.3	169.3	-8.0
Debt raising costs	3.0	3.2	0.2
Total opex (including debt raising costs)	180.3	172.5	-7.8
Percentage difference to APA proposal			-4.3%

Source: APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021; AER analysis.

Note: Numbers may not add up to total due to rounding. Amounts of '0.0' and '-0.0' represent small amount and '-' represents zero.

The main drivers for the differences and the components of our alternative estimate are set out 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 APA’s opex in 2020 as the base year, which is year three of the 2018–22 access arrangement period, to forecast its opex over the 2023–27 period. This is consistent with APA’s proposal.³⁷

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 APA’s historical trends.

³⁷ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 56.

APA's opex was subject to the incentives of an ex-ante regulatory framework, including the application of an OEIM in the 2018–22 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 above efficient levels in the proposed base year.³⁸

APA's actual opex for 2020 of \$30.9 million (\$2022) is \$1.0 million (or 3.3%) higher than our approved opex forecast for that year.³⁹ APA explained the higher opex costs in 2020 are reflective of older pipelines and higher operating costs, and that a review of opex costs in the current regulatory period did not identify an item or group of costs responsible for the increase.⁴⁰ Further, that there was no significant impacts of COVID on opex in the base year.

Our analysis shows actual opex in 2020 is around \$2.3 million (\$2022) higher than the actual opex for the two previous years of the current period (2018 and 2019), however, it is around \$1.1 million (\$2022) lower than the average opex of the 2012–17 access arrangement period of \$31.9 million (\$2022).

We also note that actual opex for 2021, the year after the base year, of \$35.5 million (\$2022) has become available since APA submitted its proposal for VTS.⁴¹ This is \$4.4 million (or 14.3%) higher than our approved opex for that year. This does not impact our draft decision for opex, as 2020 has been proposed as the base year and which we have used for developing our alternative estimate.

Based on this, and in the absence of any evidence to the contrary, we have not identified any evidence that APA's proposed 2020 base year is materially inefficient. We note that in reviewing the base opex we have taken into considerations the concerns of CCP28, who questioned whether opex in the base year (2020) may be materially inefficient, and suggested reviewing the 2021 actual estimate.⁴² Similar concerns were raised by Energy Users Association of Australia (EUAA)⁴³ and the Victorian Community Organisation.⁴⁴

Our alternative estimate for the reported 2020 opex is \$9.8 million (\$2022) higher than APA's proposal over the 2023–27 access arrangement period. This is because we applied a consumer price index (CPI) to forecast end-of-year 2022 dollars (\$2022) rather than mid-2022 dollars. We have also updated the December 2022 forecast of CPI⁴⁵ which resulted in CPI growth of 5.9%, compared to APA's estimated CPI for 2022 of 2.0%.

Table 6-4 sets out our alternative estimate of base opex. We have used 2020 as the base year and have not identified any necessary adjustments for non-recurrent efficiency gains in the base year. Applying the adjustments set out in the sections below for category specific

³⁸ NGR, r. 71(1).

³⁹ AER, *VTS 2023–27 Access Arrangement Proposal, Opex model*, June 2022; AER analysis.

⁴⁰ APA VTS, *Response to information request #002*, 2 February 2022, p. 2.

⁴¹ APA, *VTS (APA GasNet) 2021 – Annual - RIN response -Consolidated*, 2 May 2022; AER analysis.

⁴² CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, p. 51.

⁴³ EUAA, *Submission, APA Gas Transmission Access Arrangements*, 18 February 2022, p. 2.

⁴⁴ Victorian community organisations, *Joint submission to the Australian Energy Regulator (AER) from Victorian community organisations 2023–2027 APA Victorian Gas Transmission System Access Arrangement*, 14 February 2022, p. 18.

⁴⁵ RBA, *Statement on Monetary Policy, Forecast Table - May 2022*, 5 May 2022.

forecasts and the final year increment we have calculated estimated opex of \$32.7 million (\$2022) for 2022.

Table 6-4 APA proposal for VTS base opex in 2020 and AER draft decision (\$million, 2022)

	APA proposal for VTS	AER draft decision	Difference to APA proposal
Reported 2020 opex	29.4	31.4	2.0
Final year increment	–	1.4	1.4
Estimated final year opex	29.4	32.8	3.3
Remove category specific forecast ^a	–0.1	–0.1	0.0
Base opex	29.3	32.7	3.3

Source: AER analysis

(a) Refers to debt raising costs.

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

6.4.1.1 Removal of category specific forecasts

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

We have removed the category specific forecast for debt raising costs from base opex of \$0.1 million (\$2022) (\$0.4 million (\$2022) over the 2023–27 access arrangement period) in our alternative estimate. This is consistent with APA's proposal.⁴⁶

6.4.1.2 Estimate of 2022 opex

The final year increment is the estimated change in opex between the base year (2020) and the final year (2022) of the current (2018–22) 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 June 2022.

APA did not include a final year increment in its proposal. This is inconsistent with how we estimate opex for 2022, including in the OEIM.

Our alternative estimate of the total opex forecast, over all five years is \$6.9 million (\$2022) higher than APA's proposal, due to our higher final year increment estimate (\$1.4 million (\$2022) per year, as in Table 6-4). To calculate our alternative estimate of the final year increment, we have followed the approach as set out in the Guideline⁴⁷ which ensures consistency with how we estimate opex for 2022 in the OEIM. It is important our final year estimate is the same as that used in the OEIM. This allows the service provider to retain incremental efficiency gains made after the base year through its opex forecast.

⁴⁶ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

⁴⁷ AER, *Expenditure forecast assessment guideline for electricity transmission*, , November 2013, pp. 22-23.

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 for the 2023–27 period. This accounts for forecast growth in prices, output and productivity.

APA proposed an opex forecast for VTS that is flat in real terms. It forecast no growth for labour prices, output and productivity changes. Our alternative estimate includes labour price and productivity growth that is consistent with an average annual rate of change of 0.0%. This results in a difference in rate of change calculations to APA's forecast of \$0.1 million (\$2022) over the access arrangement period (or an increase in opex equal to 0.04% of the total opex proposed). This small difference is consistent with the rationale APA provided for not including these forecasts in its opex model, in that it considered real price and labour productivity growth to be largely offsetting.⁴⁸ APA's forecast of the rate of change for VTS, our alternative forecast and the difference is provided in Table 6-5.

In its submission to APA's initial proposal for the VTS, CCP28 recommended including labour price, output and productivity growth estimates.⁴⁹ CCP28 noted that it would have expected APA to have linked growth in productivity to its ToT step change. AGL also recommended AER consider growth in the trend components for our alternative assessment.⁵⁰

Table 6-5 Forecast rate of change (%)

	2023	2024	2025	2026	2027
APA proposal for VTS					
Input price growth	–	–	–	–	–
Output growth	–	–	–	–	–
Productivity growth	–	–	–	–	–
AER draft decision					
Input price growth	0.3	0.5	0.6	0.6	0.4
Output growth	–	–	–	–	–
Productivity growth	0.5	0.5	0.5	0.5	0.5
Overall rate of change	–0.2	0.0	0.1	0.1	–0.1
Difference to APA proposal	–0.2	0.0	0.1	0.1	–0.1

Source: APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021, AER analysis.

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '–0.0' represent small amounts and '–' represents zero

⁴⁸ APA VTS, *Response to information request #002*, 2 February 2022, p. 3.

⁴⁹ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, pp. 51-53.

⁵⁰ AGL, *APA Victorian Transmission System 2023-27 Access Arrangement Proposal*, 18 February 2022, p. 2.

6.4.2.1 Forecast price growth

We have applied a real average annual price growth of 0.5% in our alternative estimate. APA proposed no average annual price growth in its opex forecast.⁵¹ This increases our alternative estimate of total opex by \$1.2 million (\$2022).

APA stated in response to an information request that it considered real price and labour productivity growth to be largely offsetting and therefore it did not include these forecasts in its model.⁵²

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 wage price index (WPI) for the Victorian electricity, gas, water and waste services (utilities) industry. Specifically, we have used the forecasts from our consultant Deloitte and the BIS Oxford forecasts submitted by AusNet (electricity) transmission services.⁵³ We have also added the impact of the legislated increases in the superannuation guarantee, which is not captured in the WPI forecasts.
- Both we and APA did not forecast any non-labour real price growth.⁵⁴
- We applied input price weights of 62% and 38% for labour and non-labour respectively in our alternative estimate reflecting our previous approach for transmission networks,⁵⁵ which is similar to the estimate including for the recent Roma to Brisbane pipeline.⁵⁶

Consequently, we and APA have not applied the same approach to forecast price growth.

Table 6-6 shows APA's proposed forecast labour price growth, our alternative estimate and the difference to APA's proposal for the draft decision.

⁵¹ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

⁵² APA VTS, Response to information request #002, 2 February 2022, p. 3.

⁵³ Deloitte Access Economics, *Wage Price Index forecasts*, 8 March 2022, p. xii, Ausnet, *Revised Revenue Proposal 2023–27, Appendix 4A: Labour cost escalation forecasts to FY2027*, 1 September 2021, p. 3. Note that the BIS Oxford estimates were prepared on a financial year basis and so were averaged to get a calendar year estimate.

⁵⁴ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

⁵⁵ Economic Insights, *Inputs to be used in the Economic Benchmarking of Electricity Network Service Providers*, 27 February 2013, p 10.

⁵⁶ AER, *Draft Decision, Roma to Brisbane Pipeline Access Arrangement 2022 to 2027 Attachment 6 Operating expenditure*, November 2021, p. 18.

Table 6-6 Forecast labour price growth (%)

	2023	2024	2025	2026	2027
APA proposal for VTS					
Forecast labour price growth	–	–	–	–	–
AER draft decision					
Forecast WPI growth, Deloitte	–0.4	0.1	0.1	0.3	0.4
Forecast WPI growth, BIS Oxford Economics	0.5	0.7	1.0	1.0	1.0
Superannuation guarantee increases	0.5	0.5	0.5	0.3	0.0
Forecast labour price growth	0.5	0.9	1.0	0.9	0.7
Difference to APA proposal	0.5	0.9	1.0	0.9	0.7

Source: APA VTS, Access arrangement proposal 2023–27, Opex Model, 1 December 2021.; APA, APA VTS 2023–27 – Reset RIN response (Public), December 2021, p 57.; AER analysis.

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

6.4.2.2 Forecast output growth

We have not included output growth in our alternative estimate. This is consistent with APA's opex forecast.⁵⁷

We are satisfied with this forecast for output growth given pipeline capacity is not forecast to grow to meet additional demand, and there is no plan to extend the VTS during the 2023–27 access arrangement period.⁵⁸ This is also consistent with APA's capex proposal, which does not include any expansion capex in the 2023–27 period driven by growing demand. APA has proposed some capex projects that will expand the size of the network, but these are driven by security of supply needs and not additional demand.⁵⁹

6.4.2.3 Forecast productivity

We have included average annual productivity growth of 0.5% in our alternative estimate. APA included zero productivity growth for the VTS proposal, but noted customers benefit from economies of scale in a wide number of functions performed at the corporate level.⁶⁰

APA proposed a productivity factor of 0.5% in its 2021–26 opex proposal for the Amadeus gas transmission pipeline (Amadeus) and we included this percentage growth in our draft and final decisions for the Roma to Brisbane Pipeline 2023–27 reset. In the proposal for Amadeus, APA stated⁶¹:

⁵⁷ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 56.

⁵⁸ APA VTS, *A look at plans for Victorian Transmission System, APA Victorian Transmission System 2023-27 access arrangement proposal overview*, 1 December 2021, pp. 18-19, 23-26.

⁵⁹ APA VTS, *A look at plans for Victorian Transmission System, APA Victorian Transmission System 2023-27 access arrangement proposal overview*, 1 December 2021, pp. 30-33.

⁶⁰ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 57.

⁶¹ APTNT, *Amadeus Gas Pipeline 2021–26 Access Arrangement – Reset RIN Response*, 1 July 2020, pp. 48–49.

- In the absence of specific productivity forecasts for gas transmission, the AER’s forecast of 0.5% 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.

Our preference is to explicitly apply a forecast productivity growth for VTS. Given both RBP and Amadeus are gas transmission pipelines owned and operated by APA, we expect both transmission pipelines should have similar productivity growth. Further, as APA has noted, customers likely benefit from economies of scale at the corporate level and there may also be efficiencies from the technology projects being proposed for the upcoming access arrangement period. Therefore, we have applied a forecast of annual productivity growth of 0.5% for our alternative estimate. This has decreased our draft decision opex forecast by \$1.3 million (\$2022) compared to APA’s proposal.

6.4.3 Step changes

In developing our alternative estimate for the draft decision, we include prudent and efficient 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.⁶²

APA’s proposal for VTS included five step changes totalling \$27.6 million (\$2022) or 15.3% of its proposed total opex forecast.⁶³ These are shown in Table 6-7 along with our alternative estimate for the draft decision, which is to include step changes totalling \$6.0 million (\$2022). Our lower alternative estimate reflects that we are not satisfied that all the proposed step changes are prudent and efficient.

Table 6-7 APA proposal for VTS step changes and our draft decision (\$million, 2022)

Step change	APA proposal for VTS	AER draft decision	Difference to APA proposal
Transformation of technology	9.4	–	–9.4
WORM and SWP opex	7.0	1.9	–5.1
Security of critical infrastructure	6.6	4.1	–2.4
Property taxes	3.1	–	–3.1
Acquisition of carbon offset certificates	1.5	–	–1.5
Total step changes	27.6	6.0	–21.6

Source: APA VTS, APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation, 1 December 2021, pp. 58–69; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

⁶² AER, *Expenditure forecast assessment guideline for electricity transmission*, November 2013, p. 24.

⁶³ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021; AER analysis.

The following sections outline the reasons for our draft decision, including the alternative estimates we have developed.

6.4.3.1 Transformation of technology

APA’s proposal for the VTS included a transformation of technology step change of \$9.4 million (\$2022) over the 2023–27 access arrangement period. This relates to costs to replace and migrate to cloud-based services some of APA’s critical IT applications and to enable service improvements. It is based on a whole of business proposal for APA, and costs have been allocated to VTS using its cost allocation method.⁶⁴ We have not included this step change in our alternative estimate as we were unable to substantiate the costs were prudent and efficient.

Table 6-8 Transformation of technology step change (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	2.4	3.0	1.7	1.1	1.1	9.4
AER draft decision	–	–	–	–	–	–
Difference to APA proposal	–2.4	–3.0	–1.7	–1.1	–1.1	–9.4

Source: APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 62; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

APA explained that the drivers for its proposed IT cloud expenditure are associated with routine upgrades and replacing several legacy IT systems, which are at the end of their technical life, and are unable to be replaced like-for-like due to limited or no vendor support.⁶⁵ APA submitted that it is replacing its obsolete IT systems and migrating them to IT cloud-based services. It also appears that the migration to IT cloud based services is driven by some service improvements.⁶⁶ These IT systems relate to its Enterprise Program Management Office programs, including asset management, back office and field mobility totalling \$9.2 million (\$2022), and Operational technology program totalling \$0.2 million (\$2022).⁶⁷

APA further submitted that the International Financial Reporting Interpretations Committee has clarified how arrangements in respect of a specific part of cloud technology, Software-as-a-Service (SaaS), should be accounted for.⁶⁸ The Committee has clarified that 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

⁶⁴ APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, p. 10.

⁶⁵ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, pp. 64-65.

⁶⁶ APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, pp. 10-25.

⁶⁷ APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, p. 10, 11, 25.

⁶⁸ APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, p. 6.

the supplier controls the intellectual property of the underlying software code. Accordingly, APA has proposed to shift its forecast SaaS expenditure from capex to opex.

APA proposed that due to these drivers, allocation of costs between opex and capex will be impacted.⁶⁹ We requested APA to provide evidence that the required expenditure was prudent and efficient. However APA only stated that this expenditure has not been included in its forecast capex. For us to include this as a step change we would need to be satisfied that this expenditure is not captured as a capex cost.

Our alternative estimate does not include this step change as we were unable to determine it is prudent and efficient expenditure. We did not receive sufficient information to substantiate that the relevant IT assets have reached the end of their useful life, or to understand what role service improvements played in the decision to migrate to cloud infrastructure. Further, while APA stated the opex forecast for the step change was determined using opex costs derived from third party benchmarking analysis provided by CapGemini,⁷⁰ we could not substantiate this using the information provided.⁷¹ APA also indicated the scope of the programs is subject to ongoing assessment and updated opex estimates are expected to be available in the future, including as a result of information obtained from vendors through request for proposal responses.⁷² This information from vendors would help to substantiate the efficiency of the proposed costs. In its revised proposal, we encourage APA to provide information as set out above, including any market based evidence of the step change reflecting lowest cost options.

In its submission to APA's initial proposal for the VTS, CCP28 recommended that each component of the step change be assessed for timing, costs and risk including a costed business case and its apportionment to the VTS business.⁷³ Further, that clarification of the reasonableness of the proposed migration of expenditure from capex to opex be assessed. We have done this in forming our view further information would be needed to determine the prudent and efficient costs of this step change.

6.4.3.2 Opex related to capex projects for WORM and SWP

APA's proposal for VTS included a step change of \$7.0 million (\$2022) over the 2023–27 access arrangement period for ongoing opex costs related to operating and maintaining the WORM and SWP capex projects. APA stated that these 'expansion' projects are driven by security of supply and not output growth.⁷⁴ Our alternative estimate includes opex associated with the WORM capex project, but we have not included any costs at this stage for the SWP capex project.

⁶⁹ APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, p. 6.

⁷⁰ APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, p. 12.

⁷¹ APA VTS, *Response to information request #008*, 31 January 2022, pp. 2–5.

⁷² APA VTS, *Information Paper, Information Technology, Victorian Transmission System 2023-27 access arrangement proposal*, 1 December 2021, p. 27; APA VTS, *Response to information request #008*, 31 January 2022, pp. 1–2.

⁷³ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, pp. 53–58.

⁷⁴ APA VTS, *A look at plans for Victorian Transmission System, APA Victorian Transmission System 2023-27 access arrangement proposal overview*, 1 December 2021, pp. 30–33.

Table 6-9 Opex from Capex (WORM and SWP) step change (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	0.6	1.2	1.7	1.7	1.7	7.0
AER draft decision	0.4	0.4	0.4	0.4	0.4	1.9 [#]
Difference to APA proposal	-0.2	-0.8	-1.4	-1.4	-1.4	-5.1

Source: APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 58-59; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

\$0.6 million per annum for the WORM opex (\$3.0 million (\$2022) over the access arrangement period) is included in our alternative estimate, made up of \$0.2 million in the final year increment for 2022 and \$0.4 million (\$2022) per year thereafter. This has resulted in \$1.9 million (\$2022) being included in our alternative estimate of the step change and \$1.1 million (\$2022) in the final year increment as these costs were included in the AER's last determination for the access arrangement.

In its written documentation, APA classified these as step changes,⁷⁵ but in its opex model it included them as separate forecasts for 'augmentation and expansion related opex'.⁷⁶ APA's proposal noted that these 'expansion' projects are driven by security of supply and not output growth.⁷⁷ For this reason, we do not consider that they are related to the rate of change and are better classified as a step change than a category specific forecast. While not related to a new obligation, or capex / opex trade-off, these are new costs of operating and maintaining capex assets which in future access arrangement periods will be revealed through actual costs.

In our draft decision for capex, we have included the proposed WORM capex (excluding overheads), as it was considered to be prudent and efficient investment.⁷⁸ The ongoing WORM opex is expected to commence in the first year of the access arrangement period (2023).⁷⁹ WORM related opex was included in our 2018–22 access arrangement decision with a start date of 2021, but as its construction is ongoing these costs are not in in the actual base year opex (2020).⁸⁰ APA stated that the increase in cost per annum (\$0.4 million (\$2022)) from the previously approved WORM opex (of \$0.2 million (\$2022)), was due to changes in the way the WORM pipeline was being constructed as a result of environmental considerations.⁸¹

APA provided a detailed breakdown of opex costs related to the WORM capex project.⁸² Our review found them to be within reasonable bounds of efficient costs. Therefore, we have included ongoing WORM related opex costs in our alternative estimate.

⁷⁵ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, pp. 58–59.

⁷⁶ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

⁷⁷ APA VTS, *A look at plans for Victorian Transmission System, APA Victorian Transmission System 2023–27 access arrangement proposal overview*, 1 December 2021, pp. 30–33.

⁷⁸ AER, *Draft Decision APA Victorian Transmission System (VTS) Access Arrangement 2023 to 2027 (1 January 2023 to 31 December 2027), Attachment 5 Capital Expenditure*, June 2022.

⁷⁹ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

⁸⁰ APA VTS, *VTS - B2; Operating expenditure model revised with WORM – 20170515 Public*; AER, *Draft Decision, APA VTS Gas access arrangement 2018 to 2022, Attachment 7 - Operating expenditure*, July 2017, p. 6.

⁸¹ APA VTS, *A look at plans for Victorian Transmission System APA Victorian Transmission System 2023-2027 access arrangement*, 1 December 2021, p. 33.

⁸² APA VTS, *Response to information request #002 (question 3.1(e) spreadsheet)*, January 2022.

In our draft decision for capex we have not included the capex costs related to the two compressors originally proposed for the SWP capex project. Instead, we have included an alternative capex project and forecast for a single compressor to be constructed at a location to be agreed between APA and AEMO. This capex will be largely incurred in the current access arrangement period but also the next access arrangement period. The business case for the alternative capex project included opex costs of \$1.25 million but was not provided with sufficient time or detail to determine the efficiency of the related opex costs.⁸³ Therefore our alternative estimate does not include any opex related to compressor cost for the draft decision. The efficiency of these costs will be assessed with APA’s revised proposal. We encourage APA to include the basis for the operating and maintenance costs of the new assets, including the underlying cost basis and frequency of use along with evidence of the efficiency of the proposed costs.

In their submissions to APA’s initial proposal for VTS, CCP28⁸⁴, Red Lumo⁸⁵ and EUAA⁸⁶ all considered scrutiny should be applied to the SWP opex and capex proposals. Viva⁸⁷ and Lochard⁸⁸ supported the SWP project. This scrutiny has occurred as a part of us forming our alternative estimate of opex for the SWP opex.

6.4.3.3 Security of Critical infrastructure

APA’s proposal for VTS included a step change of \$6.6 million (\$2022) over the access arrangement period to meet new compliance requirements under the *Security Legislation Amendment (Critical infrastructure) Bill 2020*.⁸⁹ This was based on a whole of business proposal for APA and costs have been allocated to VTS using its cost allocation method.⁹⁰ We have only included \$4.1 million (\$2022) of the proposed step change in our alternative estimate. We consider these costs have been demonstrated to be prudent and efficient, but the additional \$2.4 million (\$2022) have not.

Table 6-10 Security of Critical infrastructure step change (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	1.3	1.3	1.3	1.3	1.3	6.6
AER draft decision	0.8	0.8	0.8	0.8	0.8	4.1
Difference to APA proposal	-0.5	-0.5	-0.5	-0.5	-0.5	-2.4

Source: APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 62; AER analysis

⁸³ APA VTS, *Business Case AA6 – SWP Expansion – Winchelsea 2nd Unit – Final*, 17 May 2022, p. 14.

⁸⁴ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, p. 54.

⁸⁵ Red Lumo, *Re: APA Gas Transmission Access Arrangements*, 18 February 2022. pp. 1-2.

⁸⁶ EUAA, *Submission, APA Gas Transmission Access Arrangements*, 18 February 2022, p. 10.

⁸⁷ Viva Energy Australia, *Submission APA VTS: AA 2023–27*, 18 February 2022. p. 3.

⁸⁸ Lochard Energy, *Lochard Energy submission to AER on APA’s Victorian Transmission System gas access arrangement proposal 2023-27*, 18 February 2022, p. 1.

⁸⁹ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 62.

⁹⁰ APA VTS, *A look at plans for Victorian Transmission System APA Victorian Transmission System 2023-2027 access arrangement*, 1 December 2021, pp. 22, 38 and 39.

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

In terms of the legislative requirements for security of critical infrastructure, we note that the original *Security Legislation Amendment (Critical infrastructure) Bill 2020* was divided into two separate parts. The first part became the *Security Legislation Amendment (Critical Infrastructure) Act 2021* in December 2021 and put in place cyber security requirements.⁹¹ The second part became the *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022* in April 2022, which built upon the rules and regulations established in the *Security Legislation Amendment (Critical infrastructure) Bill 2020* relating to the key hazards of cyber, personnel, supply chain and physical & natural. The *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022* also provides requirements for a risk management program and enhanced cyber security for any critical infrastructure declared 'Systems of National significance'.⁹²

APA assessed its new legislative requirements against the *Security Legislation Amendment (Critical infrastructure) Bill 2020* as part of developing its proposal (across six domains: enterprise security governance, personnel security, physical security, cyber security, supply chain security and natural hazards).⁹³ APA engaged EY to conduct a gap analysis in relation to these domains, excluding cyber security.⁹⁴ Each domain was critically analysed to identify the current state of compliance, any gaps, and the capabilities and associated costs to meet these gaps. Cyber security domain compliance was assessed by APA using the Australian Energy Sector Cyber Security Framework (AESCSF)⁹⁵ and as required under the *Security Legislation Amendment (Critical Infrastructure) Act 2021*.⁹⁶

In its submission to VTS's initial proposal, CCP28 recommended assessing the methodology applied in establishing the material risk for the SoCI step change, and whether this is consistent with the gap analysis performed by EY and its apportionment of costs to the VTS business.⁹⁷ We have done this in forming our view of the prudent and efficient alternative estimate for this step change. We have outlined our reasons in confidential appendix A.

6.4.3.4 Property taxes

APA's proposal for the VTS included a step change of \$3.1 million (\$2022) related to increases in property tax. We have not included this step change in our alternative estimate for the draft decision for the reasons outlined below.

⁹¹ Australian Government, *Security Legislation Amendment (Critical Infrastructure) Act 2021*, December 2021.

⁹² Australian Government, *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022*, April 2022. Part 6A. & Australian Government, Cyber and Infrastructure Security Centre. *Risk Management Program*.

⁹³ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, pp. 66–67.

⁹⁴ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, pp. 62, 66.

⁹⁵ AEMO, *Australia Energy Sector Cyber Security Framework – Framework Overview*, May 2021.

⁹⁶ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, pp. 66–67 and Australian Government, *Security Legislation Amendment (Critical Infrastructure) Act 2021*, December 2021.

⁹⁷ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, pp. 11, 47 and 56.

Table 6-11 Property taxes step change (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	0.6	0.6	0.6	0.6	0.6	3.1
AER draft decision	–	–	–	–	–	–
Difference to APA proposal	–0.6	–0.6	–0.6	–0.6	–0.6	–3.1

Source: APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation, Opex Model*, 1 December 2021; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

APA submitted that there had been an increase in property taxes for the VTS in the current regulatory period that are not in base opex (given the timing of the notices being issued), and that it expected that the order of magnitude of these increases would continue into the future.⁹⁸ APA suggested that the foundation of the higher property tax assessments was an increase in underlying land valuations (but did not provide evidence to support this) and that there may have also been changes in the tax rate but that it was not clear from the assessment notices.⁹⁹

In its submission to APA's proposal for the VTS, CCP28 highlighted the limited information and transparency that APA provided to support this step change.¹⁰⁰ CCP28 also noted that it was unclear whether these property taxes were genuinely new regulatory obligations, and what, if anything, has been undertaken to mitigate the outcome.

In our assessment of this step change, it was not apparent what the driver of these tax assessment changes was, including whether these were due to temporary or permanent measures. APA did not provide information to explain any underlying basis for these changes in costs, such as variations to legislation, or changes to underlying valuation policies or methodologies, including supporting information that these will continue. Further, the information provided by APA raised questions around whether all the properties included by APA as part of the VTS property tax assessment step change are used solely for regulated purposes.¹⁰¹

In our draft decision, we have not included this step change in our alternative estimate as we do not consider that APA provided information to explain the increases in property taxes are prudent and efficient. In its revised proposal, APA may provide further information if there are clear legislative or policy changes driving property tax increases. In this case, it should also provide evidence of the basis for the cost increases being efficient and that the increases only relate to properties used for regulated purposes.

⁹⁸ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 59.

⁹⁹ APA VTS, *Response to information request #002*, 2 February 2022, p. 10.

¹⁰⁰ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, p. 55.

¹⁰¹ APA VTS, *Response to information request #002 (question 3.6, spreadsheet)*, 21 February 2022.

6.4.3.5 Acquisition of carbon offset certificates

APA's proposal for VTS included a step change of \$1.5 million (\$2022) over the 2023–27 access arrangement period for the acquisition of carbon offset certificates.¹⁰² We have not included this step change in our alternative estimate for the draft decision as we do not consider this proposed step change to be prudent or efficient, including that APA has provided no evidence of customer engagement or support for this step change.

Table 6-12 Acquisition of carbon offset certificates step change (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	0.3	0.3	0.3	0.3	0.4	1.5
AER draft decision	–	–	–	–	–	–
Difference to APA proposal	–0.3	–0.3	–0.3	–0.3	–0.4	–1.5

Source: APA, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 61; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

APA submitted that this step change would advance the purpose of the Victorian Government's *Climate Change Act 2017* (the Act), noting that the emission reduction targets to achieve net zero by 2050 are set at a state level and there are no set targets for different sectors of the economy.¹⁰³ APA submitted that this step change was both prudent and efficient for Victorian customers, as users of the VTS, because by the VTS contributing to meet the interim targets, other parts of the economy would consequently shoulder a lesser financial burden.¹⁰⁴

APA further clarified that it used the reporting under the *National Greenhouse and Energy Reporting Act 2007* to estimate its carbon footprint,¹⁰⁵ namely only fugitive emissions related to the VTS pipeline length. APA stated that the remaining emissions (namely emissions associated with the management of the VTS, such as maintenance works and the consumption of goods and services for the purpose of managing the VTS) are minor and declining (scope 2), or are the responsibility of other parties (scope 3 – parties for whom this is their scope 1 and scope 2 emissions).¹⁰⁶

In submissions received on APA's proposal for the VTS, the EUAA¹⁰⁷ and CCP28¹⁰⁸ stated that they do not support this step change. The Victorian Community Organisations were also not supportive of the step change, stating that carbon offsets should not be funded through revenue and that investments in offsets to improve APA's corporate climate reporting should

¹⁰² APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 61.

¹⁰³ APA VTS, *Response to information request #002*, 2 February 2022, p. 7.

¹⁰⁴ APA VTS, *Response to information request #002*, 2 February 2022, p. 7.

¹⁰⁵ APA VTS, *Response to information request #002*, 2 February 2022, pp. 7–8.

¹⁰⁶ APA VTS, *Response to information request #002*, 2 February 2022, pp. 7–8.

¹⁰⁷ EUAA, Submission, *APA Gas Transmission Access Arrangements*, 18 February 2022, p. 2.

¹⁰⁸ CCP28, APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER, 18 February 2022, pp. 57–58.

be funded by the business, not consumers.¹⁰⁹ The Victorian Community Organisations also questioned what the incentives are to reduce emissions from pipelines if costs are being passed through to customers.

CCP28 further highlighted the absence of consumer engagement on this issue, and raised concerns including on the reasonableness of APA’s proposed carbon accounting methodology and its assumptions.¹¹⁰

Overall, we are not satisfied that the proposed step change is prudent and efficient. Firstly, there is no clear obligation for this step change, and in the absence of this APA has not undertaken any stakeholder consultation. Secondly, to the extent there was a clear obligation or customer support, we are not satisfied that APA’s suggested methodology, including the assumptions it makes in its carbon accounting, represents a genuine contribution to advancing the purpose of the Act as APA submitted.¹¹¹ For instance, we consider achieving net zero involves comprehensive carbon accounting of all scope 1, 2 and 3 emissions associated with the operation of an entity (e.g. see carbon accounting standards of the federal Climate Active program, which details the requirement for comprehensive carbon accounting to attain carbon neutral status). APA does not propose a comprehensive carbon accounting process. Therefore, its proposed contribution to the Victorian net zero 2050 target is unlikely to satisfy carbon accounting standards to qualify as an emission reduction initiative for the Victorian Government’s carbon inventory.

6.4.4 Category specific forecasts

APA’s proposal for the VTS included three expenditure items, or category specific forecasts, which were not forecast using the base-step-trend approach. These are debt raising costs, linepack and spares allowances, and an allowance for preparation of the 2028–32 access arrangement. We have included a category specific forecast for debt raising costs in our alternative estimate, but did not include category specific forecasts for the other two proposed allowances.

6.4.4.1 Debt raising costs

We have included debt raising costs of \$3.2 million (\$2022) in our alternative estimate for the 2023–27 period. This is an increase of \$0.2 million from APA’s proposed debt raising costs.¹¹²

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.

¹⁰⁹ Victorian community organisations, *Joint submission to the Australian Energy Regulator (AER) from Victorian community organisations 2023–2027 APA Victorian Gas Transmission System Access Arrangement*, 14 February 2022, p. 19.

¹¹⁰ CCP28, *APA: Victorian Gas transmission System Access Arrangement 2023–27, CCP28 Advice to the AER*, 18 February 2022, pp. 57–58.

¹¹¹ APA VTS, *Response to information request #002*, 2 February 2022, p. 7.

¹¹² APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021 and AER analysis.

6.4.4.2 Linepack and spares allowance

APA's proposal for the VTS included a category specific allowance for the return on linepack and spares inventory of \$1.0 million (\$2022), separated into \$0.8 million (\$2022) for linepack and \$0.2 million (\$2022) for spares.¹¹³ Our draft decision is to not include a category specific forecast of the proposed linepack and spares allowance for the reasons outlined below.

Table 6-13: Linepack and spares allowance (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	0.2	0.2	0.2	0.2	0.2	1.0
AER draft decision	–	–	–	–	–	–
Difference to APA proposal	–0.2	–0.2	–0.2	–0.2	–0.2	–1.0

Source: APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero

Linepack

APA's proposal for the VTS included an allowance for the carrying cost of linepack inventory of \$0.8 million (\$2022) for the 2023–27 access arrangement period.¹¹⁴ Linepack is the amount of gas needed to be contained in a pipeline to maintain required pressure and operation of the pipeline, and is a requirement in commissioning the pipeline. The proposed linepack allowance was for both historically purchased inventory, and for inventory estimated to be purchased for the 2023–27 access arrangement.

APA estimated the linepack allowance by using a methodology based on total capex, rather than using project specific business cases and projections to calculate linepack expenditure for individual pipelines.¹¹⁵ We consider this creates risks of inflating linepack expenditure, as not all capex will be for commissioning new pipelines (e.g. see 2023–27 access arrangement capex model which contains proposals beyond capex related to new pipelines).¹¹⁶

More fundamentally, we consider that a return on capex is normally and more appropriately managed via a return on the relevant capital base, rather than through an opex allowance. While we have provided opex for this in our previous decisions, following further examination of the issue we do not believe this treatment is appropriate. Our modelling also shows that the opex allowances received historically by VTS for linepack sufficiently compensate it for any returns that would have been received as a return on the capital base had the linepack been capitalised (as per the normal approach).

For these reasons, we have not included a category specific forecast for linepack in our alternative estimate.

¹¹³ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

¹¹⁴ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

¹¹⁵ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 69 and APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

¹¹⁶ APA VTS, *Access arrangement proposal 2023–27, Capex Model*, 1 December 2021.

Spares

APA's proposal for the VTS included an allowance for the carrying cost of spares inventory (capex) purchased, both in terms of historical and projected future requirements. Similar to the linepack estimate, APA estimated its spares inventory allowance of \$0.2 million (\$2022) for the 2023–27 access arrangement using a methodology based on the total capex, rather than using its asset management expertise to project spares requirements.¹¹⁷ Further, APA also proposed expenditure related to spares in its 2023–27 access arrangement capex proposal.¹¹⁸

As with linepack, we consider that a return on capex is normally and more appropriately managed via a return on the relevant capital base, rather than through an opex allowance. While we have provided opex for this in our previous decisions, following further examination of the issue we do not believe this treatment is appropriate. Further, we consider the separate capex proposal for spares a more appropriate approach to determine the return on prudent and efficient capex for spares. Additionally, we note that for the 2013–17 access arrangement we approved spares in capex, and that APA reported no spares purchases during the 2018–22 access arrangement.¹¹⁹

For these reasons, and to avoid any double counting, we have not included a category specific forecast for spares in our alternative estimate of opex.

6.4.4.3 Access arrangement allowance

APA's proposal for the VTS included a category specific forecast of \$2.0 million (\$2022) for costs it expects to incur in preparing its proposal for the 2028–32 access arrangement.¹²⁰ Our draft decision is to not include a category specific forecast for access arrangement costs in our alternative estimate for the reasons outlined below.

Table 6-14: Access arrangement allowance (\$million, 2022)

	2023	2024	2025	2026	2027	Total
APA proposal for VTS	–	–	–	1.0	1.0	2.0
AER draft decision	–	–	–	–	–	–
Difference to APA proposal	–	–	–	–1.0	–1.0	–2.0

Source: APA, VTS; 2023–27 Access Arrangement – opex model. 1 December 2021; AER analysis

Note: Numbers may not add up due to rounding. Amounts of '0.0' and '-0.0' represent small amounts and '-' represents zero.

APA's proposal for the VTS included an allowance for the preparation of the 2028–32 access arrangement. APA provided limited supporting information on this allowance, and did not explain any additional factors that may alter our previous reasons for not accepting

¹¹⁷ APA VTS, *APA VTS 2023–27 Access Arrangement Reset RIN Response – Public, Access Arrangement RIN response and Basis of Preparation*, 1 December 2021, p. 69 and APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

¹¹⁸ APA VTS, *Access arrangement proposal 2023–27, Capex Model*, 1 December 2021.

¹¹⁹ APA VTS, *Access arrangement proposal 2023–27, Capex Model*, 1 December 2021.

¹²⁰ APA VTS, *Access arrangement proposal 2023–27, Opex Model*, 1 December 2021.

access arrangement category specific allowances.¹²¹ At that time, we highlighted that costs associated with the preparation of an access arrangement are a business-as-usual expense that a prudent network business will consider and manage within its existing base opex forecast. Importantly, such costs are fundamentally directly related to a business' regulatory obligations to submit a proposal for the subsequent access arrangement period.

We accept that access arrangement costs are non-recurrent on a year-on-year basis and, therefore, may not be reflected in the particular base year chosen. However, they are costs that are typically borne within an access arrangement period. This means that although there may be volatility in the cost of certain individual opex activities on a short term, total opex is generally stable over time. We therefore consider providing a category specific forecast for such opex items may upwardly bias the total opex forecast. Minimising the number of costs forecast on a category specific basis also helps to simplify our expenditure assessments and allows for greater consistency across our regulatory determinations.

6.5 Revisions

We require APA to make the following revisions to its access arrangement proposal consistent with the NGR and NGL.

Revision 6.1: We require APA make all necessary amendments to address the issues raised in our draft decision on forecast opex for the 2023–27 access arrangement period.

¹²¹ AER, *Draft decision, APA VTS Australia Gas access arrangement 2018 to 2022, Attachment 7 – Operating Expenditure*, July 2017, p. 16.

A Shortened forms

Shortened form	Extended form
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
APA / APA VTS	APA VTS Australia (Operations) Pty Ltd and APA VTS Australia (NSW) Pty Ltd
Capex	Capital Expenditure
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
RFM	Roll forward model
RIN	Regulatory Information Notice
VTS	Victorian Transmission System
WACC	Weighted average cost of capital