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# APA Victorian Transmission System 2023-27 access arrangement. Revised proposal

## Overview of Revised Proposal

**August 10, 2022**

# Contents

# Executive summary

APA is submitting a revised proposal for APA VTS 2023-27 Access Arrangement for the next regulatory period from 1 January 2023 to 31 December 2027 (2023-27 regulatory period).

Our revised access arrangement proposal has been prepared in response to the Australian Energy Regulator's (AER's) Draft Decision, published on 30 June 2022. APA's revised proposal takes into consideration feedback made by stakeholders and the Consumer Challenge Panel (CCP28) in submissions to our initial proposal, matters raised in AER's Draft Decision, stakeholders during four APA roundtables in June and July, and presentations made at the AER Public Forum on 25 July 2022. In July, APA issued two Discussion Papers on VTS Business Narrative and Load & Demand to elicit stakeholder views on these topics.

APA's revised proposal will enable VTS transmission services to continue to provide gas transmission services to two million Victorian residential gas consumers, 64,600 commercial businesses and 600 large industrial manufactures in a safe, reliable, secure, and cost-effective way.

Our revised proposal acknowledges the need to adapt to an uncertain environment in the energy sector. We propose to do this by keeping options open in a prudent and nimble way.

## Involvement of stakeholders

The revised proposal is the culmination of 20 months of engagement with stakeholders starting in October 2020 to prepare the initial proposal through to July 2022 for the preparation of the revised proposal.

After submission of the initial proposal, APA scheduled five roundtables (one roundtable was cancelled due to an MS Teams outage affecting several stakeholders and APA but agenda items were discussed at the subsequent roundtable).

Over the course of stakeholder engagement APA was flexible in the approach to engagement and co-designing topics and regulatory positions as we went along. In the time we were preparing the initial proposal there were shifts in energy policy by governments and market conditions that meant we need to adjust topics to keep engagement relevant.

The key themes that emerged from engagement with stakeholders and our response is summarised in the following table:

## Key themes raised by stakeholders and APA response to stakeholder concerns

| Key themes raised by stakeholders | Our response to stakeholder concerns |
|---|---|
| **Affordability for all customers** | • Every element of the VTS regulated revenue components has been viewed through the lens of affordability and the impact on consumers<br>• Reducing costs as much as possible, deferring projects<br>• We have reduced proposed capital expenditure by 21%<br>• We have sought to smooth tariffs as much as possible |
| **Security of supply, but not at any price** | • Avoid investing in long-lived assets that may only be used for a short time<br>• Adopt an incremental approach to investing in new projects and replacement of existing assets<br>• To reduce uncertainty, supply forecasts include only projects that have reached Final Investment Decision<br>• Invest in what is needed and no more.<br>• We have adjusted our proposed investment in South West Pipeline in response to changes in Victorian supply conditions<br>• Support policy makers, AER & AEMO investigating demand management on the VTS |
| **Intergenerational equity** | • We believe that shortening maximum asset lives to accelerate depreciation of assets will be more beneficial to future consumers than doing nothing<br>• We maintain the principle of start early, start small, and monitor towards accelerated depreciation |
| **Investing under uncertainty requires flexibility** | • Adapting the regulatory tools that are available to us now<br>• We will review asset lives and depreciation profile if there is a change in circumstances<br>• We propose to undertake hydrogen safety study over 10 years (rather than 5) to assess possibility of repurposing VTS pipelines |

## Response to AER Draft Decision

APA's Revised Proposal Overview summarises APA's response the AER's request for further information, or where we did not agree with the AER Draft Decision, and we are resubmitting further analysis to support our position. A summary of the revised proposal is set out in the following table.

A more detailed response is contained in the remaining sections of this Revise Proposal Overview.

| Element of Draft Decision | Our revised proposal | Impact on consumers |
|---|---|---|
| Inputs & assumptions | | |
| Demand forecasts | Propose *Delayed Step Change* scenario - AEMO *Progressive Change* scenario for the first five years (the period of this AA) then shift to a AEMO *Step Change* scenario | Lower average tariffs for customers relative to adopting Step change scenario. |
| Rate of Return | Accepts AER approach to Rate of Return. 2022 instrument comes into effect early December 2022 | Rate of return is higher relative to current regulatory period |
| Proposed expenditure | | |
| Total capital expenditure | Reduced proposal capital expenditure program to $279.7m (21%) less than initial proposal | Lower tariff and bill impact for customers |
| Replacement (stay-in-business) capital expenditure | APA's revised forecast of $103m is 17% lower than initial proposal | Balances meeting safety and integrity obligations and energy affordability. Proposed program costs residential customer $1.24 per year |
| Western Outer Ring Main | Revised capital expenditure forecast is $216 million (from $185m). Most of this incurred in current period. | WORM will improve VTS security & resilience by winter 2023. Delays in obtaining approvals, domestic & global supply issues, & cost increases issues have been detrimental |
| South West Pipeline & Winchelsea compressor | In response AEMO 2022 GSOO concerns, and with support from Victorian government, APA submitted proposal to expediate investment for second compressor at Winchelsea ($60.1m). APA has withdrawn initial SWP570 proposal ($90.1m) | Improving VTS resilience and reducing the risk of gas shortfalls will help to ensure Victorian households, businesses and manufacturers have gas available to meet their needs and in particular heating needs during winter 2023 and beyond |
| Information & Operational Technology (IOT) | Revised information to support IOT proposal. Proposing capex of $10.1m and opex of $8.1m | The average bill impact for residential customers is 73 cents per year |
| Security of Critical Infrastructure | Revised business case for SoCI physical security. | Reduce risk of potentially significant impact to public safety and reduces risk of interruptions to gas supply. The bill impact for revised SoCI proposal is $1.25 per year for residential customers. |
| Hydrogen safety & integrity study | Propose to undertake hydrogen study over 10 years starting in 2023.Proposing to depreciate the study over life of pipe. Proposed capital expenditure is $18.9 million over 2023-28. | Average bill impact for residential customers is 20 cents per year with depreciated over 30 years. |

| | | |
|---|---|---|
| Carbon offset certificates | Includes purchase of offset certificates to offset Scope 1 emissions. | Approximately 9¢ per residential customer per year |
| Depreciation | | |
| Shortening asset lives & accelerating | Engaged external expertise to prepared scenario analysis. Resubmitting proposal for accelerating depreciation with average remaining life of 30 years | Starting accelerated depreciation now before there is a large-scale shift by residential gas consumers to electrify will reduce costs borne by remaining gas customers |
| Investment environment | | |
| Fixed principle | We have accepted stakeholders and AER do not support Fixed principle proposal | Less risk for customers |
| Rule 80 pre-approval | We have accepted stakeholders and AER do not support rule 80 pre-approval for SWP investment | No impact |

## What is the impact on consumer bills?

The composite tariff impacts of the revised proposal, relative to the AER's draft decision, are as follows:

| | AER Draft decision | APA VTS Revised proposal |
|---|---|---|
| Total revenue over the 5-year period ($m nominal) | 610.87 | 695.98 |
| Total volumes over the 5-year period (PJ) | 1,176.12 | 1,176.12 |
| Composite tariff | $0.5194/GJ | $0.5918/GJ |
| Estimated annual cost per residential customer | $28.26 pa | $32.19 pa |
| Estimated annual cost per commercial customer | $259.70 pa | $295.88 pa |

The impact of APA's revised proposal is an average increase of $3.95 per year to a residential customer bill relative to the AER draft decision.

APA has not updated the AER's forecast of inflation in this revised proposal; APA is mindful that the AER will review inflation assumptions based on information at the time of their final decision. The AER's draft decision features a 2023 forecast of inflation of 3.25%. An increase to the forecast 2023 inflation rate would increase the indexation of the capital base and cause an offsetting reduction in the depreciation building block. An increase in 2023 forecast inflation to 4.0%[1] would result in a decrease in the revenue requirement in the order of $18.6 million over the five year period. This would bring the estimated annual cost per residential customer to $31.33/GJ, a net increase of $3.07 per year relative to the AER draft decision. An increase beyond 4% as many are speculating would further reduce the annual cost to consumers.

[1] RBA Statement by Philip Lowe, Governor: Monetary Policy Decision, 2 August 2022. See https://www.rba.gov.au/media-releases/2022/mr-22-21.html#:~:text=The%20Bank's%20central%20forecast%20is,3%20per%20cent%20over%202024.

## What's in it for consumers?

Gas is an important source of energy in Victoria and APA's revised proposal will enable a continued reliable supply of gas. Importantly, gas will continue to be an important contributor to the health and well-being of Victorians, and the commercial health of businesses.

**Replacement capital expenditure program**. APA's ongoing investment in integrity, safety and reliability programs means that consumers can be assured that APA is striving to provide a safe and reliable transmission service. APA is doing its bit to ensure that consumers can rely on uninterrupted heating, hot showers and gas cooking.

The replacement program is largely driven by legislative obligations set by the Victorian government and Australian pipeline standards. We have carefully considered APA VTS's regulatory obligations and good industry practice in developing the access arrangement proposal. APA maintains the VTS to ensure risks are as low as reasonably practicable. This conforms to what a prudent and efficiency operator would do.

**Security of supply.** APA's investments in WORM and the Winchelsea second compressor (Winchelsea C2) will enhance security of supply for gas consumers for winter 2023 and beyond. The fragility of the demand supply balance in Victoria and the increased criticality of the WORM has been revealed with AEMO issuing notices of threats to system security in winter 2022. AEMO acted in response to depletion of gas inventory levels at Iona to levels which threatened the ability to deliver gas from the facility and heightened the risk of AEMO needing to curtail demand.

In circumstances where there is uncertainty as to the source of future gas supplies, the WORM and Winchelsea C2 support greater resilience, security of supply and provide optionality to service potential new gas powered generation and gas import terminals. The expenditure is necessary in order to maintain and improve the capacity of the VTS, to maintain integrity of services, and the safety of APA VTS personnel and the public.

Reducing the risk of gas shortfalls will help to ensure Victorian households have gas available to meet their needs and especially heating needs during winter 2023. Victorian businesses who rely on gas for heating processes, will benefit from reduced risk of interruptions (and potentially curtailment) to gas supply and to their operations.

**Security of Critical Infrastructure enhancing security and resilience.** New Australian government legislation is driving an all-hazards approach uplift in critical infrastructure resilience. The risks APA faces on the VTS (as with all its assets) are increasing and have the potential for significant consequence across society with potential to result in billions of dollars in impacts to customers, consumers and the economy. APA's SoCI program is designed to address the necessary capabilities within APA and appropriately increase its security and resilience.

**Hydrogen as a future fuel.** APA acknowledges concerns by consumer groups about the obligations, timing and the funding of the hydrogen study. APA has obligations under Victorian government legislation to ensure the safety and integrity of the pipelines. APA acknowledges the uncertainty but considers that, to keep options open for hydrogen as a future source of energy, it would be prudent to start testing for safety and integrity during 2023-27. APA's view is that to achieve targets contained in recent Commonwealth legislation clean fuels such as hydrogen are a key element. To reduce the impact on consumers we propose to extend the testing program over 10 years, rather than 5 years. This also provides an opportunity to review the program prior to the 2028-32 Access Arrangement. In addition, it is proposed to match the regulatory depreciation life to that of pipelines.

**Economies of scale benefit to consumers.** As part of APA Group, APA VTS benefits from economies of scale and scope relative to incurring cost on a stand-alone basis. APA is subject to constant market scrutiny and the expectation management will minimise costs. This provides assurance that costs are efficient. This is a benefit to all customers.

Information Technology, Operational Technology and the SoCI program in particular benefit from economies of scale and scope relative to incurring these costs on a stand-alone basis.

Further efficiencies are achieved by procurement of work in alignment with APA procurement policy which will deliver best value for customers.

We believe that the revised proposal is consistent with the expenditure that a prudent organisation acting efficiently would incur. The 2023-27 VTS access arrangement has been carefully revised to provide good value and optionality for Victorian gas consumers.

# 1. Introduction

## 1.1. Purpose

APA VTS Australia (Operations) Pty Limited (APA) submitted an initial proposal to the Australian Energy Regulator (AER) for the 2023-27 Access Arrangement for the Victorian Gas Transmission System (VTS). The proposal was lodged with the AER on 1 December 2021.

The Australian Energy Regulator (AER) Draft Decision, published on 30 June 2022, was not to accept APA's VTS 2023-27 access arrangement proposal. The AER considered that APA had not provided sufficient evidence for AER to approve the proposal. The AER advised that it further evidence is provided in APA's revised proposal a higher expected revenue may result.

APA has taken on board the comments made by AER in its Draft Decision and has prepared a revised proposal for the 2023-27 access arrangement. APA has had less than six weeks prepare the revised proposal and the short time frame has limited scope to fully engage with stakeholders.

APA understands that consumers are feeling the impact of increasing energy charges and we have attempted to ameliorate where possible adverse impacts for consumers. We have revised downwards proposed expenditure for replacement projects, withdrawn the initial South West pipeline proposal, and extended the timing of the hydrogen safety study.

This overview presents APA's revised proposal and considers engagement with our stakeholders and matters raised by AER in the Draft Decision.

## 1.2. About APA & Victorian Transmission System

APA VTS is part of APA Group who proudly owns the VTS which plays a vital role providing gas to Victorian households and businesses. The gas transported on the VTS is used to power customers, communities, and the economy in Victoria.

APA's Purpose is to strengthen communities through responsible energy. This means doing the right thing, even in tough situations; creating value for all our stakeholders; taking a long-term view and being here for our future generations; investing in future technologies and new energy; and innovating for a sustainable future.

APA is committed to better engagement with stakeholders to help shape the 2023-27 access arrangement proposal for the VTS. The purpose of the engagement was to gain insights and input from the community of gas customers, consumers and stakeholders in Victoria impacted by the VTS. We wanted to have a better understanding of what is important to the VTS community. And we wanted to incorporate what's important to stakeholders in our proposed plans for operating and investing in the VTS over the 2023-27 access arrangement period.

By consulting widely with parties impacted by the VTS, APA has, we believe, prepared a revised access arrangement for 2023 through to 2027 that truly does strengthen communities through responsible energy.

## 1.3. Access arrangement revision process

The regulation of gas transmission pipelines is prescribed in the National Gas Law and Rules. The VTS is regulated under the National Gas Law and the National Gas Rules. The VTS is a fully regulated pipeline system, which means that prices (tariffs) for reference services, and the terms and conditions

on which those services are provided, are subject to regulatory oversight by the Australian Energy Regulator (AER).

Oversight of a fully regulated pipeline is achieved through the AER approving an initial access arrangement for the pipeline, and subsequently approving periodic revisions to the access arrangement.

The access arrangement for a fully regulated pipeline sets out, amongst other things, the reference services that can be provided using the pipeline, the terms and conditions on which those services will be provided, and the reference tariffs for the services.

The form and content of the access arrangement, and the approval process which must be followed by the AER when approving access arrangement revisions, are specified in the National Gas Rules.

The provisions of the access arrangement must be consistent with the national gas objective. Access arrangement revisions, and the approval of revisions by the AER are, therefore, guided by that objective. The National Gas Objective is as stated in s23 of the National Gas Law (NGL) is:

> *The objective of this Law 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.*

The current 2018-22 access arrangement requires APA to submit access arrangement revisions on 1 December 2021, and those revisions are expected to have effect for a period of five years from 1 January 2023.

APA submitted a proposal for the 2023-27 access arrangement proposal to the AER on 1 December 2021. On 30 June 2022, the AER published its Draft Decision setting out what elements of the APA VTS proposal was accepted and what was not accepted and where further information required from APA.

We have now prepared and submitted the revised VTS access arrangement for the 2023-2027 regulatory period. The documents that form the revised proposal:

1. Proposal overview document (this document)
2. VTS 2023-2027 Access Arrangement (tracked and clean versions)
3. VTS 2023-2027 Access Arrangement Information
4. Lifecycle model revised and business cases
5. Security of Critical Infrastructure revised business case (confidential and public versions)
6. Information Technology paper
7. Operational Technology paper
8. Hydrogen safety and Integrity revised business case
9. Depreciation analysis by ACIL Allen
10. Post-tax revenue model (PTRM)
11. Roll-forward model (RFM)
12. Confidentiality claim
13. Stakeholder engagement material
14. Register of documents.

## 1.4. Much appreciation to our stakeholders

APA is grateful and appreciative of the level of interest shown by stakeholders since we commenced engagement in October 2020. We appreciate the feedback, insights and alternative perspectives on the things that mattered to stakeholders. It was important to us to hear from industry stakeholders and consumer and business advocates.

VTS stakeholder engagement was a very important part of preparing the 2023-27 access arrangement proposal.

On behalf of APA VTS, we thank and deeply appreciate stakeholders for their involvement and the open and honest discussions. We hope stakeholders found it informative and felt that they had influence in developing the plans.

# 2. Stakeholder engagement

## 2.1. Involvement by stakeholders

The revised proposal is the culmination of 20 months of engagement with stakeholders, starting in October 2020, for the preparation of the initial proposal, through to July 2022, for the preparation of the revised proposal.

APA set out to undertake better engagement with stakeholders to improve the way we plan and invest in VTS. We planned for VTS stakeholder engagement to involve consumers and businesses who rely on safe, reliable, and secure gas service in Victoria. We also sought to involve market participants such as retailers and distributors who know what their customers need and could represent their customer interests. And, given the importance of gas security in Victoria, we sought to involve owners of storage facilities and LNG import terminals. The AER was invited as observers to ensure the regulator was satisfied with our engagement approach and that we were taking on board stakeholder views.

We believe that this was the right - or more fit-for-purpose - approach to stakeholder engagement for the VTS. Everyone together in the same room - talking to each other and hearing what each other said. In this way, the risk of APA biasing or capturing any one group was significantly reduced.

Recognising the range of views held by stakeholders (which in some cases are opposing), we did not set out to get agreement from stakeholders, but we wanted to understand everyone's point of view. And to the extent possible reconcile opinions and positions and incorporate them as much as possible into our proposal. This approach had acceptance by our stakeholders.

## 2.2. Engagement Plan and its implementation

In the 20 months of engagement, we held 16 Roundtables with stakeholders[2], a Capital Issues Workshop, a Hydrogen Information session. The stakeholder roundtables were held monthly and on-line due to Covid lockdowns and travel restrictions. The benefit of the on-line sessions was that it enables APA to involve a wider engagement group.

The engagement with stakeholders involved four phases:

- Phase 1 - Setting the scene. About APA, VTS and the regulatory landscape & draft engagement plan.
- Phase 2 - Getting to the detail - revenue requirements, tariffs and access arrangements
- Phase 3 - Putting the plans together
- Phase 4 - After we've submitted proposal.

Details of the full engagement and AER timeline is presented in the table below.

The engagement principles, format and scope were set out in the VTS Engagement Plan.

[2] Roundtable 16 was cancelled due to an MS Teams outage affecting stakeholders and APA.

**APA Engagement principles for VTS 2023-27 access arrangement proposal**

- **No surprises.** We want stakeholders and the regulator to feel that during the engagement process we revealed details of our thinking as we went along. At each roundtable we presented what we heard and our response to the issues raised in previous roundtables. At the last roundtable we let stakeholders know how feedback had been incorporated into the draft proposal.
- **Clear, accurate and timely communication.** We aimed to prepare information with sufficient time for stakeholders to consider and provide feedback. We held monthly roundtables and distributed material before the roundtables.
- **Easy to understand.** We aimed to prepare and provide accessible, non-technical information that could be read and understood by a wide audience. We made stakeholder engagement material and the timetable available on our website.
- **Transparent.** We wanted to be transparent about our thinking and plans. APA is ASX-listed and there are rules about what we can and cannot make public. The information we provided met the disclosure requirements**.**
- **Provides for influence.** We wanted to be open about what is and what is not open to stakeholder influence. We let stakeholders know whether we are simply providing you with information or seeking to consult and involve you in developing our plans. For example, our operating and capital expenditure plans are open to influence, and we will consult on these, however, rates of return align with regulatory instruments and were presented for information only.

At our first Roundtable to set the scene, we published a draft engagement plan for consultation with the stakeholder engagement group. The draft engagement plan set out an indicative timeline for a series of roundtables and proposed topics to engage on.[3] The engagement plan and throughout roundtables asked stakeholders to let us know the topics that they wanted us to engage on. During this early engagement stakeholders suggested we prepare and early draft of the proposal for submission and sought clarification of where engagement was on the IAP2 scale.

During the engagement process, topics emerged that were of interest to people. For example, stakeholders sought a workshop on the capital program to deep-dive into topic such as the progress of the Western Outer Ring Main, South West Pipeline, and hydrogen and other capex topics. Stakeholders expressed interest in hydrogen, and we held an Information session; stakeholders asked us to prepare a business narrative and we prepared a Discussion Papers on VTS Business Narrative and relatedly Load & Demand forecasts. The business narrative was discussed at Roundtable 17.

The outcomes from Phase 1 to 3 engagement were discussed in the initial access arrangement proposal.

[3] Engagement Plan for consultation can be found here. VTS 2023-27 Access Arrangement Engagement Plan (apa.com.au) . Or refer to supporting material VTS – VTS Stakeholder Engagement Plan Draft 27.10.20 - December 2021 - Public

We referred to our approach to engagement akin to 'thinking out aloud' with stakeholders in the roundtable. We were presenting our thinking as we were developing our draft proposal APA's broad approach to stakeholder engagement was beneficial, as it turned out. During the 20 months engagement process, the energy sector became a lot less secure and energy and climate change policy often conflicting between the (then) Federal and the Victorian government.

This information, along with engagement material was continuously updated and available on APA VTS stakeholder engagement webpage.[4]

[4] VTS engagement webpage can be found at victorian transmission system access arrangement | APA Group

| VTS stakeholder engagement key activities and dates | | | |
|---|---|---|---|
| **Date** | **Activity** | **Topics** | **IAP2 spectrum** |
| **Phase 1 - Setting the scene** | | | |
| 28/10/2020 | Consultation | 2023-27 access arrangement Engagement Plan. Draft for comment | Consult / Involve |
| 28/10/2020 | Roundtable 1 | Setting the scene, about APA, VTS and the regulatory landscape & draft engagement plan | Inform/ Consult |
| 18/11/2020 | Consultation | APA draft Reference Service Proposal circulated for comment | Consult / Involve |
| 25/11/2021 | Roundtable 2 | Declared wholesale market exit and entry capacity certificates (presentation by AEMO) & reference services draft proposal | Inform/ Consult |
| 10/02/2021 | Roundtable 3 | APA asset management framework & strategic issues influencing VTS asset management plan | Inform/ Consult |
| **Phase 2 - Getting to the detail - revenue requirements, tariffs and access arrangements** | | | |
| 16/03/2021 | Roundtable 4 | Introduction to regulatory building block and VTS tariff structure | Inform/ Consult |
| 14/04/2021 | Roundtable 5 | Overview of 2021Victorian Gas Planning Report; and first look at capital program for VTS | Inform/ Consult |
| 13/05/2021 | Issues Paper | Capital program | Involve |
| 19/05/2021 | Roundtable 6 | AEMO presentation on VGPR. Demand forecasts. | Inform/ Consult |
| 16/06/2021 | Roundtable 7 | Capital program update & first look at operating expenditure<br>Pigging the Unpiggable: An asset futureproofing initiative | Inform/ Consult/ Involve |
| 29/07/2021 | Capital Issues Workshop | Workshop to describe on drivers and decision-making for capital expenditure and engage of issues of concern to stakeholders | Inform/ Consult/ Involve |
| 18/08/2021 | Roundtable 8 | Capital issues - continuing discussion. Demand and Supply study, South West Pipeline and Depreciation, | Inform / Consult/ Involve |
| 26/08/2021 | Information session | Hydrogen: Why it is important to explore options to repurpose the VTS for hydrogen | Inform/ Consult/ Involve |
| 15/09/2021 | Roundtable 9 | Demand & Supply Final Report, depreciation again, Transformation & Technology, Stay in business update | Inform / Consult |
| **Phase 3 - Putting the plans together** | | | |
| 6/10/2021 | Roundtable 10 | How you have influenced our draft proposal. First look at the revenue requirements - capital and operating expenditure forecasts, impact on tariffs. | Inform / Consult |
| 8/10/2021 | Consultation | APA release APA VTS early consultation document | Involve |
| 13/10/2021 | Roundtable 11 | Early consultation proposal - Q&A session | Involve |
| 11/10/2021 to 22/10/2021 | Consultation | Opportunity for one on one meetings with stakeholders | Involve |
| 3/11/2021 | Placeholder | Follow-up on any outstanding issues | Involve |
| 8/11/2021 | Consultation | Submissions to APA on early consultation document | |
| 17/11/2021 | Roundtable 12 | How you shaped our thinking on the VTS regulatory proposal | Involve |
| 1/12/2021 | Submission | APA VTS regulatory proposal submitted to AER | |
| 9/12/2021 | Feedback session | Post lodgement review and feedback on VTS engagement | Involve |
| **Phase 4 - After we've submitted proposal** | | | |
| 01/02/22 | AER Public Forum | Public forum - AER, CCP28, BSL, APA VTS present | |
| 18/02/22 | Stakeholder submissions | Submissions made to 2023-27 access arrangement | |
| 13/04/22 | Roundtable 13 | AEMO to present on GSOO/ VGPR. Other updates. | Inform/ consult |
| 25/05/22 | Roundtable 14 | APA updates. Discussion of stakeholder submissions to APA proposal | Consult/ involve |
| 30/06/22 | AER Draft Decision | AER publishes Draft Decision | |
| 12/07/22 | Roundtable 15 | Discuss AER Draft Decision | |
| 21/07/22 | Roundtable 16 | To be based on key stakeholder topics (Cancelled due to MS Teams outage) | Consult/ involve |
| 25/07/22 | AER Public Forum | Draft Decision | |
| 28/07/22 | Roundtable 17 | Revised proposal - collaborating on key positions | Involve/ collaborate |
| 10/08/22 | Revised proposal | APA VTS submits revised proposal | |
| 06/09/22 | Stakeholder submissions | Submissions on revised access arrangement proposal and draft decision | |
| Early December 2022 | AER Final Decision | AER publishes final decision | |

## 2.3. Engagement after we submitted the initial proposal - Phase 4

In the period between the close of stakeholder submissions in February and the release of the AER's Draft Decision, APA provided stakeholders with updates on the WORM Business Case and VTS demand Management and held two roundtables. We offered to hold a third roundtable, but stakeholders did not consider there was a need for another roundtable prior to release of the AER Draft Decision.

On 21 March 2022, APA emailed to stakeholders:

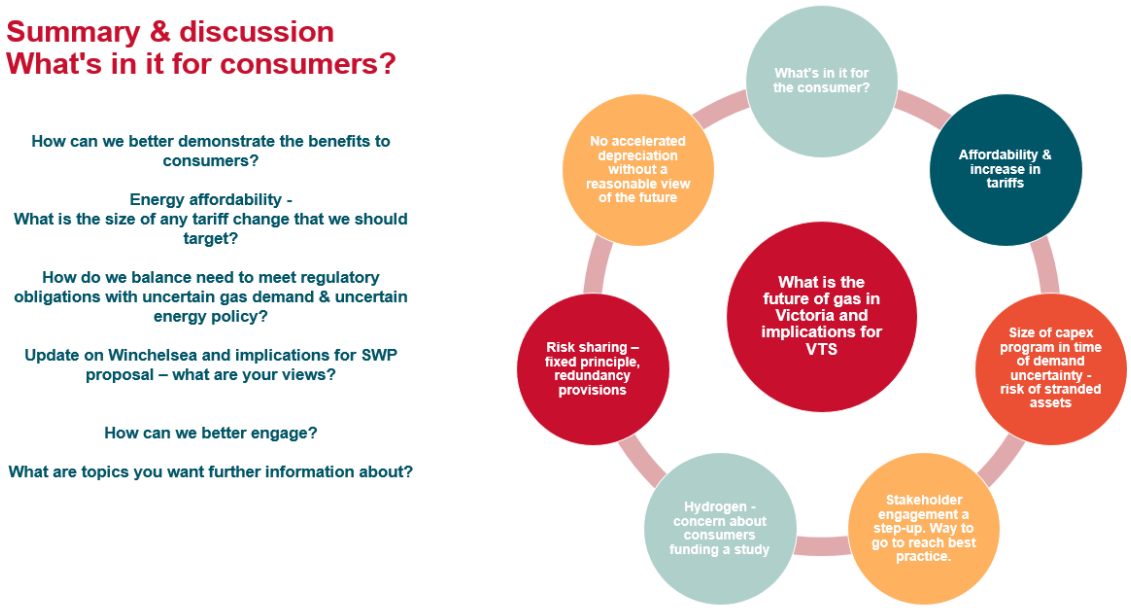
- Western Outer Ring Main (WORM) Project – Business Case Update 2022. This was in response to several stakeholder submissions requesting a revised business case to be prepared for the WORM.
- VTS Demand Management. APA's investigation into the potential for demand management. This was a topic that consumer and business advocates sought further understanding about as an alternative to security of supply investment
- A briefing note setting out a summary of submissions to APA VTS 2023-27 access arrangement proposal. Prepared for information.

On 13 April 2022, APA *held Roundtable 13. AEMO 2022 GSOO & Victorian Gas Planning Report. Stakeholder submissions and more.* On the agenda:

- AEMO presented on 2022 GSOO & Victorian Gas Planning Report. AEMO presented concerns about gas supply demand balance for winter 2023
- APA provided an update on the Demand Management Information Paper that was sent to stakeholders on 21 March. APA's investigations found the demand management was not a credible option under the current Declared Wholesale Gas Market arrangements. Our investigations have found that the potential cost of implementing demand management is greater than the cost of investing in the WORM and proposed South West Pipeline expansion. And the transaction costs, complexity of execution, and risks of an insufficient number of large users being able or willing to simultaneously curtail consumption on the peak days, renders this option unworkable and possibly ineffective. APA supported AER/ AEMO undertaking a review into the potential for future demand management in the DWGM. The roundtable provided an opportunity for stakeholders to ask questions about APA's investigations.
- APA presented the WORM business case. Our analysis found that the WORM is needed to maintain security of supply during the forecast tight gas demand-supply balance in Victoria forecast by AEMO. The need for the WORM remains, reinforcing the conclusions of 2017 business case in 2017. In fact, now there is greater urgency doe to the unanticipated two-year delay to meet Victorian planning requirements. The increased urgency is to build the WORM in time to meet forecast winter peak shortfalls in 2023 and onwards. We presented breakeven analysis, and asked stakeholders about 'willingness to pay' and 'willingness to accept'.

On 25 May 2022, APA held *Roundtable 14 – Updates on Winchelsea. Demand and Supply. Discussion about stakeholder submissions*. On the agenda:

- Update on Winchelsea. APA informed stakeholders that, as presented by AEMO in R13, due to risk of supply shortfall in winter 2023, APA was approached by the Victorian Government and AEMO to investigate possibility of a fast-tracked solution to install a second compressor at Winchelsea before winter 2023. While the schedule is very tight, APA has established that the installation of a second compressor at Winchelsea before winter 2023 is possible. APA is proposing to install a second Taurus 60 (5.6 MW) compressor at Winchelsea which will increase Iona's injection capacity to 517 TJ/d (41 TJ/d of additional gas supply capacity) to the VTS during the winter peak period. The cost of Capital expenditure forecast to be $60.01 million ($37.2 million in CY2022 and $22.81 million in CY2023). Operating expenditure of $250,000 per annum starting in CY2023.
- APA presented updated supply forecasts based on AEMO's 2022 Gas Statement of Opportunities. These had been submitted to the AER. The updates include proposing the Progressive Change scenario as the preferred scenario to adopt for the VTS forecasts.
- This was based on APA agreeing with AEMO regarding public policy and private investment in energy efficiency and electrification, which would reduce gas consumption, would need to speed up to rapidly reduce gas consumption. The pace and impact of hydrogen deployment will rely on the proposed VTS Hydrogen Safety study, technology improvement and consumer uptake.
- APA summarised analysis of the key themes from stakeholder submissions. Stakeholders were provided with the opportunity to discuss their submissions. Slide 9 from the slidepack presents a summary of the key themes from the submissions. From our perspective, there were no surprises. These themes have influenced APA's consideration of capital expenditure, hydrogen study, accelerated depreciation, and the tariff impact on consumers.
- We asked stakeholders how we could better engage and what topics they wanted us to engage on. Stakeholders preferred to have the next roundtable after the AER Draft Decision was released to get a better sense of topics for future engagement.



**A summary of the discussion R13 and R14 was presented at R15 and is shown below.**

**Stakeholder submissions & feedback during discussions**

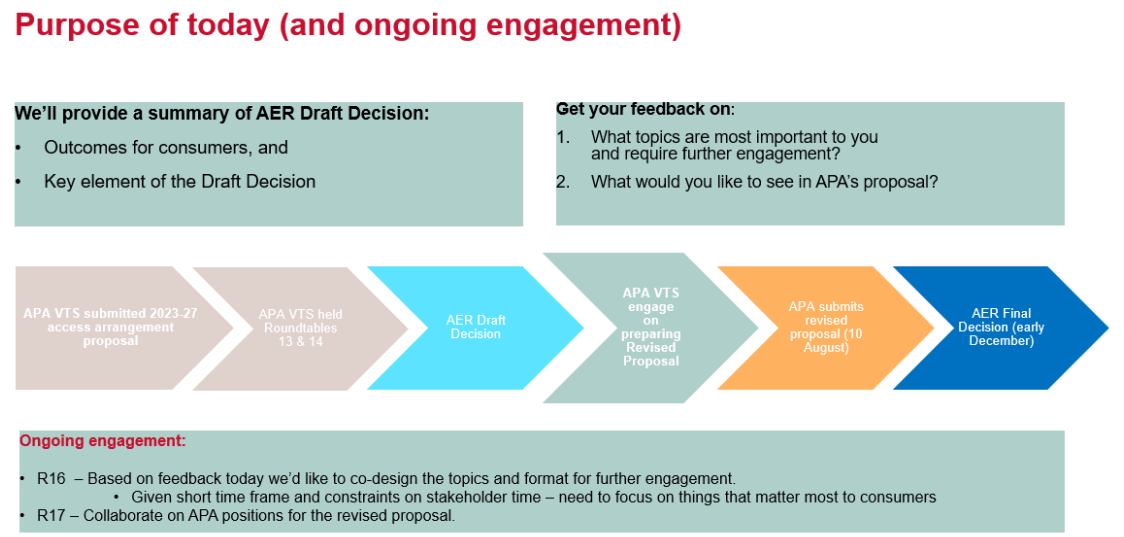
- Energy affordability an issue for all consumers
- APA to provide better analysis and information for key parts of proposal – capex and opex
- Proposal to provide more detail and better discussion about the ranging stakeholders views (eg accelerated depreciation, expansion capex)
- Reinforced concern about the size of the proposed capex forecasts and potential for customers to bear asset stranding risk
- Clarification sought about changes to South West expansion investment (Winchelsea)
- Discussion about step change vs progressive change/ Victorian Gas Substitution Roadmap potential implications; high gas prices and scope for demand destruction; impact of volume forecasts on average prices
- Discussion about demand management, and funding sources for hydrogen study.

**Breakout room discussion:**

- Ongoing accountability for expenditure that had been approved in AER Decisions
- South West capacity currently a constraint
- Concerns about investing in long-lived assets
- Hydrogen funding dilemma – taxpayer, consumer, proponents, APA shareholder?

On 12 July 2022, we held *Roundtable 15 – AER Draft Decision – co-designing engagement topics for APA revised proposal.* On the agenda:

- What's happened since we lodged the 2023-27 access arrangement proposal. We discussed the dynamic state, national and global environment impacting energy markets. Expressed concern for how this was Impacting on cost of living for consumers; Impacting on demand forecasts and affecting investment decision; and impact on tariffs. This discussion was further reflected in the VTS Business Narrative Discussion Paper.
- We presented the format for the engagement for the revised proposal. This was informed by the AER Draft Decision released on 30 June which suggested that APA co-design topics for the engagement in preparing the revised proposal and better collaborate with stakeholders. This is reflected in slide four of R15 slidepack as shown below.



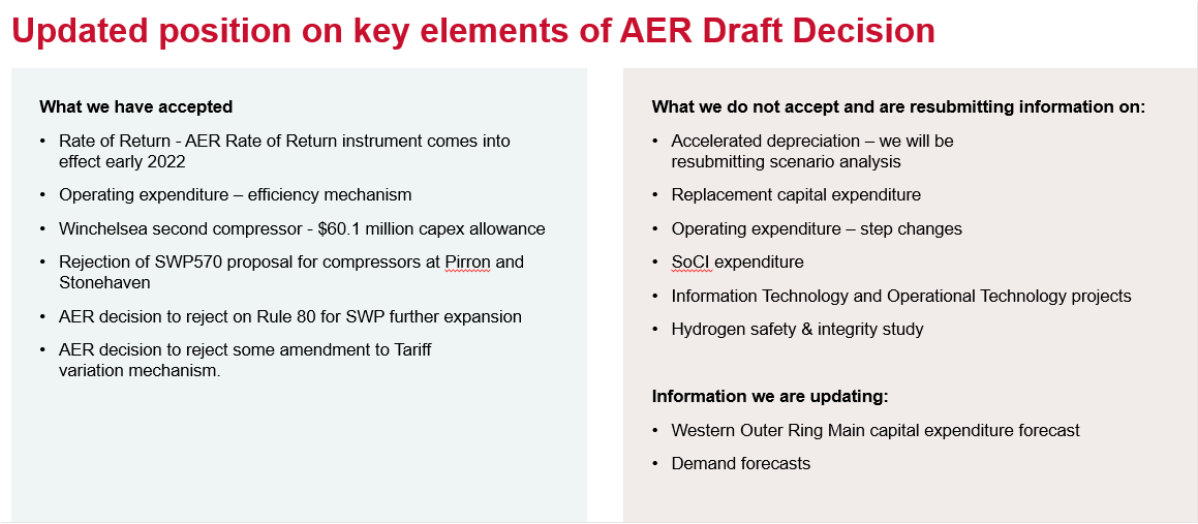

- APA presented on the key outcomes from the AER Draft Decision. We summarised the key revenue and tariff outcomes from the AER Draft Decision and went through each of APA's proposed key elements of the access arrangement and revenue components and, of these, what the AER had and had not accepted. And, where the AER had not accepted, we summarised the AER draft decision and further information AER required from APA. The intention of this was to help inform stakeholders about potential engagement topics for the next phase of the engagement to prepare the revised proposal.
- APA facilitated a 'word cloud' to get instantaneous input on topics for further engagement. The only response received was for more engagement on demand forecasting.

Roundtable 16 was to be based on key stakeholder topics as part of the 'co-design' but due to limited input we revised the agenda to include the VTS Business Narrative Discussion Paper and a presentation by ACIL Allen present on scenario analysis for accelerated depreciation. As it turned out unfortunately, R16 was cancelled due to a widespread MS Teams outage affecting APA and other stakeholders. Fortunately, we were able to incorporate R16 agenda items into Roundtable 17.

On 28 July 2022, APA held *Roundtable 17 – Business narrative. Accelerated depreciation analysis. Revised proposal updates on key elements.* On the agenda:

- VTS Business Narrative Discussion Paper. The Discussion Paper was sent to stakeholders on 15 July. We received feedback from stakeholders wishing to see a business narrative to help them engage with issues raised as part of VTS access arrangement proposal.
- The purpose of the discussion paper is present our views on the drivers, challenges, and opportunities for the VTS. We sought to elicit views and expectations from stakeholders about the future for VTS for 2023-27 access arrangement and beyond.
- ACIL Allen present on scenario analysis for accelerated depreciation. The presentation discussed the scope and methodology for the analysis
- APA presented on its updated positions on key elements of the AER Decision. As illustrated in the snip below. We went through draft positions on operating expenditure; replacement capex – stay-in business (noting that our revised capital expenditure proposal was $103 million - down from $123 million in the initial proposal; and updating stakeholders about the increased capital expenditure for the WORM from $185 million to $217 million. We informed that as tenders from construction and other services are being received for the WORM we

are finding that the current squeeze in the labour market and global supply chain backlogs are affecting the bid prices from contractors to undertake the work.




Further information about the recent stakeholder roundtables is provided in:

- VTS AA Roundtable 13 -. AEMO 2022 GSOO & VGPR. Other updates 13.04.22 - Public
- VTS AA Roundtable 14 - Update on Winchelsea. Forecasts. Submissions. 25 May 2022 - Public
- VTS AA Roundtable 15 - AER Draft Decision - codesign engagement topics (amended) -12 July 2022 - Public
- VTS AA Roundtable 17 - Business narrative. Revised proposal key positions - 28 July 2022 - Public.

### 2.4. Future stakeholder engagement

The revised proposal for the 2023-27 has been prepared at a time of great uncertainty and fragility in the energy sector. Hearing from a broad group of stakeholders about what was important to them has helped us prepare a more robust proposal. We are grateful for the stakeholders who sought to engaged and challenged us on the range of complex issues.

APA's objective during the VTS stakeholder engagement has always been to meet stakeholder expectations. The feedback we received in November 2021 supported that we delivered on our engagement principles. We have been heartened by positive feedback from stakeholders and thankful for the ongoing participation by a core group of stakeholders.

We acknowledge that we can improve, and we will take on board the feedback that we have received so far to work on ways to improve. We heard that one of the ways to improve engagement was to continue engaging even after submitting the revised proposal. We are considering not just for VTS but for our other regulated assets.

So, this is not the end, it is only the beginning of our engagement with stakeholders.

# 3. VTS Business narrative

## 3.1. Purpose

These are uncertain times in the energy sector and especially for gas. The transition to net zero will change the mix of energy sources used by all consumers from residential consumers, business and industrial customers. Victorians are very reliant on gas and will be impacted by the transition to net zero more so than other Australian consumers.

APA prepared a VTS Business Narrative Discussion Paper to articulate short- and longer-term drivers impacting the VTS operations and investment. The narrative is intended to set out the state of play in energy policy, climate policy, and describe the operational and investment drivers. APA received feedback on the Business Narrative at Roundtable 17 held on 28 July 2022.

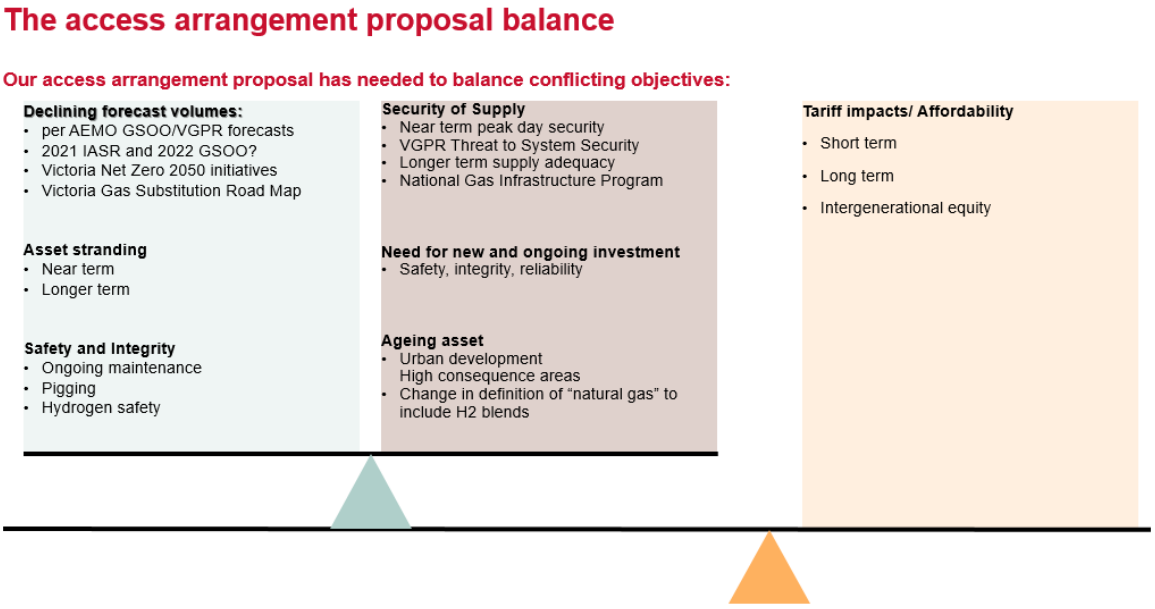
The VTS Business Narrative was prepared in response to requests by stakeholders and the Consumer Challenge Panel.

## 3.2. Uncertain & fragile energy markets

During stakeholder engagement we characterised the current gas market environment as uncertain while at the same time having to balance competing objectives.

The competing objectives include the longer term forecast for declining consumption volumes against security of supply obligations; the risk of asset stranding against the need for ongoing investment to meet safety, integrity, and legislative obligations; and that maintaining safety and integrity requires more focus as the assets age.

Balancing the competing objectives are underpinned by impact on tariffs and affordability for consumers. The competing objectives are illustrated in the following “double balancing act” diagram from Roundtable 12.



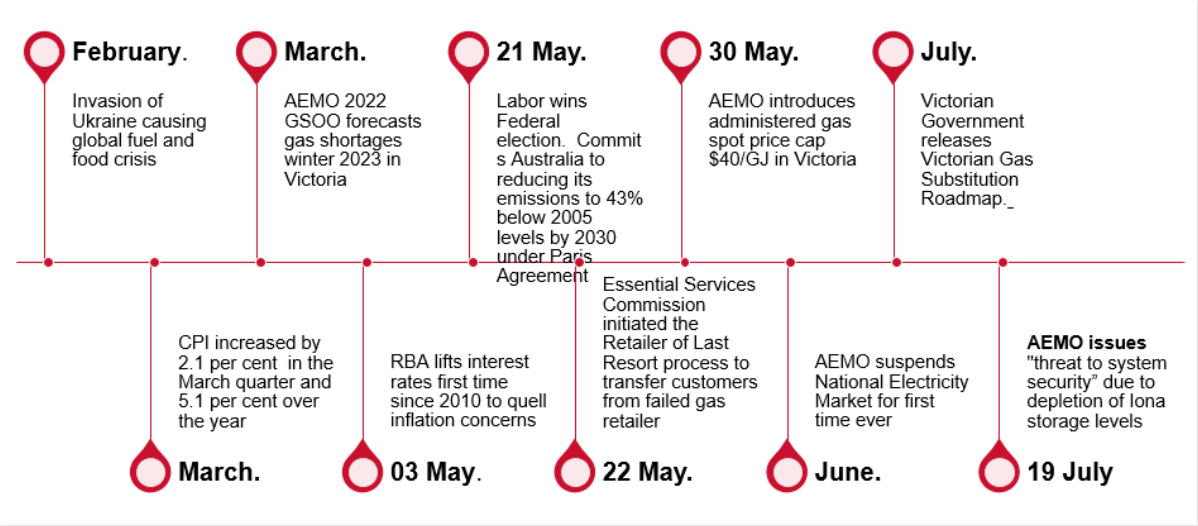

Along with uncertainty and balancing against competing objectives, the fragility of the demand and supply balance in the east-coast region was revealed in the first half of 2022 culminating in AEMO suspending the National Electricity Market on 16 June 2022.

The unprecedented suspension was due to a confluence of events including generators and transmission being offline for planned maintenance, low wind and solar output, unplanned outages by coal fired generators, flooding across the east coast, the early onset of winter increasing demand for both electricity and gas.

Domestically we saw significant increases in inflation and interest rates and the election of Labor to Federal Government with its platform of reducing emissions to 43% below 2005 levels by 2030 under the Paris Agreement.

At a global level, we are seeing the impact of the invasion of Ukraine on global fuel prices as Europe looks to alternative sources of energy.

The events since we lodged the 2023-27 access arrangement proposal as shown in the diagram below.




And these events have happened in the seven months since we lodged the proposal. These events highlight the changing and uncertain environment facing energy sector and energy consumers. In our view, the challenges and uncertainties facing the energy sector require us to be flexible, nimble and keep options open to ensure we can meet consumer energy needs in an orderly way.

In our view, these events strengthen the need for APA to consider flexible options for the VTS in the next and future access arrangement periods. We are looking to get your views ways to be flexible and keep options open.

### 3.3. Drivers to deliver value for consumers

APA's purpose is to deliver value for our stakeholders including consumers and direct customers, and to take long-term view and be here for future generations.

Drivers to deliver value to consumers are influenced by a range of internal and external drivers and APA business strategies. Operation and investment in the VTS are influenced by a range of key drivers.

The key drivers are illustrated below.


These drivers have been discussed during stakeholder engagement or were raised in submissions to the 2023-27 access arrangement proposal. Further information on the drivers is set out in the Discussion Paper.

The most important driver for the 2023-27 access arrangement is meeting the needs of consumers. Energy affordability has long been a key focus for consumers. Energy costs have been exacerbated by the 2022 ‘energy crisis’ on the east coast and ‘cost of living’ pressures nationwide.

The energy transition is posing challenges to affordability. Renewables are by their very nature more variable in their output and need firming support from other means of generation and energy infrastructure. The question facing the APA is how the transition will impact use of the VTS and how efficient investment made in the VTS will be recovered from gas customers.

Our concern has been ensuring that there is an orderly transition. An important part of this is ensuring that those gas consumers who cannot switch to an all-electric homes and cars are not left with the burden of paying for the remaining life of the efficient investment made in the VTS.

During stakeholder engagement we have emphasised that an orderly transition means putting in place measures that will not expose vulnerable consumers and hard to abate industrial customers to a higher proportion of VTS costs. We have emphasised the need for Intergenerational equity between current and future users.

The most effective regulatory tool for doing this is to shorten the remaining life of assets resulting in accelerating depreciation of those assets. The concept of accelerated depreciation has been an important topic in discussions with stakeholders.

The other five drivers are discussed in more detail in the VTS Business Narrative Discussion Paper.

### 3.4. In times of uncertainty, we need to keep options open

Historically, gas has been a cheap source of energy and its use has been encouraged by governments. This is changing with the energy transition that is underway. The complex energy market and policy landscape creates an environment of uncertainty.

The business narrative for the VTS is characterised by greater uncertainty especially in the medium to longer term. The Victorian Government Roadmap paves the way for residential customers to shift to electricity to meet energy needs. Thus, freeing up gas for hard-to abate industrial users.

An outcome of this is that it is not business as usual for VTS. In this shifting environment APA's focus is to reduce the uncertainty, remain flexible and help facilitate an orderly transition. One way to manage uncertainty, is to be flexible and keep options open.

The regulatory framework was designed during times of relative stability and there is a limit to what we can propose to be flexible and manage uncertainty. The toolkit we have includes:

- Accelerated depreciation to start early and start small before there is a large-scale shift by residential gas consumers to electrify
- Minimising capital expenditure needed to meet 'as low as reasonably practicable' requirements
- Minimising any increase in tariffs
- Undertaking a study to test safety and integrity of hydrogen on VTS
- Applications to AER for advance determinations about future capital expenditure (pre-approval under National Gas Rules r.80) in response to uncertain events.

In the longer term, as the transportation of gas along the VTS will increasingly compete with electricity, batteries, and renewable sources of energy – and even with gas distribution businesses, there may be no need for economic regulation.

The speed of the transition and consumer shift from gas to electricity will very much depend on response by consumers to government incentives to shift away from gas.

The business narrative for VTS is very much in the hands of consumers.

Further information is provided in VTS - Discussion Paper on VTS Business Narrative - 15.07.22 - Public

# 4. Load and demand

On 15 July 2022, APA circulated a discussion paper, “Load & Demand 2022 GSOO VGPR update”. This document contains the reasoning behind the AEMO scenario chosen for the VTS load and demand forecast for the purposes of this access arrangement and is included as an attachment to this revised proposal.

## 4.1. Initial proposal

APA relies heavily on forecasting information prepared by AEMO to develop load and demand forecasts for the VTS access arrangement revision.

In December 2021, APA lodged its original proposal based on AEMO’s March 2021 GSOO. We made some adjustments to the GSOO for known events occurring after the GSOO. These included several announcements that, in our view, were likely to affect the forecasts, such as, APA’s planned expansion of the East Coast Grid, Origin’s contemporaneous supply contract with APLNG, and Esso and Qenos curtailing consumption in Altona. Another adjustment was that APA did not include projects that were not committed - such as the Port Kembla Gas Terminal (PKGT) which had not reached Final Investment Decision (FID).

APA advised that the revised proposal would be updated for AEMO’s 2022 GSOO which was scheduled to be released at the end of March 2022.

## 4.2. Stakeholder submissions

Submissions to APA’s initial proposal recognised that APA’s supply and demand forecasts should be revised according to AEMO’s 2022 GSOO (for an independent view), and any impact of the Victorian Gas Substitution Roadmap (which at that time had not been finalised). Concerns were raised of APA using a few peak demand days each year over the next few years to justify capital expenditure with consumers bearing the potential for the assets to be stranded in the longer term.

There was a suggestion that APA should include the PKGT project has been classified by AEMO as a “committed project” under AEMO’s 2021 GSOO. Noting that “While understanding that the project owners have yet to reach their Final Investment Decision (FID) on this project, APA’s investment plans should primarily be driven by AEMO’s 2021 GSOO”.

Before allowing for any impact of the Victorian Gas Substitution Roadmap, the 2022 GSOO is likely to derive a forecast of demand that is the ‘best estimate arrived at on a reasonable basis’. Several stakeholders voiced concerns at the lack of demand management and called for more work to develop demand management frameworks including for the AER to consider a Value of Customer Reliability for gas (like the AER’s VCR electricity as a proxy value for customer reliability).

In response to stakeholder interest in demand management as an alternative to investment in new infrastructure, APA prepared on information paper on demand management and sent this to stakeholders on 21 March 2022. The VTS Demand Management paper presents APA’s investigation into the potential for demand management on the VTS. In the paper, we conclude that AER and AEMO are in the best place to develop a framework for demand management.

Further information can be found in VTS - Information Paper - Demand Management - 10 March 2022 - Public.

AEMO released the 2022 GSOO and 2022 Victorian Gas Planning Report the end of March 2022. APA updated the forecasts for VTS. On 13 April 2022, APA held Roundtable 13. AEMO presented on 2022 GSOO & Victorian Gas Planning Report. AEMO presented concerns about gas supply demand balance for winter 2023. AEMO talked about the *Progressive Scenario* and the *Step Change* Scenarios and the assumptions underpinning the modelling. APA provided an update on the Demand Management Information Paper that was sent to stakeholders on 21 March which provided an opportunity for discussion about APA's investigations.

At Roundtable 14, we presented updated forecasts based on AEMO's 2022 Gas Statement of Opportunities. These had been submitted to the AER. The updates include proposing the *Progressive Change* scenario has the preferred scenario to adopt for the VTS forecasts. Our reasoning was on the basis of agreeing with AEMO regarding public policy and private investment in energy efficiency and electrification, which would reduce gas consumption, would need to speed up to rapidly reduce gas consumption.

Stakeholders accepted the proposal to update the forecast for the 2022 GSOO. We sought, but received limited, commentary regarding which scenario stakeholders consider we should use to underpin this revised proposal.

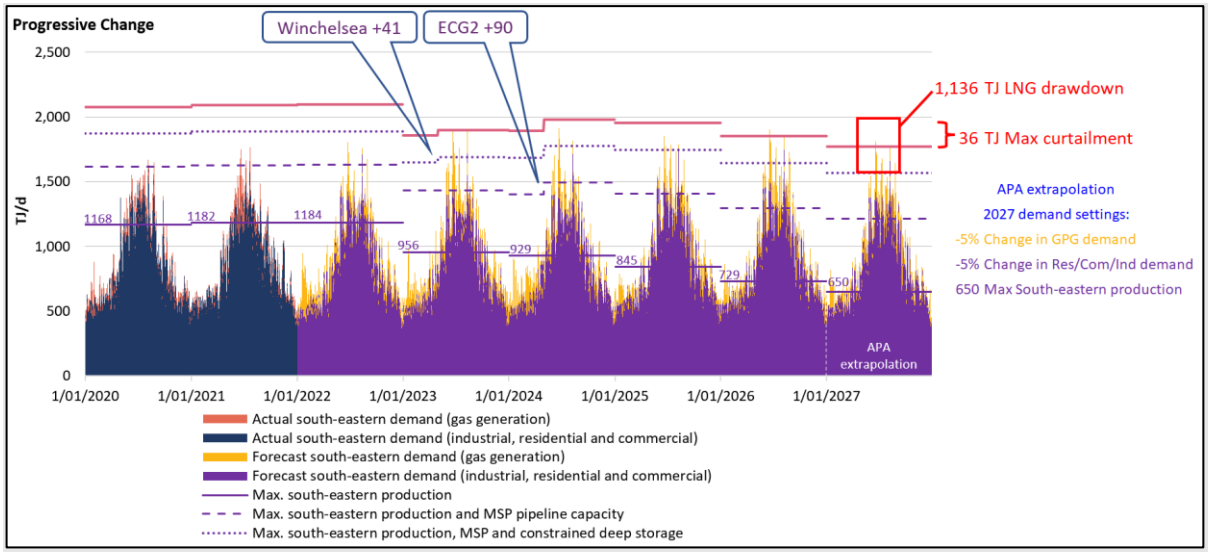
### 4.3. AER Draft Decision

The AER draft decision advised that it had adopted AEMO's *Progressive Change* scenario as a placeholder, and that it would undertake further analysis before reaching a conclusion in the final decision.

### 4.4. APA consideration

APA has updated its proposal for the 2022 GSOO. In addition, we have updated for additional matters becoming known since the 2022 GSOO was published, notably the commitment to the Winchelsea compressor, and APA's Final Investment Decision to proceed with Stage 2 of its East Coast Grid expansion project. Of note was that the PKGT had still not reached FID and AEMO had pushed back the timing of when the proposal would come online. As such, APA was prudent to base the outlook for VTS on only projects that had reached FID.

While mooted supply shortfalls appear to have been averted in 2023, this update still shows a delicate supply and demand balance in the later years of this access arrangement period:




In summary, APA examined three demand (consumption) scenarios:

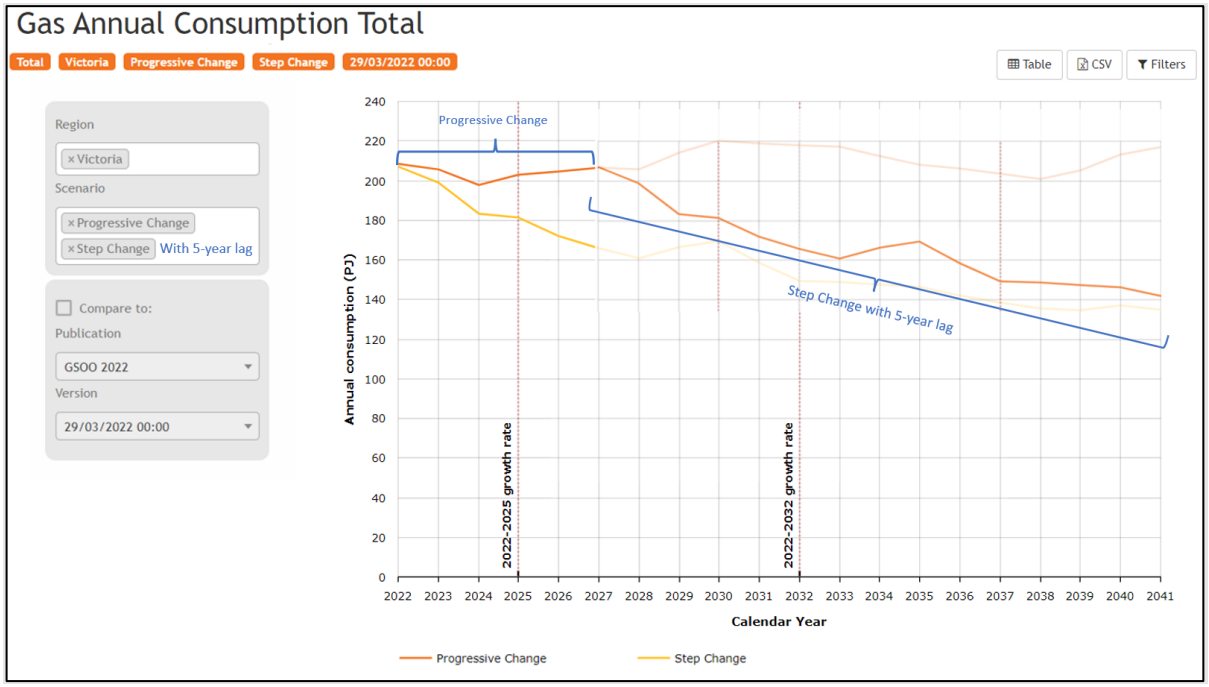
1. AEMO's Step Change scenario
2. AEMO's Progressive Change scenario
3. Hybrid of 1 & 2- assumes the Progressive Change scenario for 2023-27, then followed by Step Change scenario

The reasoning for hybrid assumptions include:

- A likely lag in changes to planning requirements in Victoria and flow through to consumer behaviour
- Uncertainty about whether developers will electrify housing stock
- Lag in consumers switch to electric appliances
- Uncertainty about consumer preferences - will consumers choose to switch from gas appliances and hot water to electricity only homes?

### 4.5. APA revised proposal

For the purposes of this access arrangement, APA has adopted a *Delayed Step Change* scenario, which adopts AEMO's *Progressive Change* scenario for the first five years (the period of this AA) before shifting to a *Step Change* scenario after a five-year "policy lag":




In practical terms, proposed tariffs for this access arrangement have been developed based on the more level *Progressive Change* scenario.

More detail, including the load and demand forecasts by System Withdrawal Zone, can be found in the attached document - VTS - Discussion Paper Load & Demand 2022 GSOO VGPR - July 2022 - Public.

# 5. Capital expenditure program

## 5.1. Initial proposal

In the December 2021 proposal, APA forecast capital expenditure program was $352 million ($2022) in the 2023-27 access arrangement period. The proposed capital expenditure was $58.4 million (20%) higher than the total capital expenditure of $293.6 million for the current 2018-22 period.

The increase in forecast capital expenditure program was driven by an increase in forecasts for replacement expenditure, inclusion of security related expansion of South West Pipeline, increase in costs of the Western Outer Ring Main (WORM), inclusion of a proposed hydrogen safety and integrity assessment, and new Security of Critical Infrastructure program to meet new legislative obligations.

## 5.2. Stakeholder submissions

A consistent concern by stakeholders throughout the engagement was the increase in the capital expenditure program and growth in the VTS regulatory asset base. Stakeholders questioned the size of the program given the uncertain outlook for gas into the future, and because APA was proposing to shorten asset lives to accelerate depreciation of the VTS asset base. There was concern that higher capital investments with uncertain demand could leave customers exposed to asset stranding risk. As previously discussed, stakeholder thought there should be more focus on demand management to help reduce the need for capital investment.

## 5.3. AER Draft Decision

The AER Draft Decision did not accept APA's proposed capital expenditure forecast. The AER allowed an alternative capital expenditure allowance of $186.3 million ($2022) which is 4%7% less than APA's proposed expenditure.

The AER alternative forecasts reduced the capital expenditure forecast for replacement capital expenditure; security of supply expenditure (South West Pipeline); and SoCI program. AER did not accept APA proposed forecasts for Information and Operational Technology program nor the hydrogen study.

The AER considered that APA had not provided sufficient information to support the proposal.

### Variation to access arrangement

The AER draft decision required the following revision to the APA VTS access arrangement:

| | |
|---|---|
| Revision 5.1 | Make all necessary amendments to address the issues raised in our draft decision on conforming capex for the 2023–27 access arrangement period, as set out in Table 5-1 and Table 5-2. |

APA has made the necessary changes to reflect this revised proposal.

## 5.4. APA consideration

APA has taken on board comments made the Draft Decision, and concerns raised by stakeholders about the capital program. APA acknowledges the concerns expressed by stakeholders about the proposed increase in the capital program.

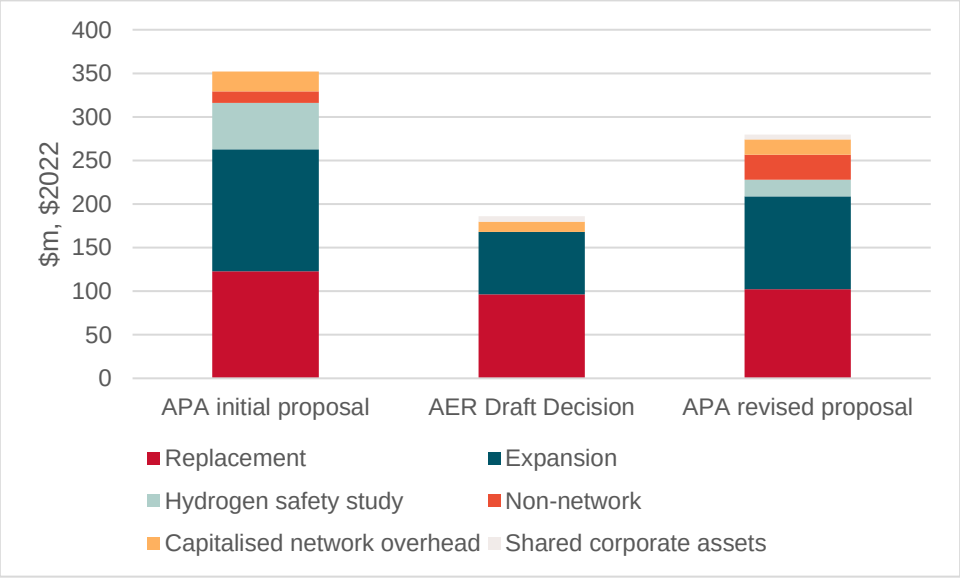
APA has been transparent about the conflicting objectives being faced in the current uncertain environment. APA is required to maintain safety and integrity of the VTS infrastructure to so that consumers receive a reliable supply of gas. This is at the core of legislative obligations placed on us by Victorian Government – its part of the regulatory compact.

We understand stakeholder concerns that this is occurring when gas demand is expected to fall in the medium term. APA has taken these concerns on board.

In response, APA has revised the scope of the capital program in a way that does not compromise on safety, integrity and reliability and delivers on minimising the impact on consumer bills in the 2023-27 access arrangement period.

The following chart shows a comparison of APA's initial proposal and the AER Draft Decision for the capital expenditure program by asset drivers.

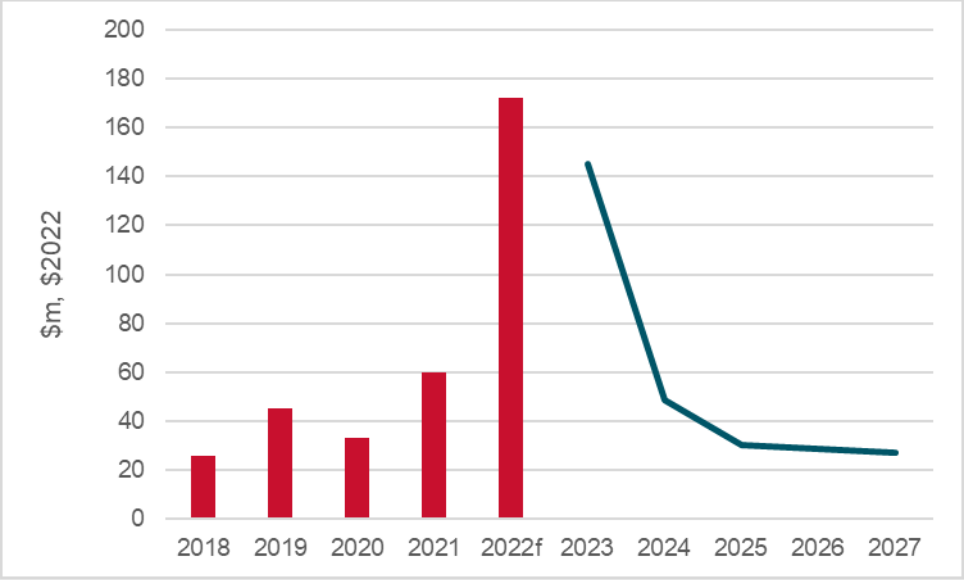
Figure 1 Comparison of APA Initial proposal, AER Draft Decision & APA revised proposal ($millions, $2022)




As shown there has been a reduction in APA's revised proposal relative to the initial proposal.

The following chart shows 10 year actual and forecast trend in capital expenditure.

Figure 2 Ten-year trend in actual and forecast capital expenditure ($millions, $2022)




The chart illustrates the lumpy nature of capital investment on transmission infrastructure. The peaky expenditure in 2022 and 2023 clearly shows the impact of security of supply related investment of the WORM and second compressor at Winchelsea. These projects are both in-flight and are being expediated to ensure they are in place for winter 2023.

### 5.5. APA revised proposal

APA's revised total capital expenditure forecast is $279.7 million. This is 21% lower than APA's initial proposal. The revised proposal addresses information concerns raised by the AER in the Draft Proposal. The revised proposal is 47% higher than the AER capital allowance in the Draft Decision.

| Asset category | APA initial proposal | AER Draft Decision | APA revised proposal |
|---|---|---|---|
| Replacement | 122.9 | 96.3 | 102.3 |
| Expansion | 140.0 | 71.8 | 106.6 |
| Hydrogen safety study | 53.2 | 0 | 18.9 |
| Non-network | 13.3 | 0 | 28.7 |
| Capitalised network overhead | 22.5 | 11.6 | 17.8 |
| Shared corporate assets | | 6.5 | 5.4 |
| **Total capital expenditure** | **352.0** | **186.2** | **279.7** |

APA's revised capital program is discussed in sections 6 to 11.

# 6. Replacement capital expenditure

## 6.1. Initial proposal

Replacement program and projects are driven by the need to maintain and improve the safety, security, reliability and integrity of services. The VTS replacement programs and projects are underpinned by legislative obligations and Australian Standards. The assessment of replacement expenditure falls within Rule 79 whereby the capital expenditure is necessary:

- to maintain and improve the safety of services; or
- to maintain the integrity of services; or
- to comply with a regulatory obligation or requirement; or
- maintain capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from an expansion of pipeline capacity).

Our original proposed replacement capital expenditure program of $122.9 million ($2022) represented an increase of $41.4 million (50.8%) increase over the actual and estimated expenditure for 2018-22 access arrangement period.

The original increase was due largely to uplift in the pipeline integrity programs (converting unpiggable pipelines to allow for pigging) response to increased risks of ageing assets combined with urban encroachment which need to be addressed. The increased focus on pipeline integrity follows an increased focus on managing risks to ‘as low as reasonably practicable’ across APA.

The weighted average age of the infrastructure on the VTS is 34 years indicating an ageing system requiring ongoing expenditure to maintain safe and reliable services. VTS pipelines have an average service life of 33.5 years but range in age from 6 to 65 years. Several of our ageing assets in high consequence areas require increases in the in-line-inspection resolution/frequency and the post in-line-inspection repairs required. Managing asset integrity is a key focus which requires ongoing expenditure to maintain safe and reliable services.

The proposed replacement capital expenditure program seeks to reduce risk to as low as reasonably practicable in line with safety obligations and good industry practice.

## 6.2. Stakeholder submissions

AEMO operates the assets on the VTS as part of the Declared Wholesale Gas Market. AEMO’s submission in response to APA’s initial proposal raised concerns about several of the replacement capital expenditure projects. AEMO questioned the criticality of Brooklyn Compressor Station Units 8 & 9 & 10 once the WORM is completed. Likewise with Brooklyn, AEMO submitted that Wollert Compressor Station A would not be required once the WORM was operating.

AEMO called on APA to be transparent on remaining life and forecast timing of decommissioning for Wollert Compressor Station A and Brooklyn units 8, 9, & 10.

APA met with AEMO and has taken on board concerns raised about specific projects. As a result, APA has revised seven proposed projects. These are discussed below.

### 6.3. AER Draft Decision

The AER Draft decision was not to accept APA's proposed replacement capital expenditure program. The AER alternative forecast was $96.3 million which was $27 million (or 21.6%) lower than APA's proposal. Of the 31 projects proposed by APA, AER approved 18, provided replacement forecasts for three and not approved 10 of these projects.

In its assessment of APA's proposed replacement projects, AER considered the requirement for the proposed works, the scope and timing of the proposed works, and whether the input cost of each project represents the efficient, lowest sustainable cost.

AER investigated the relative increase in the estimated 2021 and 2022 forecast capex compared with the 2018-2020 period. In response to AER information requests, APA provided further information to the AER to demonstrate committed expenditure and capability to deliver the step up in capital programs these two years.

### 6.4. APA consideration

APA has carefully considered the AER Draft Decision for replacement expenditure and submissions to the initial proposal.

The replacement program and projects are integral to maintaining and improving safety, maintaining security and integrity of transmission services. Most are underpinned by legislative obligations and Australian pipeline standards.

APA manages the VTS to ensure that we meet our obligations under the National Gas Rules, Victorian government legislation, Australian standards, and the Service Envelope Agreement with AEMO. APA is required to meet Australian Standard AS 2885 - The Standard for Gas and Liquid Petroleum Pipelines which is the foundation on which the petroleum pipelines industry provides assurance to itself, policy makers, regulators and the wider community that the pipelines that carry very hazardous materials (i.e., hydrocarbons) are safe, environmentally benign and reliable.[5]

The AS 2885 sets the risk assessment process to be followed by pipelines industry. These standards are developed by an industry-based body.

APA's Risk Management System is designed to support the operation of assets by ensuring that risk is identified and managed, including risk elimination (where appropriate) and effective management through identified protection measures.

In accordance with AS2885.3 ALARP definition, the risk assessment process ensures that current and proposed risk treatment plans are not disproportionate to the risk itself and regular reviews identify any changes to the threats and control profiles. (AS2885.3 ALARP Definition: "the cost of further risk reduction measures is grossly disproportionate to the benefit gained from the reduced risk that would result.").

APA's risk management system is represented in the following diagram.

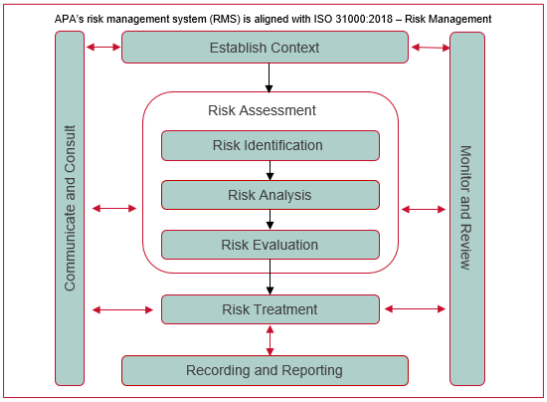
[5] Refer to AS 2885: The Standard for Gas and Liquid Petroleum Pipelines - Australian Pipelines and Gas Association (apga.org.au)

## Risk Management System (ISO31000 & AS2885)

The following tools have been developed to facilitate and support effective and meaningful risk management at APA:

- APA Corporate Risk Matrix (5x5)
- APA Projects Risk Matrix (5x5)
- APA Risk Appetite Statement and Performance Metrics
- CGR - APA's Risk Repository

The corporate RMS is integrated into the Operations Excellence Framework and considers strategic, operational and commercial for individual assets and the Operations division.




APA's RMS supports the management of assets through:

- Strategic and Operational risk management.
- Capital Allocation Prioritisation
- Regulatory Submissions and Technical Risk (including Process Safety)
- Risk Based Inspection and Maintenance Regimes
- Operational Improvement Prioritisation

APA's asset management framework provides for systematic and coordinated activities and practices through which we optimally and sustainably manage assets, their associated performance, risks, and expenditures over the asset life cycles. We focus on top-down strategic input, bottom-up business planning.

AER gave weight to AEMO's submission to APA's replacement (SIB) capital expenditure proposal which questioned need for investment in Brooklyn Compressor (units 8&9) ($10.3m); Wollert Compressor Station A ($1.3m), Iona Aftercooler ($3.2m) and several other projects.

APA met with AEMO to gain a better understanding of comments made in its submission to the AER on proposed replacement projects. In response to the matters raised by AEMO, APA revised the scope of projects where AEMO did not consider were needed or where AEMO suggested that APA consider decommissioning assets.

APA and AEMO agreed that several projects did not need to go ahead in the 2023-27 access arrangement period and in some cases, assets will commence an assessment for decommissioning. Wollert Compressor Station A and Brooklyn Compressor Station will be subject to end-of-life assessment which will determine the course of action for each asset (including decommissioning of units found to be at end of life). APA revised proposal

APA has carefully considered the AER's draft decision and stakeholder submissions including by AEMO. The proposed replacement programs and project are driven by the need to meet legislative obligations and standards. Replacement expenditure is driven by the need to maintain safety, integrity and reliability of the infrastructure and the service provided to consumers.

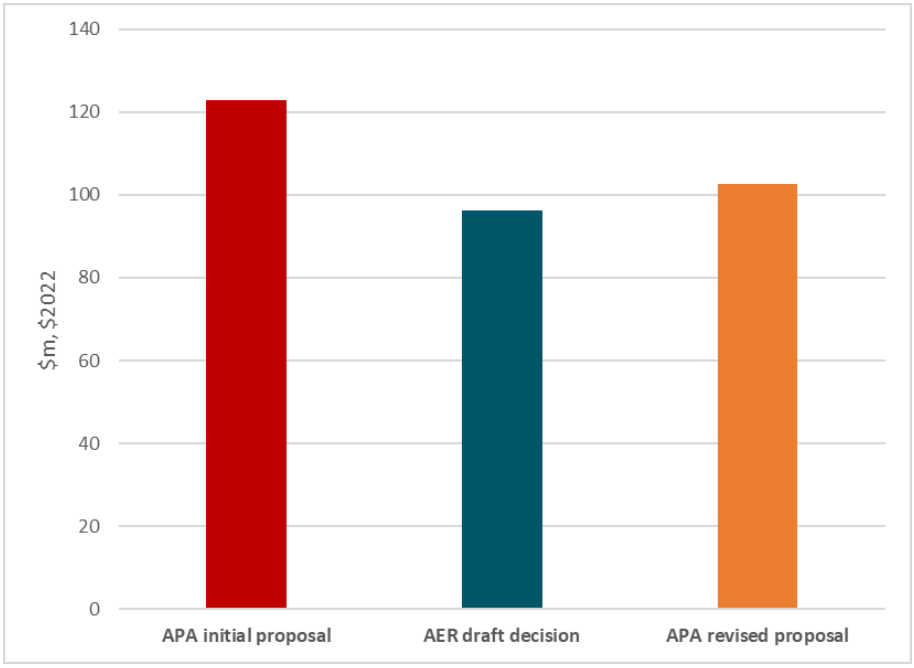
At the same time, APA is mindful of cost-of-living pressures and energy affordability as key concerns facing consumers. In response, APA has revised down its initial proposal and, in some cases, accepted the AER's alternative forecast and on other cases deferred expenditure until the 2028-32 access arrangement period.

APA's revised total capital expenditure forecast is $102.7 million which is:

- $20.2 million or 16% lower than the initial proposal ($122.9m).
- $6.4 million or 7% higher than the AER's draft decision.

A comparison of the total replacement expenditure between APA initial proposal, AER Draft Decision and APA revised proposal are shown in the following chart.

Figure 3 Comparison of APA initial proposal, AER Draft Decision, and APA revised proposal replacement expenditure ($2022, $m)




The revised replacement capital expenditure forecast is based on the following revisions to projects:

- Undertaking an end-of-life study for Brooklyn Compressor Station
- Undertaking an end-of-life study for Wollert Compressor Station A
- Accepting AER decision to reject Iona Aftercooler project
- Resubmitting information for Waterbath Heater Integrity and Battery charger upgrades
- Accepting AER reduced allowance for Emergency spares, Liquids management, Mainline Valve upgrades
- Deferral of AER rejected projects until the 2028-32 access arrangement period
- New business case for Pipeline Fracture Resistance assessment ($1.4m). The driver for this is a new requirement in AS 2885 which will come into effect 2023.

A summary of the projects that AER did not accept and APA's response in the revised proposal is shown in the following table.

| Project | APA original proposal | AER Draft Decision | APA revised proposal | Comment |
|---|---|---|---|---|
| BC203 Wollert Compressor Station A Process Safety | 1.3 | 0 | 0.75 | Revised proposal to develop end-of-life plan then decommission |
| BC204 Brooklyn Compressor Station Upgrade | 10.3 | 0 | 0.75 | Revised proposal to develop end-of-life plan then decommission selected units |
| BC211 Iona Compressor Station Aftercooler Upgrade | 1.0 | 0 | 0 | APA accepts AER alternative forecast |
| BC212 Battery Charger Upgrades | 1.0 | 0 | 1.0 | APA resubmitting proposal with information requested by AER |
| BC216 Wollert City Gate & T74/T119 PRS Instrument Air | 1.6 | 0 | 0 | APA accepts AER alternative forecast |
| BC224 Dandenong City Gate Gas Quality | 1.4 | 0 | 0 | APA accepts AER alternative forecast |
| BC239 Emergency Response Equipment | 7.6 | 6.1 | 6.1 | APA accepts AER alternative forecast |
| BC242 BCS Unregulated Bypass Upgrade | 0.3 | 0 | 0 | APA accepts AER alternative forecast |
| BC260 Liquids Management | 0.6 | 0.3 | 0.3 | APA accepts AER alternative forecast |
| BC267 BCS Unit 12 Inlet Filter Upgrade | 0.6 | 0 | 0 | APA accepts AER alternative forecast |
| BC275 VTS Mainline Isolation Valve Upgrade | 3.7 | 2.6 | 2.6 | APA accepts AER alternative forecast |
| BC307 Reliability Centred Maintenance | 2.3 | 0 | 0 | APA accepts AER alternative forecast |
| BC328 Waterbath Heater Integrity | 2.0 | 0 | 2.0 | APA resubmitting proposal with information requested by AER |
| BC331 Pipeline Fracture Resistance | NA | NA | 1.4 | New proposed project |

### BC203 Wollert Compressor A Process Safety

***APA initial proposal***

The Wollert Compressor A Process Safety project was proposed to improve the safety and reliability of the Wollert Compressor Station A (WCS A). The proposed option was aimed at providing a more dependable and safer station that addresses identified process safety vulnerabilities. The cost of the project was forecast to be $1.3 million to undertake the work.

***AER draft decision***

In making its assessment of the prudency and efficiency of the proposed project, AER took into consideration AEMO's views made in its submission to APA's initial proposal.

AEMO submitted that Wollert A CS compressors are not often operated as they are lower powered than Wollert B CS compressors, less operationally efficient, less reliable due to age, and can leak introducing lube oil downstream. The three 'A' station compressors ran only for 19 hours in 2021.

Wollert A will be redundant when WORM is completed. AEMO stated that APA should be transparent about decommissioning Wollert A due to the future commissioning of WORM. Given this, AER did not consider that the proposed expenditure would be incurred by a prudent service provider and rejected APA's forecast and made a replacement forecast of $0.

***APA revised proposal***

APA has incorporated feedback from AEMO on post-WORM operational requirements and revised the business case for Wollert A Process Safety. In line with the AEMO's position expressed in its submission to the AER, APA is proposing to decommission Wollert A Compressor Station. WORM scope includes an additional compressor in WCS B, once complete this will provide further contingency.

As a prudent operator, APA will undertake an end-of-life study to assess potential risks and undertake mitigation measures to ensure the balance of plant remains safe and functional. We will engage with stakeholders (namely AEMO) before decommissioning the compressor station.

The anticipated phases of this process are as follows:

- Part A. Post-WORM System utilisation study ($150k)
- Part B. Assess & scope impacts of study ($150k)
- Part C. Execute scope ($450k).

Noting that this will be more of a consult and the isolate/make safe in the 2023-27 period for the decommission scope, 2028-32 will have a clear plan and costing of disposal and remaining scope.

The forecast cost of the end-of-life study and commencement of decommissioning project is $750,000.

Further information is provided in: VTS - BC203 AA23-27 WCS A Decommissioning - August 2022 – Public.

### BC204 Brooklyn Compressor Station Upgrade

***APA initial proposal***

The initial proposal to upgrade Brooklyn Compressor Station was aimed at improving safety and reliability and to maintain the capability to compress gas coming out of the Melbourne system for transmission to western Victoria and to the Iona gas storage facility. The initial project proposed replacement of specific components of Units 8, 9, 10 and 11 of the Brooklyn Compression Station at a forecast cost of $10.3 million.

***AER draft decision***

In making its assessment of the prudency and efficiency of the proposed project, the AER took into consideration AEMO's submission which advised that the criticality of the Brooklyn Compressor Station site will reduce once the WORM project is completed. With the WORM in service, AEMO expects to be less reliant on the Brooklyn Compressor Stations. AEMO considered that demand in the south-west can be more efficiently supplied from the Outer Ring Main via Wollert.

AEMO clarified that the Brooklyn Centaurs (compressor units 11 and 12) will still be used to support winter demand, especially Ballarat demand, and contribute to the SWP withdrawal capacity on higher demand days. At least two Centaur units will be required to provide this service to ensure redundancy.

***APA revised proposal***

APA has taken into consideration AEMO's submission and information discussed in a subsequent meeting. As such, APA has revised the business case for Brooklyn Compressor Station. APA's revised proposal is to:

- Develop end-of-life plan to decommission units 8,9 and 10
- Defer upgrades for Unit 11 to 2028-32 regulatory period.

The forecast cost of the end-of-life study and decommissioning project is $750,000.

Further information is provided in: VTS - BC204 AA23-27 BCS 8,9 & 10 Decommissioning & 11 Upgrade - August 2022 – Public.

### BC211 Iona Compressor Station Aftercooler Upgrade

***APA initial proposal***

The Iona Compressor Station has a power output constraint due to insufficient cooling of process gas during the summer months. The initial proposed was for the installation of a larger, more capable gas aftercooler to ensure the full capacity of the station can be realised. The forecast cost of the initial proposal was $3.2 million.

***AER draft decision***

In the Draft Decision, AER noted that in discussions with APA, that need for the need for an upgrade to the Iona Station Aftercooler would only be required when gas is drawn from Iona in summer which is a rare occurrence. AER noted that, in response to an information request, APA accepted that this project can be removed.

Given this information, AER considered that a prudent service provider would not undertake this project. AER rejected the proposed forecast and made a replacement forecast of $0.

***APA revised proposal***

APA meet with AEMO to confirm that the new operating pressures at Iona gas storage facility reduced the need for cooler upgrade.

APA has accepted the AER's draft decision to not accept the proposal for the 2023-27 access arrangement period. As a prudent operator, APA may revisit the need for this project for the 2028-32 access arrangement revision.

### BC212 Battery Charger Upgrades

***APA initial proposal***

APA's proposed battery charger upgrades program was aimed at replacing older (lower integrity) battery chargers at compressor stations with the latest (fail-safe) design. Compressor stations, meter sites, city gates, and pressure regulating stations with control functionality require a stable 24VDC power supply to operate safely and reliably. This power supply is provided from 24VDC battery banks which are maintained in a fully charged state by mains connected battery chargers. This enables safe and reliable control and monitoring during mains outages but also protects the control and monitoring system from mains voltage fluctuations. The consequence of a 24VDC failure is that the site/station control and monitoring systems shut down until the 24VDC power can be restored (usually >24hours).

Modern battery chargers have battery life maintenance, monitoring and fail-safe features available that are not present in older designs. Older designs have a greater risk of failure that could result in outages and in worst cases could cause fires. APA policy is to replace older chargers to maximise battery life (typically 8-10 years) while reducing the risk of power outages and battery/charger fires. This policy is consistent with Australian Standards AS3000 Wiring Rules and AS4044 Battery chargers for stationary batteries.

The battery charger upgrades are part of an ongoing program. During 2023-27, APA proposed battery charger replacements at Euroa Compressor Station, Springhurst Compressor Station, Winchelsea Compressor Station, Wandong Pressure Regulating Station (PRS) and Newport (metering site). The forecast cost of the program was $1.0 million.

***AER draft decision***

AER rejected the initial proposal on the basis that APA had not provided any information on the need for the identified battery chargers to be changed. For example, that the age of the battery chargers and the current condition were not provided.

AER considered that without data on the current condition of the battery chargers and equipment it could not assess the prudency of this project and efficiency of this project. AER therefore made an alternative capex forecast of $0.

***APA revised proposal***

APA is resubmitting the proposal to replace battery chargers at the Euroa Compressor Station, Springhurst Compressor Station, Winchelsea Compressor Station, Wandong pressure regulating station PRS and Newport. APA's revised business case for the program contains information on the type of battery charger and the date of installation at each of the stations scheduled for upgrades.

The ongoing program to upgrade battery chargers is consistent with Australian Standards AS3000 Wiring Rules and AS4044 Battery chargers for stationary batteries. APA maintains that replacement

of battery charges is consistent with prudent operations. In addition, the reduction of risk to as low as reasonably practicable in a manner that balances cost and risk is consistent with Australian Standard AS2885.

Further information is provided in: VTS - BC212 AA23-27 Battery Chargers - August 2022 – Public.

### BC216 Wollert City Gate & T74/T119 PRS Instrument Air

***APA initial proposal***

The Wollert City Gate & T74/T119 PRS (Pressure Regulating Station) uses instrument gas which vents to atmosphere causing a safety hazard as well as greenhouse gas emissions. The project is to convert the Wollert CG & T74/T119 PRS to instrument air. APA's submission funding request was for $1.6 million.

***AER draft decision***

AER assessed the proposed project as not prudent. AER considered that the business case provided by APA showed that this project addresses risks which are low to negligible. AER made a replacement forecast of $0 for this project.

***APA revised proposal***

APA has decided to accept the AER's decision forecast an alternative of $0 the project for the 2023-27 access arrangement. APA has deferred the project for consideration for the 2028-32 access arrangement.

### BC224 Dandenong City Gate Gas Quality

***APA initial proposal***

The Dandenong City Gate Gas Quality project was proposed to meet a regulatory requirement under the National Gas Rule r.288 all injection points into the Victorian Declared Transmission System must meet gas quality requirements. Currently there is no gas heating before the pressure regulation at the Dandenong City Gate and consequently the downstream temperatures are regularly sub zero in winter, which can lead to condensate dropout. APA considered that the absence of gas heating affects AEMO's ability to ensure the quality of the gas entering the T16 pipeline complies with the gas quality standards as set out in the AEMO procedures.

***AER draft decision***

AER took on board AEMO's submission on this proposed project which stated that Dandenong City Gate is not a Declared Transmission System injection point. AEMO submitted that it does not believe that there is justification for this project because of compliance with temperature limits as defined in AEMO's standard for gas quality at DTS injection points.

Based on AEMO's advice AER considered that the proposed project was not prudent and have made an alternative forecast of $0.

***APA revised proposal***

APA accepts the AER's decision for the 2023-27 access arrangement. APA may reconsider the project for the 2028-32 access arrangement.

### BC239 Emergency Response Equipment

***APA initial proposal***

APA proposed the purchase of emergency spares, including pipe and equipment (hot tap equipment and vents and flares). Emergency response and recovery equipment and material is needed in order to deliver timely management and recovery from pipeline events. The inability to efficiently and effectively respond and repair pipeline damages could result in prolonged loss of supply to customers and greater risks of Health & Safety and Environmental impacts from emergency scenarios to workforce and neighbouring communities. APA proposed capital expenditure of $7.6 million in emergency response equipment.

***AER draft decision***

AER considered it a necessary requirement for APA to be able to respond to outages on the VTS in a timely manner, including having access to emergency spares, and that it was reasonable that APA hold these spares.

AER considered the proposal to be prudent but considered that the overall cost was not efficient as it did not account for the recertification and reuse of existing inventory rather than replacing with new spares. AER draft decision was to apply a 20 percent reduction in overall costs to account for this. The AER's alternative forecast for this project was $6.1 million.

***APA revised proposal***

After careful consideration, APA has decided to accept AER's alternative forecast for this project of $6.1 million. APA has deferred the component that has not been accepted by the AER until the 2028-32 regulatory period.

Further information is provided in: VTS - BC239 AA23-27 Emergency Response - August 2022 – Public.

### BC242 Brooklyn Compressor Station Unregulated Bypass Upgrade

***APA initial proposal***

APA proposed the Brooklyn Compressor Station Unregulated Bypass Upgrade project to remove the manual regulation of the Brooklyn Compressor Station - Station bypass by disconnecting the station bypass with a valve and blind.

APA submitted that that manual regulation has the potential to over-pressurise the pipeline from the T56 Brooklyn to Ballan Pipeline or T24 Brooklyn to Corio Pipeline which could result in pipe rupture. The proposed capital expenditure for the project was $342,000.

***AER draft decision***

In assessing the proposed project, AER referred to discussion under the 'Brooklyn CS upgrade' project (summarised above) whereby AEMO had stated that the criticality of the Brooklyn Compressor Station site will reduce once the WORM project is completed.

As such, AER considered it unclear that the proposed work at BCS is prudent and efficient, and sought further information from APA on the criticality of these works. AER made a replacement forecast of $0.

***APA revised proposal***

Considering the decommissioning of Brooklyn Compressor Station units 8 & 9, APA accepts the AER's replacement forecast of $0. APA will defer the component that is not approved until the 2028-32 regulatory period.

### BC260 Liquids Management

***APA initial proposal***

APA proposed to upgrade existing liquids management systems to the APA standard design. APA proposed to carry out a Brooklyn liquids management system upgrade and a Wollert liquid level indicator upgrade. The original capital expenditure proposed for the project was $600,000.

***AER draft decision***

AER considered AEMO's submission on this project which as discussed under the Brooklyn Compressor Station upgrade project above. AEMO submitted that the criticality of the Brooklyn Compressor Station site will reduce once the WORM project is completed. AEMO indicated that there will be little need to operate the wet seal compressors at Brooklyn Compressor Station

On this basis, AER considered that this project would not be carried out by a prudent service provider. As Brooklyn CS accounts for 58% of the forecast cost, AER reduced the project proposed cost by this amount. AER made an alternative forecast of $0.3 million ($2022, excluding overheads) being for the proposed works excluding Brooklyn Compressor Station.

***APA revised proposal***

Noting the decommissioning proposal for Brooklyn Compressor Station units 8 & 9, APA accepts the AER decision for the 2023-27 period. The Brooklyn end-of-life study will cover the remaining end of life consideration. APA will defer the component that is not approved until the 2028-32 regulatory period.

Further information is provided in: VTS - BC260 AA23-27 Liquids Management - August 2022 – Public.

### BC267 BCS Unit 12 Inlet Filter Upgrade

***APA initial proposal***

Brooklyn Compressor Station Unit 12 (BCS12) has a single process gas inlet filter. This filter was procured from another VTS compressor station (Bulla Park) to reduce cost of BCS12 installation in 2007.

The filter has consumable elements that require cleaning/replacement when they become fouled. In order to perform this maintenance activity, the vessel must be isolated from gas, depressurised, purged of hydrocarbons and then the confined space must be entered by a technician. BC12 is unavailable when this filter requires cleaning as there is only one filter for the unit. APA's forecast cost of this project was $600,000.

***AER draft decision***

AER draft decision was to reject the proposed project noting AEMO's submission that the criticality of 'Brooklyn Compressor Station will reduce once the WORM project is completed. Compressor 12 will

only be required for peak and winter periods. Hence, the amount of gas going through the compressor will decrease. Also, compressor 11 is a full backup for compressor 12 once the WORM is completed.

Given the change in operational status of the Brooklyn Compressor Station, AER considered that it was not prudent and efficient to spend $0.6 million to save $0.3 million because of 'dirty gas' as set out in APA's business case. AER made a replacement forecast of $0 for this project.

***APA revised proposal***

APA accepts the AER's decision to reject the proposal. As prudent operator, APA will monitor the performance of BCS Unit 12 and may resubmit the proposed project for the 2028-32 access arrangement proposal.

### BC275 VTS Mainline Isolation Valve Upgrade

***APA initial proposal***

APA submitted this proposed project to ensure VTS pipeline mainline isolation valves can operate safely and reliably when required. The objective of this project was to target with remedial actions all mainline isolation valves in a high consequence areas. APA's remedial approach involved replacement rather than repair of the valves.

APA stated that these valves have been in service since the pipeline was installed and are no longer well supported by the Original Equipment Manufacturer. The proposed expenditure on this project was $3.6 million.

***AER draft decision***

The AER did not accept APA's proposed approach to replace rather than repair the mainline valves. Based on the costs in the business case and the costs provided by APA in response to AER information request, AER assessed that the total cost of the valve replacement program is $3.7 million while the cost of the in-situ overhaul would be $2.6 million, a 29 percent reduction. AER substituted APA's proposed capital expenditure with its alternative of $2.6 million.

***APA revised proposal***

APA accepts the AER's alternative forecast of $2.6 million. APA will assess cost versus benefit and associated risks of replacing valves compared with overhauls further in the design phase. APA will use this information in proposals for the 2028-32 access arrangement proposal.

Further information is provided in: VTS - BC275 AA23-27 Mainline Isolation Valve Upgrade - August 2022 – Public.

### BC307 Reliability Centred Maintenance

***APA initial proposal***

APA proposed applying Reliability Centred Maintenance principles to maintenance strategy development. The aim was to allow APA to generate fit for purpose strategies that align with asset/business criticality and increase reliability, reduce preventable reactive maintenance.

***AER draft decision***

AER assessed that this project is to develop an asset management strategy based on Reliability Centred Maintenance. And that it is not to carry out any works on assets to extend their lives or utilisation. On this basis AER assessed that this project does not constitute capital expenditure.

AER rejected this project on the basis that it is not conforming capital expenditure. AER made a replacement forecast of $0.

***APA revised proposal***

APA accepts the AER's decision. APA notes AER's view that If APA were to propose this project as operating expenditure that it would not necessarily qualify for a step change under the operating expenditure assessment framework. APA has not sought to propose the RCM project as operating expenditure.

### BC 328 - Waterbath Heater Integrity

***APA initial proposal***

This project expenditure is for periodic inspection of Waterbath Heaters. The aim of this project is to ensure compliance with APA integrity policy and maintain the waterbath heater equipment to a safe and dependable standard. This is an ongoing project but was previously classified as operating expenditure but following an internal review was reclassified as capital expenditure. APA forecast capital expenditure of $2.0 million for the 2023-27 access arrangement period.

***AER draft decision***

AER considered that the inspection of waterbaths using a risk-based Inspection schedule would be done by a prudent service provider and noted that APA's use an external contractor to do most of the work. And as the cost estimates are based on the average cost for previous work, AER found there is sufficient evidence to demonstrate that the cost is efficient.

AER considered that this project should not be capital expenditure as it is a maintenance activity and that it should remain in operating expenditure. On this basis the AER noted that this expenditure is captured in the 'base opex' (as per the base-step-trend forecasting method). AER explained that If it was to remain in capital expenditure then there should be a commensurate reduction in the base opex.

On this basis the AER assessed that this project is not conforming capital expenditure and made a replacement forecast of $0.

***APA revised proposal***

Waterbath heaters require periodic internal inspection to meet Type B requirements and ensure safe reliable operation. The objective of this project is to schedule waterbath heater internal inspections that verify condition and identify risks and manage accordingly, which in turn improves certainty of remaining life and related supply confidence.

In 2020, an internal review found that the non-routine expenditure for waterbath heater inspections which were required to be classified as capital expenditure were instead treated as operating expenditure.

*Accounting Treatment*

The capitalisation of inspection costs is in accordance with the Australian Accounting Standard - AASB 116 Property, plant and equipment.

The relevant section of the Australian Accounting Standard is:[6]

14 A condition of continuing to operate an item of property, plant and equipment (for example, an aircraft) may be performing regular major inspections for faults regardless of whether parts of the item are replaced. When each major inspection is performed, its cost is recognised in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied. Any remaining carrying amount of the cost of the previous inspection (as distinct from physical parts) is derecognised. This occurs regardless of whether the cost of the previous inspection was identified in the transaction in which the item was acquired or constructed. If necessary, the estimated cost of a future similar inspection may be used as an indication of what the cost of the existing inspection component was when the item was acquired or constructed.

The recognition criteria to recognise such expenditure as a capital is detailed below:

**Recognition**

7 **The cost of an item of property, plant and equipment shall be recognised as an asset if, and only if:**

**(a) it is probable that future economic benefits associated with the item will flow to the entity; and**

**(b) the cost of the item can be measured reliably.**

In accordance with the recognition criteria, it is probable that water bath inspections will contribute to economic benefits, such as lower operating costs, and that these benefits will be derived beyond a financial year (future economic benefit).

It is important to note that the relevant sections of AASB 116 Property, plant and equipment, noted above, have been in operation since 1 January 2005, when Australia first adopted the International Financial Reporting Standards (IFRS). APA's Policy for Property, plant and equipment, first published in 2011, also specifies this same treatment of inspections. APA acknowledges that there were inconsistencies in APA's application of the AASB 116 in relation to waterbath heater inspections which was rectified in 2020.

***APA internal guidelines***

In 2020, noting that historically there may have been inconsistencies with the policy adopted by the APA Group, internal guidelines were prepared on the re-interpretation of non-routine operating expenditure to be classified as capital expenditure. The guidelines are presented here:

[6] Australian Accounting Standard can be found here: AASB116_08-15_COMPdec21_01-22.pdf

*Some guidelines to follow to determine whether to capitalise or not are as follows:*

1. *Is the inspection done annually – if yes then not able to be capitalised as where future economic benefits are not expected to be achieved beyond the period the costs were incurred, must be expensed.*
2. *Is the inspection considered major – is there a predetermined list of checks, is the cost material – let's say greater than $50K*
3. *Will the inspection provide future economic benefits – this includes work which substantially reduces operating costs, such as maintenance costs.*

*Guidelines for APA to follow are:*

1. *The frequency of the inspection needs to be greater than 2 years*
2. *The cost of the inspection needs to be greater than $50K*
3. *The inspection is performed to substantially reduce operating costs, not just for compliance reasons*
4. *There is a predetermined list of checks that are undertaken during the inspection.*

Based on the 2020 internal guidelines, the VTS asset lifecycle team assessed waterbath heater integrity inspections against the criteria. The assessment found that the project met the criteria provided in the internal guidance.

| Guideline | Waterbath Heater Inspections |
|---|---|
| The frequency of the inspection needs is greater than 2 years | Waterbath Heater inspections are undertaken every 4-6 years |
| The cost of the inspection needs to be greater than $50K | Each inspection is forecast to cost $200,000 |
| The inspection is performed to substantially reduce operating costs, not just for compliance reasons | Economic benefits of inspections include:<br>• Improved Performance (reduced Fuel Gas cost)<br>• Extends useful life of asset<br>• Reduces maintenance and repair cost |
| There is a predetermined list of checks that are undertaken during the inspection | Worklist includes:<br>• Electrical and mechanical isolations<br>• Drain and dispose of water<br>• Pressure clean vessel internals to improve operating efficiency<br>• Clean burners to improve operating efficiency<br>• Inspect vessel internals for defects that could reduce the safe, reliable operation of the asset<br>• Rectify any defects found during inspections<br>• Re-fill with new clean water |

| | |
|---|---|
| | • Reinstate equipment to operation. |

The 2020 VTS operating expenditure does not include costs for Waterbath Heater Inspections. The reduction in future operating costs would be captured under the Efficiency Benefit Sharing Scheme and efficiency improvements shared with consumer under the EBSS.

It is important to note that the treatment of such inspections as part of this Access Arrangement is not a change of policy, although historically, in practice there may have been inconsistencies with the policy.

***APA revised proposal***

APA request that the AER reconsider the draft decision to reject the proposal made in Business Case 328 Waterbath Integrity and accept the project as capital expenditure.

Further information is provided in VTS - BC328 AA23-27 Waterbath Heater Integrity - August 2022 - Public

### BC331 Pipeline Fracture Resistance Assessment (New project)

***APA revised proposal***

APA is submitting a new project as part of the revised proposal for replacement program. The Pipeline fracture resistance assessment project is aimed at meeting the latest revision of AS2885.1 Fracture Resistance Assessment requirements

VTS, like APA's other assets, consists of pipelines of varying age and condition. In each case the design and construction of the pipeline met the requirements of the applicable design and material codes as they existed at the time of design.

Over time, these codes and standards have changed, evolving to meet advances in the understanding of the industry of those factors necessary to achieve a safe and efficient pipeline. This process means that older pipelines do not necessarily meet the requirements of newer versions of the standards.

The current revision of the standard AS2885.1:2018 Fracture Resistance Assessment was formulated by a committee drawn from industry subject specialists. It is an extensive revision and provisions for pipeline fracture control were reviewed and updated to reflect the most current understanding. The prospect of the revision requiring retrospective assessment and conformity to some fracture control standards has been informed by recent international and national events.

AS 2885 in general is not retrospective - see Clause 1.6.1 of AS2885.0-2018. Hence the fracture control requirements do not apply to pipelines built earlier than that. However, the forthcoming revision of AS2885 Part 3 will require a fracture resistance assessment. Among other things that includes an assessment of risks using the SMS process of Part 6, and further actions to manage risk may arise from that.

AS2885 requires that all pipelines be maintained and operated, to the extent practicable, to the current version of AS2885.3, and allows that where a new provision is considered very significant from a safety or technical viewpoint it may be required to be applied retrospectively.

Fracture Control Plans for existing VTS pipelines are reviewed against latest edition of AS2885.1 as part of ongoing compliance and currency of the Plan as required by AS2885. Where a new provision is considered very significant from a safety or technical viewpoint it may be required to be applied retrospectively. APA has identified through SMS workshops that rupture may occur in circumstances where existing physical and procedural controls fail. To demonstrate ALARP for this threat, existing pipelines should be reviewed against latest edition Fracture Control requirements for compliance.

The revised standard for Fracture Resistance Assessment requirements come into effect in 2023. It is prudent for APA to commence work to comply with the new requirements. The total cost of the project is forecast to be $1.4 million over the 2023-27 access arrangement period.

Further information is provided in: VTS - BC331 AA23-27 Pipeline Fracture Resistance Assessment - August 2022 – Public.

# 7. Security of supply – South West Pipeline & Winchelsea compression

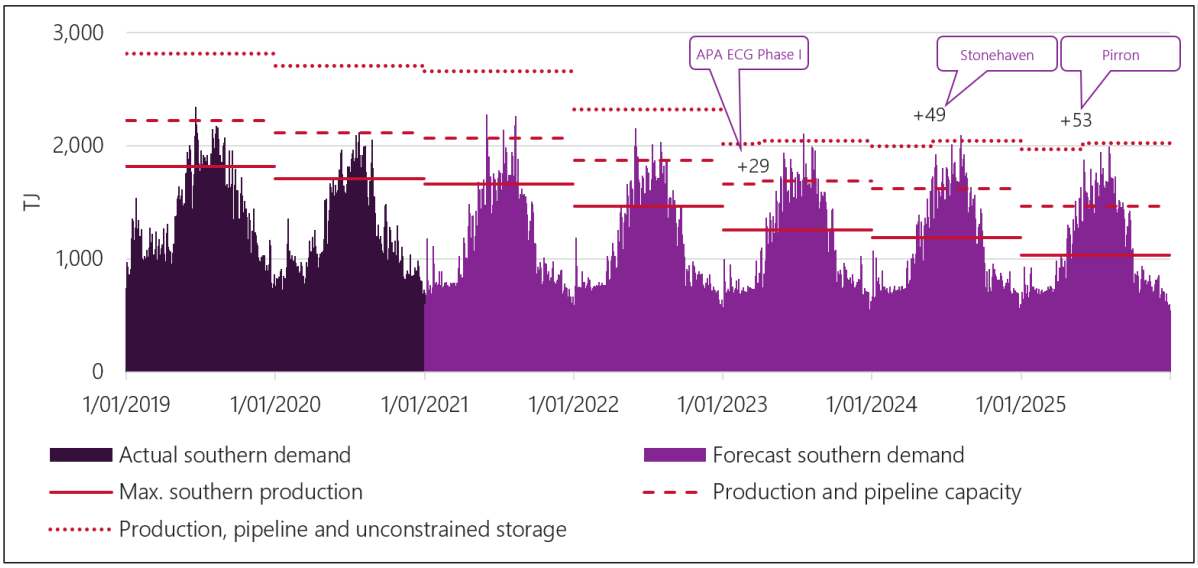
## 7.1. Initial proposal

AEMO's 2021 GSOO forecast gas supply shortfalls in its outlook period, which were (at the time) forecast to be alleviated by the Port Kembla Gas Terminal (PKGT). The APA VTS December 2021 proposal did not include the PKGT as a supply source as it had not announced Final Investment Decision (FID) to the market.

In preparing a gas supply outlook, APA adopted a policy position of only incorporating supply projects, to bring more supply to Victoria, that had reached FID. At the time, the only FID-committed projects were Phase 1 of APA's East Coast Grid expansion, and Lochard Energy's expansion of deliverability from the Iona gas storage facility to 570 TJ/day.

AEMO's 2021 GSOO identified the capacity of the South West Pipeline as being a constraint to delivering more gas into the VTS from Iona storage. APA therefore undertook investigations to ascertain the lowest cost option to increase the capacity of the SWP to 570 TJ/day, to align with the committed increased deliverability of Iona gas storage.

The lowest cost solution was to construct two greenfield compressors, at Stonehaven and Pirron respectively. Following feedback from stakeholders, we planned the construction of these compressors on a staged approach, with Stonehaven coming online for winter 2024 and Pirron coming on line for winter 2025:




Source: AEMO 2021 GSOO as modified by APA

APA had also noted that a supportive investment environment would be required in order for the Stonehaven and Winchelsea projects to attract capital.

To this end, APA had proposed a Fixed Principle under Rule 100 that the expansion of the South West Pipeline (later clarified to also apply to investment in the WORM) would not be subject to the capital redundancy provisions included in the access arrangement by virtue of Rule 85.

## 7.2. Stakeholder submissions

Generally, speaking, there were two camps regarding the proposed investment in two new compressors along the South West Pipeline - those that questioned the need for further investment and those that called for the investment to be accelerated.

Some stakeholders were not supportive of APA undertaking significant capital expenditure in an environment of forecast declining demand. While acknowledging AEMO's forecast of a delicate supply and demand balance, the non-supportive stakeholders were reluctant to support the investment in the Stonehaven and Pirron compressors.

A consistent theme among stakeholders was that consumers should not be required to underwrite the cost of an expensive long term solution to mitigate a short term system security problem. There were other suggestions for this expenditure to be treated under speculative capex arrangements 'until the need is proven'.

There was a call from some stakeholders for the AER to work with all relevant authorities and businesses to establish a demand management mechanism to help address short-term and intermittent mismatches between demand and supply in the Victorian gas network.

Others called for the proposed South West Pipeline business case to be reassessed with data from the 2022 GSOO. And calling for all augmentation to be avoided if possible, with a broad and robust options analysis being implemented to find appropriate low cost, alternatives.

There was support for the proposed investment in the South West Pipeline from a consortium of market participants and Lochard Energy. These stakeholders noted that SWP capacity expansion must be provided more quickly than envisaged by APA, to meet potential supply shortfalls in 2023, as identified by AEMO in the 2021 GSOO. Further that approvals and planning must be fast-tracked to ensure the Stonehaven compressor is able to be installed by winter 2023 instead of 2024 and Pirron compression preferably also a year earlier in 2024.

Furthermore, there was concern that the timeframes presented by APA for expanding SWP capacity were too long. One stakeholder urged that if APA's views about the PKGT are correct and it is not completed in time for winter 2023, the supply deficits estimated by AEMO in the 2021 GSOO will start in 2023. To avoid this, the Stonehaven compressor must be installed by winter 2023 instead of 2024 and Pirron compression preferably also a year earlier in 2024. This will require approval by AER prior to the start of the 2023-27 Access Arrangement.

In response to the potential for LNG import terminal proposals to breach the supply gap, the current high global LNG prices, which are projected to continue, will deter suppliers from purchasing LNG cargoes. It is also uncertain as to whether the Eastern Gas Pipeline (EGP) will be expanded in the timeframe required.

There were no stakeholders who supported APA's proposal for a Fixed Principle to apply to the SWP Expansion.

## 7.3. APA revised business case for South West Pipeline

When released at the end of March 2022, AEMO's Gas Statement of Opportunities (GSOO 2022) and Victorian Gas Planning Report (VGPR 2022) predicted a risk of shortfall in gas supplies in the

Victorian Transmission System (VTS) to meet winter demand as early as 2023. This shortfall is driven by the declining gas supplies from Longford.

Due to risk of supply shortfall in winter 2023, APA was approached by the Victorian Government and AEMO to investigate possibility of a fast-tracked solution to install a second compressor at Winchelsea before winter 2023.

The Winchelsea compressor site has provisions for a future second unit to be installed. The availability of space for a second compressor substantially shortens the time required for design, engineering and approvals.

While the schedule is very tight, APA has established that the installation of a second compressor at Winchelsea before winter 2023 is possible.

APA is proposing to install a second Taurus 60 (5.6 MW) compressor at Winchelsea which will increase Iona's injection capacity to 517 TJ/d, that is, 41 TJ/d (from post WORM 476 TJ/d) of additional gas supply capacity to the VTS during the winter peak period.

The cost of Capital expenditure forecast to be $60.1 million ($37.2 million in CY2022 and $22.8 million in CY2023). Operating expenditure of $250,000 per annum starting in CY2023.

The proposed second compressor at Winchelsea is necessary to maintain security of supply during the potential gas shortfall predicted by AEMO starting in winter 2023.

**What's in it for consumers & customers?**

The Victorian Minister for Energy, The Hon. Lily D'Ambrosio MP., wrote a letter to the AER supporting the proposal for a second compressor at Winchelsea. The Minister stated:[7]

> *the Winchelsea option provides a prudent balance between mitigation of the growing supply and resilience risk and associated impacts on end consumers, while supporting energy affordability for these same consumers.*

The accelerated investment in a second compressor at Winchelsea will reduce the risk of gas shortfalls will help to ensure Victorian households have gas available to meet their needs and in particular heating needs during winter 2023.

Victorian businesses, who rely on gas for heating processes, will benefit from with reduced risk of interruptions (and potential curtailment) to gas supply and to their operations.

Regarding the original SWP570 proposal, we consulted with stakeholders in preparing the revised proposal in response to AER's Draft Decision. We proposed to withdraw the proposal to proceed with the investment in compression at Stonehaven and Pirron. There were no concerns raised by stakeholders.

[7] Hon Lily D'Ambrosio MP - Letter of support to AER for duplication of compression at Winchelsea - 13 April 2022.pdf

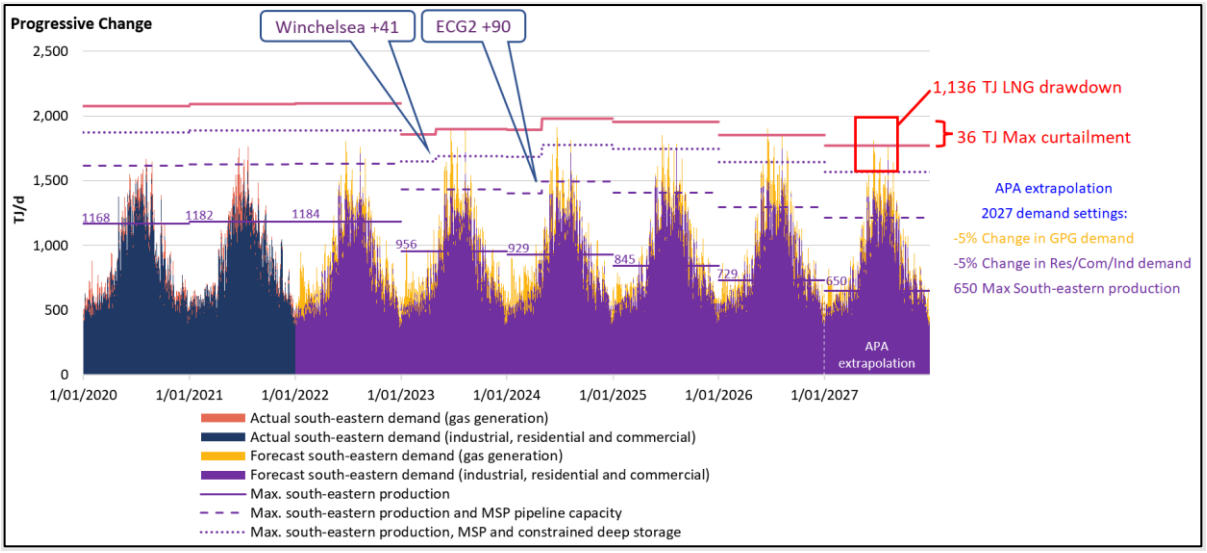
## 7.4. AER Draft Decision

AEMO's 2022 GSOO was published at the end of March 2022. AEMO warned of supply shortfalls in winter of 2023 and noted that the Stonehaven and Pirron compressors were not forecast to be completed until the winters of 2024 and 2025, respectively.

APA worked closely with AEMO, the Victorian government and the AER to develop a plan to install a second compressor at the Winchelsea site.

As a brownfield site, APA considered that this second compressor could be in service in time to avoid the winter 2023 shortfall. The AER's draft decision accepts the $60.1 million investment in the Winchelsea compressor, incurred partly in 2022 and partly in 2023.

At about the same time, APA reached Final Investment Decision to complete Stage II of its East Coast Grid expansion. These two decisions changed the gas supply and demand outlook considerably:




Source: AEMO 2022 GSOO as modified by APA

Following the commitment of these two projects, the AER considered that there was no longer a need to further augment the SWP to address any identified supply shortfall in the upcoming access arrangement period. The AER, therefore, did not approve the investment in the Stonehaven and Pirron compressors.

The AER considered APA's proposal for a Fixed Principle under Rule 100 that the expansion of the South West Pipeline (later clarified to also apply to investment in the WORM) would not be subject to the capital redundancy provisions included in the access arrangement by virtue of Rule 85.

The AER's draft decision concluded that, since the investment in the Stonehaven and Pirron compressors had not been approved, it was not necessary to include the Fixed Principle in the access arrangement.

## 7.5. APA consideration

APA accepts the AER's approval of the Winchelsea compressor at a forecast cost of $60.1 million.

APA agrees that, at the time of this revised proposal, it is not obvious that further investment in SWP capacity is currently necessary to address any identified supply shortfalls.

APA has accepted this amendment and deleted the Fixed Principle in section 8.3 of the proposed access arrangement.

## 7.6. APA revised proposal

APA has therefore withdrawn the proposals for the Stonehaven and Pirron compressors.

However, we are concerned that the supply and demand balance remains uncertain and recommend that we take no-cost steps today to enhance our flexibility to respond to unanticipated supply needs in the future.

To this end, APA proposes to retain its proposed pre-approved capex pass through mechanism to allow for further expansion, if required, to proceed promptly under a Rule 80 application. This is discussed in more detail in the section on the tariff variation mechanism.

**Variation to access arrangement**

The AER draft decision therefore required the following amendment to the VTS access arrangement:

| | |
|---|---|
| Revision 5.2 | Delete the fixed principle at Section 8.3 of APA's proposed Access Arrangement. |

This revision has been adopted.

# 8. Rule 80 proposal

## 8.1. Initial proposal

Rule 80 of the National Gas Rules provides a mechanism by which a service provider can apply to the AER to seek a binding pre-approval of proposed capital expenditure. If the AER approves, and the expenditure is undertaken as forecast, the AER is bound to include the expenditure as conforming capital expenditure at the commencement of the next access arrangement period.

Given the fluid and uncertain nature of several proposed projects to bring additional supply to Victoria, APA proposed three projects to be approved by the AER, subject to the relevant project proponents reaching Final Investment Decision on the relevant projects. These projects all related, in different ways, to required expansions of the South West Pipeline to accommodate these additional supply projects.

## 8.2. Stakeholder submissions

Stakeholders were concerned about the proposed level of capital expenditure in an environment of potentially falling demand. In this regard, stakeholders were not supportive of further expansion to the SWP and were therefore not supportive of the Rule 80 applications.

## 8.3. AER Draft Decision

Following approval of the second Winchelsea compressor to avoid gas shortfalls in 2023, the AER considered that further expansion of the SWP was unlikely to be required, and therefore rejected the applications under Rule 80.

## 8.4. APA consideration

APA's objective in lodging the Rule 80 applications with its access arrangement proposal was to give a complete picture of the complexity of the uncertain supply and demand balance facing the VTS, and the uncertain nature of projects proposed to address that uncertainty.

APA also lodged this application in support of its proposal for a pass through of capital-related costs associated with projects undertaken subject to a Rule 80 approval.

However, there is no need to lodge an application under Rule 80 with an access arrangement proposal. Should it become apparent over the course of this access arrangement period that some form of further augmentation is required, APA can lodge an application under Rule 80 at that time.

As discussed under the section on the tariff variation mechanism, APA proposes to retain the pre-approved capex pass through to add flexibility to our responses to continuing uncertainty in addressing the supply and demand balance.

## 8.5. APA revised proposal

APA has therefore not renewed the applications under Rule 80.

# 9. Security of supply - Western Outer Ring Main

## 9.1. Initial proposal

The Western Outer Ring Main (WORM) was proposed by APA (and supported by AEMO) for the 2018-22 access arrangement period capital program to address security of supply concerns due to tightening of supply / demand balance forecast by AEMO.[8]

The WORM project is a high pressure, buried gas transmission pipeline, 51 kilometres long, which will provide a new connection between existing pipelines at Plumpton in Melbourne's west and Wollert in the north. The project also includes an upgrade to the existing compressor station at Wollert. The benefit of the WORM is that it widens the window of opportunity to refill Iona Underground Storage facility, especially better opportunity to refill Iona during low winter demand days.

In the AER's 2017 Final Decision on the 2018-22 access arrangement for VTS, AER accepted the proposed project was justified based on the need to maintain system security. A total of $126.7 million ($2017) was included in the VTS capital program to undertake the WORM project.

In December 2019, the Victorian Minister for Planning determined that an Environment Effects Statement (EES) was required for the WORM. The Inquiry Panel Hearing commenced on 4 October 2021. During the preparation of the EES documentation, several environmental matters were identified that needed to be addressed including, an increase in number and length of horizontal directional drilling. In addition, the cost of meeting biodiversity offset obligations is significantly higher than originally forecast.

The forecast expenditure for the submitted in December 2021 as part of the initial 2023-27 access arrangement proposal for the WORM was revised to $184.5 million (comprising of $135.8m in 2018-2022 period and $49m in 2023-27 period).

The revised cost was based on the best available information at the time with the caveat that APA was preparing to go to market for pipeline and facilities construction.

Depending on the planning approvals, we expect the WORM to be completed by mid-2023.

APA also proposed the WORM (like SWP proposal) be subject to application of a fixed principle which set out that the redundancy provisions would not apply considering demand uncertainty.

## 9.2. Stakeholder submissions

APA acknowledges concerns raised by stakeholders calling for APA to provide a full re-assessment of the business case for the WORM considering the changed circumstances since 2017 (CCP28).

Questions were raised about whether the WORM was still required given changes in Government policy since the WORM was approved by the AER in 2017 based on system security. The AER was encouraged to look at whether the previous approval for the project could be re-considered given the change in capex, demand outlook and future of gas issues. (EUAA). Given the identified stranding risk, and the proposal for fixed principle projects and accelerated depreciation, all augmentation

[8] The Western Outer Ring Main was first proposed by APA as part of the 2013-17 Access Arrangement but was not accepted as the AER considered that the proposed security of supply benefits did not justify the cost at the time.

should be avoided, if possible, with a broad and robust options analysis being implemented to find appropriate low cost, alternatives (BSL).

Industry stakeholders were supportive of the continued importance of the WORM. As noted by one stakeholder (Lochard) gas supply reliability is likely to decline in future as pipeline and production assets age and that gas storage is the most cost-effective source of additional reliability.

AEMO reiterated continued support for the WORM; stating that it has included the WORM project in all planning analysis since 2013. AEMO submitted that the benefits of the WORM that it identified in its submission to the AER in 2017 still exist currently and have become more critical. AEMO considered there to be other benefits of the WORM including less reliance on Brooklyn Compressor Station and that several potential projects such as Viva and Venice LNG import terminals assume the WORM is in place to utilise the additional capacity to transport gas to Melbourne.

### 9.3. AER Draft Decision

AER approved $49.0 million capex for the WORM in 2023-27 period on the basis that it will provide benefits including increased gas supply and faster gas flow between the east and west systems, increased linepack storage capacity close to Melbourne to balance peaking residential and GPG demand and reduced operating costs.

AER considered that the WORM would not be a short term project and did not approve the proposed fixed principle for security of supply expenditure on the basis that it considered that the SWP and WORM would not be for a short-term use. AER noted that accepting these fixed principles would also represent a departure from the AER's current practice.

### 9.4. APA consideration

In recent months, AEMO has had to intervene in the gas and electricity markets due to a confluence of events including generators and transmission being offline for planned maintenance, low wind and solar output, unplanned outages by coal fired generators, early onset of winter and flooding across the east coast - increasing demand for both electricity and gas.

On 19 July, AEMO issued an updated 'threat to system security' notification due to ongoing depletion of gas storage levels at the Iona storage facility in Victoria. This followed an initial threat to system security notice was sent by AEMO on Monday 11 July, requesting participants to cease purchasing gas from Victoria's Domestic Wholesale Gas Market (DWGM) to reduce the depletion rate of Iona storage inventory.[9] AEMO has stated that the threat to system security remains until 30 September 2022 or until the threat to gas supply caused by Iona storage inventory depletion has subsided.

APA believes that with the WORM in place by winter 2023, it will help to widen the window of opportunity to refill Iona and help ease the current demand and supply pressures.

On 18 March 2022, APA submitted to the AER an update of the Western Outer Ring Main (WORM) Project Business Case as part of the proposal for the 2023-27 Victorian Transmission System (VTS) access arrangement proposal.

[9] Refer to AEMO | 12pm: Notice of a Threat to System Security – Iona

The updated business case was revised in response to stakeholder requests and information requests by the AER for information to support for a reassessment of prudency and efficiency of the WORM given the increased uncertainty in demand and supply conditions.

APA prepared the revised business case that demonstrated that investment in the WORM is prudent and efficient and is in the long term interests of Victorian gas consumers.

The business case presented analysis of the benefits of the WORM to Victorian consumers. On average, the WORM would cost residential customers about $2.70 a year and enable the VTS to continue to provide a reliable source of gas to meet heating, hot water, and cooking needs. As such an important source of gas this will contribute to the health and well-being of Victorians.

For businesses, on average the WORM will cost $25 per year and will enable the VTS to continue to provide a reliable source and prevent disruptions to business activities.

The WORM will enable AEMO to operate the VTS in a more flexible way by providing increased linepack to support demand and increased capacity into Melbourne's west and norther regions.

One way to measure the benefit to consumers of the WORM is to assess at what point the cost of the WORM matches the value of customer reliability (a proxy for consumer benefit) resulting from the WORM. Our breakeven analysis showed that the WORM pays for itself (breaks even) on an annualised basis if it helps to avoid loss of supply of between 2.4 and 8.0TJ/day. (This compares to a VTS peak day in the order of 1,200 TJ/day an annual load in excess of 200,000 TJ.). That is, the WORM pays for itself if it prevents between 2.4 and 8.0TJ/day not being met.

This shows that benefits of the WORM to Victorian consumers and businesses far outweigh the financial cost of the WORM.

A further benefit of the WORM is the reduced reliance on Brooklyn Compressor Station as raised by AEMO. APA has revised the replacement capital expenditure program and as a result the WORM is save at least $12.4 million in Brooklyn Compressor Station project costs related the 2023-27 regulatory period. The saving to each of the replacement projects is shown below.

| WORM savings to Replacement projects | | | |
|---|---|---|---|
| | Initial | Revised | Variance |
| BC203 | 1.3 | 0.75 | 0.55 |
| BC204 | 10.3 | 0.75 | 9.55 |
| BC242 | 1.4 | 0 | 1.4 |
| BC260 | 0.6 | 0.3 | 0.3 |
| BC267 | 0.6 | 0 | 0.6 |
| **Total saving** | **14.2** | **1.8** | **12.4** |

### *Revised cost*

APA is pleased that the AER has accepted the WORM project and notes the benefits of the WORM reiterated by its consultants.

As indicated in the initial proposal, APA indicated that the $184.8 million revised WORM cost was based on the best available information at the time with the caveat that APA was preparing to go to market for pipeline and facilities construction.

Since preparing the revised WORM business case, APA has found during the procurement process that as tenders from construction and other services are being received the current squeeze in the labour market and global supply chain backlogs is affecting the bid prices from contractors to undertake the work.

The most recent APA Board approved expenditure to for the WORM has increased to $216.8 million. A comparison between the initial proposal capital expenditure and the revised costs are shown in the table below.

Figure 4 Comparison between the initial proposal WORM capital expenditure and the revised costs

| WORM | Unit | 2018-22 | 2023-27 | Total |
|---|---|---|---|---|
| **Initial proposal** | $2022, $m | 135.8 | 49.0 | 184.8 |
| **Revised proposal** | $2022, $m | 156.23 | 60.50 | 216.7 |
| **Difference** | **$2022, $m** | **20.45** | **11.47** | **31.92** |
| **Difference** | % | 15% | 23% | 17% |

The upward revision has been the result of increases in construction costs for trenching, mitigating rock risk for a 21 km area, welding costs, street works, facilities construction, construction supervision, Department of Transport requirements and diesel costs.

These cost increases are unfortunate but not within APA's control as there are all market-based costs. This information was presented to stakeholders at Roundtable 17. There were no comments made by attendees.

As discussed above the WORM will save $12.4 million in replacement projects.

APA acknowledges that the unpreventable delays in the WORM have contributed to concerns by market participants about supply conditions. APA is doing everything it can to make sure that the WORM is in place for winter 2023 to help contribute to the easing of supply pressures.

APA has reconsidered its position on the fixed principle in response to concerns raised by stakeholders. APA accepts the AER's decision to not adopt a fixed principle for the WORM project.

### 9.5. APA revised proposal

APA resubmits revised capital expenditure forecasts for the WORM as follows:

| Revised proposal | Unit | 2018-22 | 2023-27 | Total |
|---|---|---|---|---|
| WORM | $2022, $m | 156.2 | 60.5 | 216.7 |

While the project has been delayed and costs have increased, the WORM is still a prudent investment. The criticality of the WORM has increased with AEMO issuing a threat to system security in direct response to depletion of Iona storage inventory to a level threatening capacity to deliver gas from Iona and increasing the risk of curtailment of demand.

Uncertainty of future gas supplies means that the WORM will support greater resilience, security of supply and optionality for potential new gas powered generation. The expenditure is necessary in order to maintain and improve the capacity of the VTS to maintain integrity of services and safety for APA personnel and the public.

Photo is start of preparatory work on the WORM in August 2022

Gas is an important source of gas in Victoria and ensuring a reliable supply of gas will contribute to the health and well-being of Victorians. The expenditure is of a nature that a prudent service provider would incur.

# 10. Information and Operational Technology

## 10.1. Initial proposal

APA's enterprise-wide Information and Operational Technology (IOT) portfolio support the APA's financial, operational, communications and customer facing activities. IOT enables core business information, communication, and operational technology.

Information, communications, and operational technology is necessary to support commercial functions such as customer billing, lifecycle management of assets, and technical operations of assets. The shift to digitisation is playing a greater role in more aspects of the day-to-day operations in energy.

We submitted that investment in fit-for-purpose information, communication and operational technology is necessary to enable APA to continue to operate efficiently and deliver reliable, secure and safe services to customers. Fit-for-purpose systems are crucial for APA to remain compliant with regulatory obligations including regulatory information notices. Fit-for-purpose Information, communication and operational technology is crucial for APA to operate effectively in the complex energy market.

Effective information, communication and operational technology is vital to ensure that we can meet regulatory obligations and continue to provide safe and secure services and provide information for our customers and community.

APA initially proposed a capital expenditure forecast of $10.6 million of capex for the VTS share of APA Group's Information and Operational Technology.

- Portfolio project – consisting of $6.6m for Enterprise Program Management Office (EPMO), $3.8m for the Operational Technology projects and $0.3m for the Information Technology projects.
- APA proposed $10.6m of capex for the VTS share of APA Group's Information Technology Portfolio project. These are part of the corporate overhead allocation.

## 10.2. Stakeholder submissions

During stakeholder engagement for the initial proposal we presented information to the VTS stakeholder engagement group on the IOT program and explained that the key drivers for the expenditure requirements included the transformation of information technology systems to the cloud. This was having a significant impact on shifting information technology from capital to operating expenditure under accounting standards. This was impacting two of APA's largest systems - Grid Solutions (hydrocarbon accounting) and Economic and Resource Planning (ERP) programs. We explained that VTS was allocated a proportion of costs based on the regulatory Cost Allocation Method.

Submissions to APA's initial proposal sought an IT Strategic Plan and Roadmap from APA, setting out its future IT portfolio directions for the next five years, the relationships between the various components of the program, timings, costs and risks, as well as identifying whether the projects are shared across all of the APA businesses or stand-alone.

AEMO submitted that it would like to understand the whether the cost allocation method adequately accounts for VTS functions and/ or other functions. APA Grid system refresh appears to mostly satisfy requirements outside of the DTS which APA proposes to be funded by the DWGM. AEMO supports proposed SCADA ($1.2m).

### 10.3. AER Draft Decision

In its Draft Decision, AER commented that while APA described at a high level why it considered the capex was justified, it did not:

- describe or provide evidence of what was obsolete or needing a routine upgrade
- describe what was required to be cloud based, or
- explain which technologies would no longer be supported.

AER was of the view that there was a lack of substantive information on the need for the proposed investment and the benefits of the proposed investment, APA provided no basis for the cost estimates.

AER said it was therefore unable to conclude that the proposed capex is prudent and efficient. AER did not approve the proposed capex and make an alternative forecast of $0 for the IT portfolio project.

### 10.4. APA consideration

APA acknowledges that the material submitted for the IT transformation program was based on material that was still in the early stages of development. Business cases had not been finalised for Grid Solutions, ERP and field mobility. APA's internal management cycles do not align with the VTS regulatory cycle. Since submitting the initial proposal the IT transformation program has progressed and we are able to provide more information to support the revised proposal.

APA's Information and Operational Technology portfolio covers the following core functions:

- EPMO (Enterprise Program Management Office). Responsible for ensuring projects deliver optimum business value as early as possible and ensuring a continuous improvement focus
- Operational Technology. Ensures APA has appropriate, resilient, and high performing real time systems and engineering applications, data, and solutions
- Information & Technology. Partners with business units to deliver end to end I&T solutions.

APA's IT program provides enterprise-wide delivery of business transformation, continuous improvement initiatives and technology solutions and maintains and protects APA's operations. The enterprise-wide approach to information, communication and operational technology provides economies of scale and scope in the delivery of services.

The enterprise-wide approach (rather than a stand-alone approach) enables customers to benefit from lower costs. This benefit applies to both customers of APA's regulated and unregulated assets. The economies of scope allows APA to apply the enterprise-wide information and technology systems to support customers and asset management across APA.

APA has IT systems that are legacy systems and are out of support and at the end of technical life. The need for replacement of these systems is driven by:

- Obsolete including no or limited warranty/ support and service from vendors
- No longer fit-for-purpose
- Poor condition
- Hard to find components and spare parts and outdated software.

Replacement of out-of-date systems are necessary to bring some of our legacy systems to good practice standard.

### 10.5. APA EPMO Governance framework

APA's has recently refreshed its technology strategy to ensure that it remains consistent with APA's corporate strategy. This refresh has updated and introduced six guiding principles to shape and steer information and operational technology.

**Guiding principles**

The principles guide behaviours in selecting, creating, and implementing what we do to support our business outcomes.

The APA IT program has six guiding principles

- Enabling Business Transformation - We are strategically aligned, generating shareholder value rapidly. Business agility is paramount.
- Customer & Experience Centric - We work in partnership and collaborate. We look to smarter ways of working and rapid application delivery to support business growth.
- Safe & Secure - Cyber Security is by design, aligned to board risk appetite and we are regulatory compliant.
- Fit For Purpose Solutions - We work together to deliver operational resilient and fit for purpose solutions. We adopt rather than adapt.
- Optimise For Efficiency - We optimise the business and focus on operational efficiencies. We always consider the long-term benefits and test, learn and iterate with agility.
- Data Leveraged as a Critical Asset - We believe in actionable analytics, leveraging trusted data capabilities to deliver insights and help our business see the future.

The six guiding principles are represented in the diagram below.


This strategy operates in conjunction with the EMPO project and governance framework to APA's IT program is undertaken consistent with APA's EPMO Project & Program Governance.

This governance framework is described in APA's EPMO Project & Program Governance Overview.

Further information is provided in VTS - APA EPMO Project & Program Governance Overview – August 2022 – Public.

### Information Technology

APA's enterprise-wide Information Technology (IT) program enables core business information, and communications technology to respond in an effective way to the energy sector shift to decarbonisation, decentralisation and digitisation and to protect APA against cyber security threats. The SoCI program has been discussed separately in section 0.

APA's IT program provides enterprise-wide delivery of business transformation, continuous improvement initiatives and technology solutions and maintains and protects APA's operations. The enterprise-wide approach to information technology provides economies of scale and scope in the delivery of services.

The program focuses on 5 key projects.

- Field Mobility
- GRID Solutions Application
- Econonic Resource Planning Application
- Technology Enablement
- Maximo Application Upgrade

There is also some very minor expenditure on business as usual IT work. This is around standard upgrades and ongoing operation of existing applications.

| Program | Investment driver | Summary of benefits |
|---|---|---|
| **Field Mobility** | Automate paper based process reduce to risk of error<br><br>Comply with AS2885.3 | The project will implement a Mobile Works Manager technology solution integrated with Maximo for APA Operations. It will enable the maintainence of the VTS in real time with up to date information on equipment available to field staff. |
| **GRID Solutions** | Obsolete assets | Replace obsolete GRID system to ensure accuracy in billing of customersand a secure billing environment. |
| **Economic Resource Planning** | Obsolete assets | Replace obsolete ERP to ensure the ongoing operation of the Finance, Procurement and PSC functions. |
| **Technology Enablement** | Obsolete assets | Improved regulatory data quality, reduced risk – Improving underlying systems to be more consistent and able to accurately report data without losses or data outages |
| **Maximo Upgrade** | Obsolete assets<br><br>Comply with AS2885.3 | Reduced Risk (Safety and operational) – ensuring the asset management application is stable, reliable and secure |

These projects are necessary due to:

- Replacement of Obsolete Systems
- Maintaining the ongoing reliable and secure operation of existing applications
- Ensuring different applications store and share informations in a reliable, consistent and secure way
- Modernise historic paper based systems to automate and to ensure accuracy and timeliness of information available to field staff.

### Operational Technology

Operational Technology (OT) is the connection of site equipment to the remote facility. This technology is required to operate any physical plant in the field. Some key responsibilities OT has at APA include:

- Automatically controlling equipment on site
- Enabling digital lock-outs on site to ensure field staff can safely perform maintenance
- Field staff to take control of the site if required
- Remote staff to operate the site.

OT is also used to meter the connections to the customer and provide the data to the commercial systems to ensure customers are billed correctly.

Additional to these services, operational technology is used to collect data and present to operators and engineers to make other decisions such as:

- When equipment requires servicing
- When the plant is not operating as expected
- Manage APA's fleet of assets.

OT is an essential support to the business physical operation of sites to maintain safety and reliability of services, as well as supporting commercial operations through the collection of customers metering data.

**Key drivers for OT**

The 2023-27 OT program and projects are ongoing upgrades and replacement of assets and services. The operational technology program is driven by:

- **Safety, reliability, integrity.** Compliance with the AS2885 the Standard for Gas and Liquid Petroleum Pipelines
- **Obsolescence**. End of life equipment is equipment that is no longer supported by the vendor, and equipment that no-longer has available replacements. In the event of equipment failure the likelihood is that the sites will become inoperable if not replaced
- **Improving asset lifecycle.** Improving data to enable better management of assets to have a longer lifespan. This information is used to support Asset Management to improve the safety and integrity of services. The data helps Asset Management comply with legislative requirements and relevant pipeline standards (AS2885)
- **Reliability.** Reducing impact to customers of service interruptions by improving ability to respond to faults including provision of data to engineers to interrogate faulty assets.

### Proposed programs and projects

The 12 OT proposed programs, their drivers and primary benefits are summarised in the following table.

| Program | Investment driver | Summary of benefits |
|---|---|---|
| **Lifecycle Management ($1.2m)** | Obsolete communication service<br><br>Comply with AS2885.3 | Continued operations – end of life communications services require replacement to ensure operations of site can continue. Ensure continued performance, reliability and support. |
| **Lifecycle – SCADA and HMI ($1.2m)** | Obsolete assets<br><br>Comply with AS2885.3 | Reduced Risk (Safety and operational) – ensuring site can be safely operated on site and remotely |
| **Unlock grid constraints ($0.3m)** | Safety & reliability | Reduced Risk (Safety and operational) – uplifting code in site control to ensure site is operating safely. |
| **OT Services Uplift ($0.4m)** | Reliability & data quality | Improved regulatory data quality, reduced risk – Improving underlying systems to be more consistent and able to accurately report data without losses or data outages |
| **Alarm Excellence ($0.2m)** | Safety & reliability | Reduced Risk (Safety and operational) – ensuring site control systems takes correct action to protect site safety when alarms activate, ensuring operators can make correct operational decisions |
| **Facilities Engineering Data Uplift ($0.2m)** | Reliability & data quality | Reduced Risk (Operational) – using additional equipment data to predict or rapidly respond to faults to minimise duration and severity of outages |
| **OT Lifecycle ($0.2m)** | Obsolete assets & services | Reduced Risk (operational) – identifying and acting on end of life equipment and systems to ensure sites stay operational |
| **Integrity data ($0.09m)** | Safety, reliability & integrity | Reduced Risk / Increased pipeline lifetime – connecting, reporting integrity data to provide engineers information to manage pipeline integrity. |
| **Versiondog Expansion and Uplift ($0.05m)** | Reliability | Reduced risk (operational) – secure copies of code enables rapid response to issues and restarting site operations in case of equipment failure |
| **VTS AEMO Serial to IP connections uplift ($0.2m)** | Obsolete assets | Capability uplift – replacement of legacy connections to ensure operations can be maintained securely |
| **OT Cyber ($0.3m)** | Safety, reliability, integrity | Reduced Risk (security) – Review, uplift and Installation of OT Cyber services to protect sites from cyber threats. |
| **Remote site connectivity uplift ($0.1m)** | Reliability | Capability uplift – improvement of bandwidth to sites to ensure other technologies on site can operate such as ability to support site remotely. |

## 10.6. APA revised proposal

The revised capital expenditure proposal for Operational Technology is $4.5 million as shown in the following table.

| Asset category | Unit | 2023 | 2024 | 2025 | 2026 | 2027 | Total |
|---|---|---|---|---|---|---|---|
| Operational Technology | $2022 $m | 1.4 | 1.4 | 0.7 | 0.5 | 0.5 | 4.5 |

These are systems integral to the proper functioning of an energy business. Upgrading and maintaining information technology is critical to maintaining the safety, reliability and security of APA VTS services. The program is necessary to maintain and improve the safety of the public and personnel. The proposed expenditure is of a nature that a prudent organisation would incur.

Further information is provided in the following documents:

- VTS - VTS Information Technology Program - Revised proposal - August 2022 - Public
- VTS - VTS Operational Technology Program - Revised proposal - August 2022 - Public
- VTS - APA EPMO Project & Program Governance Overview – August 2022 – Public.

# 11. Security of Critical Infrastructure program

## 11.1. Initial proposal

The Australian way of life is highly dependent on Australian critical infrastructure. Threats and hazards have the potential to disrupt critical infrastructure, and due to the energy sector's high interdependency, a disruption could potentially result in significant impacts to the economy, our security and have a compounding effect across industries and sectors.

Globally, the risk environment for critical infrastructure is increasing as attacks become more frequent and increase in complexity. Specifically, for the energy sector, existing threat actors continue with increasingly sophisticated attacks, including those which originate from nation state or state sponsored actors.

The Australian government response to increasing threats and hazards is through Security of Critical Infrastructure Act (SoCI Act). At the time of lodging the initial proposal VTS 2023-27 access arrangement proposal with the AER, APA was required to comply with the Security of Critical Infrastructure Act 2018. At the same time, the Department of Home Affairs had recommended amendments to the SoCI (2018) Act. APA's initial proposal submitted programs in order to comply with these amendments.

The original Bill to amend the SoCI 2018 Act was split into two Bills.

- The Security of Critical Infrastructure Act 2018 (the SoCI Act)1 has been amended by the Security Legislation Amendment (Critical Infrastructure) Act 2021(came into effect 3 December 2021). The 2021 amendment introduced positive security obligations for relevant assets, enhanced cyber security obligations and government assistance powers.
- The Security Legislation Amendment (Critical Infrastructure Protection) Act 2022 (SoCI 2022) (came into effect on 2 April 2022). created a new obligation for responsible entities, such as APA, to create and maintain a critical infrastructure risk management program and sets out a new framework for enhanced cyber security obligations required for operators of systems of national significance.

The SOCI Act makes provision for the Minister to decide to make enforceable rules in relation to the critical infrastructure risk management program. The draft rules cover the specified hazards of cyber and information security hazards, supply chain hazards, physical and natural hazards, and personnel hazards. The provisions of the Act do not come into force until the obligations are "switched on by a rule or by declaration" and the Minister must formally consult prior to making a rule or declaration. The rules have not yet been switched on.

On 1 December 2021, APA submitted expenditure forecasts for VTS share of APA's SoCI Program. The four components of the program included cyber security, physical security and natural hazards, personnel security, and supply chain security.

APA's initial proposal provided a description of the SoCI legislative framework (that was in place at the time) and the new obligations placed on APA and the Victorian Transmission System.

APA submitted that the new SoCI legislation was imposing incremental capital expenditure (and operating expenditure) costs on APA. To be clear, the SoCI program and forecasts is separate from the Information and Operational Technology portfolio forecasts (as discussed in section 10)

The proposed capital forecasts for the APA VTS SoCI program have been categorised into SoCI cyber, SoCI physical (VTS site specific costs) and SoCI program costs (the remaining domains) is presented in the table below. SoCI information and program justification has been submitted to the AER on a confidential basis.

### 11.2. Stakeholder submissions

In response to APA's initial submission, the only commentary was made by the Consumer Challenge Panel (CCP28). The CCP28 was seeking assurance from the AER on:

- Determine whether the work proposed is responding to a genuine legislative obligation
- Determine whether EY have appropriately identified gaps in APA's security posture
- Confirm that the most cost-effective options have been proposed for closing any identified security gaps
- Confirm that the proposed cost allocations between APA's businesses are fair and reasonable.

### 11.3. AER Draft Decision

The AER explained that in making the assessment of the prudency and efficiency of APA's proposed expenditure it considered whether:[10]

- The regulatory obligation exists
- APA has undertaken a risk assessment
- APA has proposed a risk mitigation strategy which is consistent with the regulatory obligations.

As noted by the AER, the cyber security component has been legislated under Security Legislation Amendment (Critical Infrastructure Protection) Act 2021 and Security Legislation Amendment (Critical Infrastructure Protection) Act 2022.

The AER accepted APA's proposed capital and operating expenditure on cyber security contained in the original business case submitted with APA's Access Arrangement Proposal for the VTS in December 2021.

The AER did not consider that APA's physical and program components were prudent and did not accept APA's proposal. The AER considered that the SoCI requirements apply only to 'material risks' which is described in terms of risks that have a substantial impact on availability, reliability and integrity of the critical infrastructure asset. AER explained that it assessed that the risk level being contemplated is a 'very material' level of risk (and according to notes to the SoCI material) that such that a hazard would cause the stoppage or major slowdown of a critical infrastructure asset's functioning for an unmanageable period.

AER further explained that SoCI will only be relevant to the extent that a material risk exists that is not adequately managed by the current risk management controls. And that APA's initial submission does not demonstrate that this is the case.

The revised business case addresses requirements sought by the AER by:

[10] AER, Draft Decision APA VTS Access Arrangement 2023 to 2027, Attachment 5 Capital Expenditure, p.42

- Including a risk analysis supported by evidence to how each of the risks proposed to be managed is a material risk as contemplated by the SoCI Act
- Demonstrating how the proposed risk reduction in the current level of risk meets the requirement of “so far as it is reasonably practicable”
- Demonstrating that the proposed risk reduction is efficient in meeting the “so far as it is reasonably practicable” requirement.

### 11.4. APA consideration

The Australian government has introduced new legislative measures to protect critical infrastructure, mandating a holistic and 'all hazards' approach in recognition that this is required to appropriately manage cyber risk.

These legislative amendments created new compliance obligations and were the catalyst for APA to reassess the risks it faces in order to comply with the legislation. The amendments assign penalty provisions to certain obligations and intend to appoint an appropriate regulator for the energy sector to monitor their implementation. APA has evaluated the requirements of the SoCI Act and identified required changes in its security and resilience capabilities that will be necessary for compliance with the legislative amendments.

One of the new compliance obligations is to:

- identify hazards for which there is a ‘material risk’ that the hazard impacts business operations
- minimise the material risks of those hazards occurring (so far as it is reasonably practicable to do so), and
- mitigate the impacts of hazards on the operation of Critical Infrastructure asset(s) (so far as it is reasonably practicable to do so).

APA has undertaken a risk assessment that shows APA’s VTS faces material risks, with the relevant impact, as envisaged under the SoCI Act.

The assessment found that, in many instances, current risk management controls either do not adequately manage the risks faced by APA or are insufficient to meet the requirements of the SoCI Act.

The SoCI legislation also imposes compliance obligations to meet requirements that are mandated (and not based on material risk). For example, the requirement within the Personnel Security domain to utilise AusCheck services (or similar) for background checks on personnel.

APA’s revised proposal includes a capex and opex program that seeks to reduce these risks ‘so far as reasonably practicable’.

### 11.5. APA revised proposal

APA has prepared a revised business case that addresses the matters raised by the AER.

The revised business case provides an overview of the options considered to address the need for an investment program to meet all compliance obligations under the SoCI Act and, consistent with APA's internal practices, we have developed a detailed business case in support of the recommended option.

The revised business case will enable APA to meet its regulatory obligations and compliance with the SoCI Act by the expected defined date. This program increases the capability within APA to mitigate and minimise the potential of risk events occurring.

The risks APA faces on the VTS (as with all its assets) are increasing and have the potential for significant consequence across society with potential to result in billions of dollars in impacts to customers, consumers and the economy. This program is designed to address the necessary capabilities within APA and appropriately increase its security and resilience.

APA's revised business case has been submitted to the AER on a confidential basis.

Further information found in APA - SoCI VTS Business Case - Revised - August 2022 - Confidential.

# 12. Hydrogen safety and integrity assessment

## 12.1. Initial proposal

Hydrogen is emerging as a potential future energy source to help decarbonise the economy and reach net zero targets. In the initial proposal, APA proposed to undertake a technical study to understand the impacts of hydrogen embrittlement on pipelines in the VTS. The proposed study would survey 39 of the 51 pipelines that make up the VTS.

The driver of the proposed study is to ensure the safety and integrity of the pipeline given the likelihood that hydrogen may be injected into the VTS in the future. We envisage that this could either by potential hydrogen proponents seeking to access that VTS or by accidental flow into the VTS from distribution networks. APA is concerned that the impact on the integrity of the pipelines and facilities from hydrogen is unknown. When hydrogen is absorbed into the steel of pipelines the ductility, toughness and fatigue life of the steel is reduced. This posed a potential risk to the safety and integrity of pipes.

The hydrogen safety and integrity study would provide information to allow APA to quantify the integrity impacts and suitability for hydrogen blending and remedial works or changes in operation required to ensure continued safe operation of the VTS. The proposed capital expenditure did not include any remedial costs to upgrade the VTS.

The proposed study was initial proposed to be undertaken over the 2023-27 access arrangement period. The forecast capital expenditure for the proposed study was $37.9 million of the 2023-27.

## 12.2. Stakeholder submissions

APA notes that Energy Safe Victoria (ESV) responded to questions from the AER which has been published by the AER. The ESV stated that it needs information to assess the safety of transporting hydrogen into the VTS pipelines and that the “Risk of damage is unknown as the impact of hydrogen on the VTS has not been determined at this stage Testing must be performed to prove the integrity of the VTS before H2 can enter the system”.[11]

The proposed hydrogen study has been widely discussed during stakeholder engagement and APA roundtable sessions and a hydrogen information session was well attended by interested parties.

APA notes that AEMO expressed support for the hydrogen study there was also acknowledgement by AGL that hydrogen safety and integrity assessment is necessary.

Consumer groups raised questions about whether there was a regulatory obligation on APA to conduct hydrogen study. It was noted by one group that Energy National Cabinet Reform Committe’s Consultation Paper states that they support the blend’s introduction to the distribution network, and they do not support its introduction into transmission pipelines, and that a 10% blend has been assumed to be compatible with existing distributions infrastructure. Further it was suggested that accommodating a hydrogen blend in the transmission network is a low priority for commercialising hydrogen, and there is no strong consumer-centric case to make this investment now.

[11] Energy Safety Victoria, response to AER information request, question 3.d

Given the cost of the study there was a question about whether the whether the study could be deferred to subsequent regulatory periods as further information on government policies and viability of using hydrogen becomes available. Or even whether the study could be performed over two or more regulatory periods. Overall there was concern was about the lack of clarity as to the timing of hydrogen projects, and probable locations for injection into the VTS network. During stakeholder engagement at Roundtable 17 there was a discussion about which areas of the VTS APA would seek to prioritise different sections of the VTS.

Who should fund the study was the most contentious matter raised about the proposed study. The Consumer Challenge Panel considered that the Victorian Government should fund the study. Others suggested that hydrogen proponents should fund the study. One submission stated that is APA is getting a lot of interest from potential hydrogen producers, then they can pay for the testing. Noting that a similar study recently done by AGN for the Dampier to Bunbury pipeline paid for by the WA Government.

### 12.3. AER Draft Decision

AER rejected APA's capital expenditure forecast $37.9 million for the proposed Hydrogen safety and integrity study. The AER considered that APA had not provided sufficient evidence of an assessment of risk, how the proposed study would mitigate it, or that its proposed costs of completing this study are efficient.

### 12.4. APA consideration

APA acknowledges concerns by consumer groups about the obligations, timing and the funding of the hydrogen study.

APA has obligations under Victorian government legislation to ensure the safety and integrity of the pipelines. The need for the study and safety case before hydrogen could be injected into the VTS was clearly articulated by ESV in its response to AER information request.

APA acknowledged the uncertainty but considers that, to keep options open for hydrogen as a future source of energy, it would be prudent to start testing for safety and integrity during 2023-27. APA has provided information to the AER showing the number and location of potential hydrogen producers who have approached APA about injecting into the VTS.

In response to stakeholder submissions and AER draft decision we have reassess the study options in this revised business case. We are proposing to undertake the study over two regulatory periods (commencing in 2023).

To further help minimise the impact on consumer gas bills we are proposing to depreciate the study over the life of pipelines - either 30 years or 55 years depending on whether the AER accepts APA's new analysis and revised proposal for accelerating depreciation. APA's analysis of the bill impact assuming the study is undertaken over 10 years and depreciated over a 30-year life of pipeline, that the impact is 20 cents per year for residential customers. Further, by spreading over 10 years there is the opportunity to consider outcomes of the study at the next 2028-32 access arrangement revision.

## 12.5. APA revised proposal

APA's revised proposal is to undertake the hydrogen safety and integrity study over a 10-year period. The proposed capital expenditure over 2023-27 period is $18.9 million.

We are proposing the depreciated the assets over the life of the pipe. The capital expenditure forecast for the revised study over the 2023-27 regulatory period is presented in the following table.

| Asset category | Unit | 2023 | 2024 | 2025 | 2026 | 2027 | Total |
|---|---|---|---|---|---|---|---|
| Hydrogen safety study | $2022, $m | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 18.9 |

Further information can be found in VTS - 2023-27 AA - BC200 Hydrogen study -Revised submission - & letters of support - August 2022 - Public.

# 13. Capitalised overheads

## 13.1. AER Draft Decision

Section 5.4.2.4 of the AER's Draft Decision included a discussion of capitalised overheads in the context of the capex program. That section indicated that we had not been sufficiently clear on our allocation of overheads to give the AER the confidence it requires to approve the amount of overheads allocated to the VTS as lodged.

There are a number of key points to understand in APA's allocation of corporate costs:

- The APA Group consists of a national portfolio of businesses, including gas transmission and storage, electricity transmission and renewable energy (wind and solar). In operating this portfolio of businesses, APA undertakes many activities as centralised functions, and achieves significant synergies and economies of scope and scale by doing so. When APA Group allocates corporate costs to its regulated assets, only the actual incurred amounts are allocated. The VTS therefore shares in the synergies generated through the centralised functions, rather than bearing the stand-alone costs that would be incurred by a business of its size.

- Only a small proportion of APA's total revenue is made up from Reference Tariff charges on full regulation assets. The majority of APA's revenues (over 90%) are derived through bilateral contracts, even on full regulation assets like the RBP and Amadeus. This means that, if APA incurs an increase in corporate overheads, there is no mechanism to recover that increase from customers. Corporate costs directly affect consolidated net income, and are reported separately in the consolidated financial statements. APA therefore maintains a sharp commercial focus on the level of its corporate costs, which should give confidence to the regulator in terms of prudence and efficiency.

- As APA only reports corporate costs at the consolidated level for financial reporting purposes, it allocates corporate costs among businesses in the portfolio only for regulatory reporting purposes. This is done manually rather than in its corporate accounting systems. This process has been applied consistently for many years and across the entire portfolio of assets. The process is described in some detail in the Basis of Preparation documents for our various Reset RINs, and also in the BoPs for its reporting under Part 7 and Part 23. The approaches applied have been reviewed and approved by the AER in other full regulation access arrangement review processes, notably in the April 2022 final decision relating to the Roma Brisbane Pipeline.

APA's corporate cost allocation methodology follows a number of clear steps:

- Individual corporate departments (HR, Finance, Procurement, etc) determine the amount of their department costs that are attributable to capex projects as opposed to operating expenditure. An example might be the recruitment costs associated with hiring a pipeline engineer to contribute to capital projects.

- These costs are then allocated among the various capex projects according to the direct costs of each particular project. The amount of overhead costs to be capitalised will depend on the level of capital expenditure activity occurring through the entire APA portfolio. A "busy

capital" year will see a higher proportion of departmental costs capitalised (as more of their activity will be capital related), but allocated over a larger base of capital expenditure.

The variability of both the amount of departmental costs capitalised, and the base over which those costs are allocated, means that trend analysis is not a suitable tool to either ascertain the reasonableness of incurred costs, nor the forecast amount of capitalised overheads.

- For forecasting purposes, APA has calculated the average rate of portfolio-wide corporate overhead capitalisation over the last 6 years[12] and applied that rate as a forecast of overhead loading applicable to forecast VTS projects. This forecast rate is applied equally to replacement, expansion and non-network capex.

### 13.2. APA consideration

Following the AER's draft decision commentary, APA analysed the relevant cost information, and reports the following (*cf* AER draft decision Table 5-8):

| $million, nominal | 2018 (A) | 2019 (A) | 2020 (A) | 2021 (A) | 2022 (E) | 2023 (F) | 2024 (F) | 2025 (F) | 2026 (F) | 2027 (F) |
|---|---|---|---|---|---|---|---|---|---|---|
| Capitalised overheads | 1.9 | 3.4 | 1.7 | 5.0 | Note 1 | 9.4 | 3.1 | 2.0 | 1.8 | 1.6 |
| Corporate opex | 6.6 | 5.5 | 5.8 | 6.9 | 6.1 | 7.2 | 7.4 | 7.3 | 7.3 | 7.4 |
| Corporate assets[13] | 1.9 | 2.3 | 2.4 | 6.2 | 4.7 | 4.6 | 4.3 | 1.8 | 1.0 | 2.5 |
| | 10.4 | 11.3 | 9.8 | 18.1 | | 21.1 | 14.7 | 11.0 | 10.2 | 11.4 |
| | | | | | | | | | | |
| Direct capex | 24.3 | 43.3 | 32.2 | 60.1 | 172.2 | 145.0 | 48.6 | 30.3 | 28.6 | 27.1 |
| Capitalised overheads | 1.9 | 3.4 | 1.7 | 5.0 | Note 1 | 9.4 | 3.1 | 2.0 | 1.8 | 1.6 |
| Total capex | 22.37 | 39.89 | 30.49 | 55.10 | | 135.63 | 45.50 | 28.38 | 26.82 | 25.56 |
| % of overhead capitalised | 8.4% | 8.6% | 5.6% | 9.0% | Note1 | 6.9% | 6.8% | 6.9% | 6.6% | 6.1% |

Note 1 - The forecast for CY22 is made up of 6 months of actuals for the HYJun22 and 6 months of forecast for the HYDec22. Given the timing of the reporting of this information, we were not in a position to calculate the actual capitalised overheads for HYJun22.

The forecast of capitalised overhead based on this methodology has been included in the revised proposal.

[12] As APA maintains its accounts on a June fiscal year end basis, this analysis was undertaken using a fiscal year, rather than calendar year basis.
[13] As incurred and exclusive of capital overheads

# 14. Depreciation

## 14.1. Initial proposal

As decarbonisation increases pace, customers with energy choice are likely to shift to electrical appliances. And so, leave behind a cohort of customers who do not have the ability to exercise choice in their energy solutions. For example, hard-to-abate manufacturing businesses and low-income families living in rental accommodation have limited energy choice. We are concerned that the decisions we make today may have a significant adverse impact on customers in vulnerable circumstances in the future.

The landmark work by renowned regulatory economists Crew and Kleindorfer[14] has proposed a way forward in circumstances such as this. Known as the WOOPS model, Crew and Kleindorfer note that there is a Window of Opportunity (WOO) to reduce the value of the regulatory capital base and reduce the future revenue requirement, and future tariffs, through small increases in tariffs today, while utilisation remains high. Failure to act early may result in the Window of Opportunity being Passed (WOOPS).

Our proposed approach, in line with the WOOPS model, is to start early to reduce the value of the regulatory capital base while gas usage is still high. This will facilitate smoother tariff impacts by reducing tariffs in later years as the system usage starts to decline.

Importantly for this access arrangement proposal, our goal is to allow the regulatory capital base to decline in line with reductions in volumes, and to keep tariffs as stable as possible as we transition to a decarbonised energy industry. This approach helps facilitate a more orderly transition by smoothing the price path and avoiding price shocks in the future.

Considering the decarbonisation policies that are in place, we consider that accelerated depreciation is a sensible and less risky approach that will benefit energy consumers, rather than a 'do nothing' approach.

APA proposes to "*start small, start early and monitor*". That is,

- Start accelerating depreciation of assets early with small tariff increases while gas use is still high, and
- Monitor progress at every 5-yearly access arrangement review to ascertain whether reductions in the VTS revenue requirement are aligning with reductions in demand, and to adjust the relevant regulatory settings accordingly.

We consider adopting the WOOPS principle allows for a more equitable intergenerational approach. Current users contribute to accelerating depreciation of assets rather than leaving later generations to bear the burden with higher prices. If the VTS can be repurposed for hydrogen, then asset lives can be reviewed during future access arrangement revisions.

The APA access arrangement proposal discussed these principles, and proposed a simple change to the depreciation rate, following the reasoning that we should "*start small, start early, and monitor*". The APA VTS proposal focused on achieving this principle.

[14] See Crew, M and Kleindorfer, P, 1992, "Economic Depreciation and the Regulated Firm under Competition and Technological Change", Journal of Regulatory Economics, 4(1), 1992, pp. 51-61.

## 14.2. Stakeholder engagement

In a recent paper, the AER stated that the regulatory regime supports the recovery of sunk costs as regulatory depreciation and that it used an approach where regulatory depreciation is recovered evenly over an asset's useful life. The AER offered that economic theory suggests sunk costs be recovered in the 'least distortionary way' meaning that customers do not bring forward or delay consumption/ replacement simply due to the depreciation profile.[15]

AER's comments relate more to businesses that are in a long term steady state, like electricity, but less so for gas. Our view is that we are at moment in time when the future of gas in Victoria is uncertain, and it is not in steady state.

The key theme throughout this access arrangement consultation process is the Victorian Government's Net Zero 2050 initiatives, particularly as outlined in its Gas Substitution Roadmap, and their impact on future gas consumption levels.

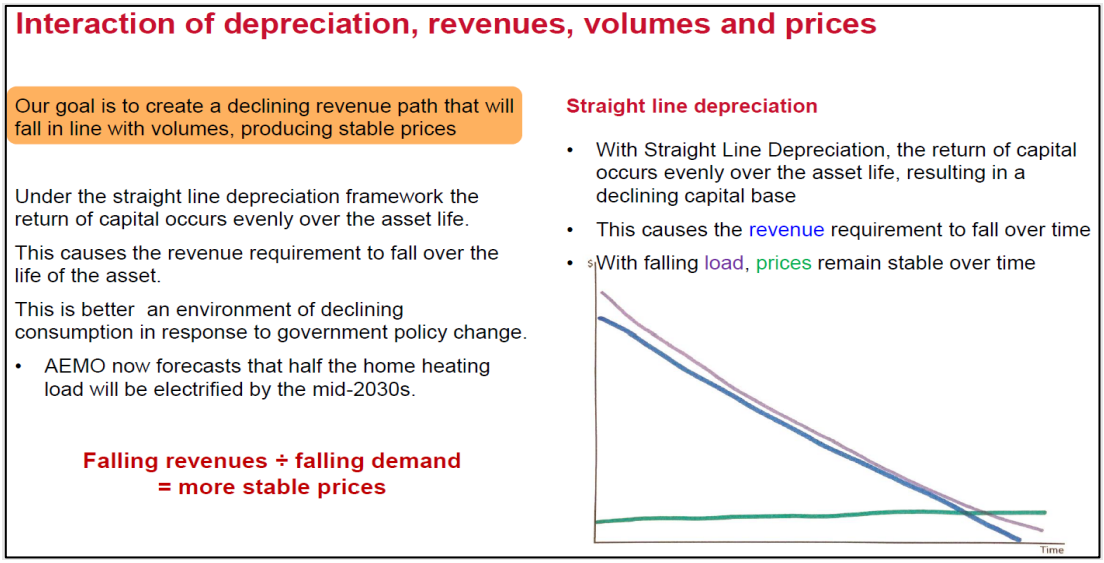
We presented the view that, absent action on all our parts, the AEMO-forecast decline in volumes will drive up tariffs. This is simply a function of the regulatory framework, in which tariffs are a function of fixed costs divided by declining volumes.

In the context of decarbonisation policy incentives, we posit that wealthier consumers, who can make energy investment decisions, will make decisions to electrify earlier in the longer term forecast period. Importantly this will leave behind those customers that do not have the financial flexibility to make these choices – the more vulnerable customers, particularly lower income customers in rental accommodation.

Our proposal to address this concern, as espoused in the AER's *Regulating gas pipelines under uncertainty - Information paper*,[16] was to accelerate depreciation to reduce the value of the regulatory capital base, with an aim to reduce the amount of the return on and of capital that needed to be recovered from a smaller, more vulnerable customer cohort in the future.

[15] AER (2021) Draft Better Resets Handbook Towards Consumer Centric Network Proposals, September 2021.
[16] https://www.aer.gov.au/networks-pipelines/performance-reporting/regulating-gas-pipelines-under-uncertainty-information-paper.

We outlined this approach in stakeholder group Roundtable 9, as follows:




During stakeholder engagement roundtables, there was a shift in sentiment from some stakeholders from scepticism to support for the concept of accelerated depreciation. But not all stakeholders were supportive.

Some stakeholders considered that APA needed to develop a clear and accessible business narrative about the future of the VTS and that this narrative should be tested with end-use consumers to gauge their support. Others considered that the concept of accelerated depreciation needed to be considered from a broader energy and social policy perspective.

### 14.3. AER draft decision

The AER's June 2022 draft decision did not accept our proposal to accelerate depreciation under the WOOPS principle – not because the principle is not sound, but because APA's December 2021 proposal did not provide the detailed financial analysis to support the changes as required under the AER's November 2021 Information Paper.

### 14.4. APA revised proposal

APA accepts the AER draft decision in this regard and has engaged expert consulting firm ACIL Allen to assist in undertaking the modelling required by the AER. This section discusses that work and its outcomes.

**ACIL Allen's brief**

Our concern, as expressed through the consumer engagement process, was to take action early to avoid price increases to vulnerable customers in the future.

ACIL Allen was therefore tasked with undertaking financial modelling to ascertain what action we should undertake today, to achieve levelised capital-related (that is, the combination of the return on capital and return of capital) costs into the future.

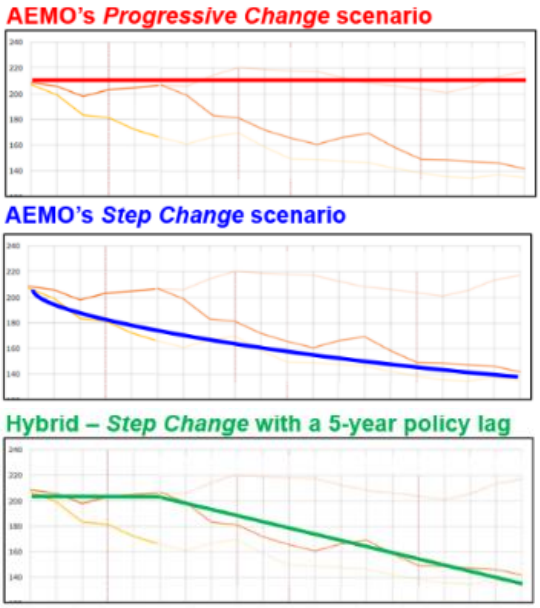
Accelerating depreciation has two related impacts: while it does increase the amount of depreciation (return *of* capital) in the cost stack today, it serves to "grind down" the capital base in the future, resulting in lower return *on* capital requirements. ACIL Allen's analysis examined the combined effect of these two components.

**Scenarios examined**

Consistent with the scenarios discussed in more detail in the attachment on load and demand forecasting, ACIL Allen examined three scenarios: AEMO's *Progressive Change* and *Step Change* scenarios[17], and a hybrid third scenario, the *Delayed Step Change* scenario.

The *Delayed Step Change* scenario is based on an expectation of a "policy lag" between the June 2022 publication of the Victorian Gas Substitution Roadmap, the Victoria November 2022 state election, and the time lag required for the related policy development, legislative change, incentive development, and customer response to incentives.

These scenarios are discussed in this revised proposal: AEMO's *Progressive Change* and *Step Change* scenarios, and the *Delayed Step Change* scenario.



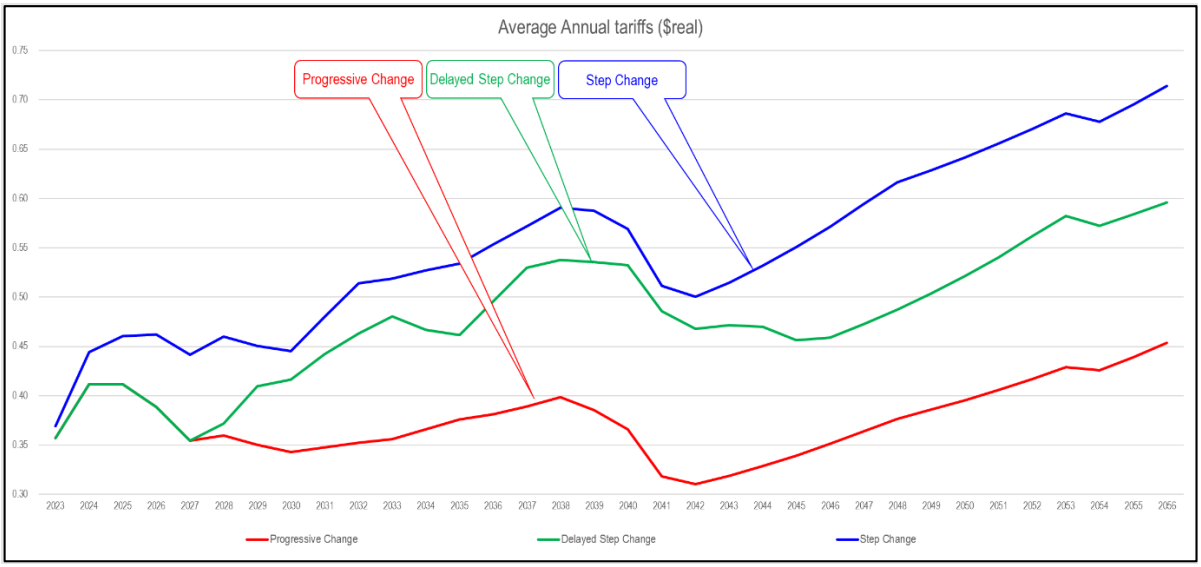

**ACIL Allen analysis**

We then asked ACIL Allen to use the AER's draft decision PTRM to model the expected tariff outcomes based on the AEMO scenarios – that is, to use the PTRM to forecast capital-related costs (return on and of capital) and divide by the AEMO-forecast load under each of the scenarios. In order to accomplish this, ACIL Allen also undertook some further longer term extrapolation of load under these scenarios. This is discussed in more detail in the ACIL Allen report.

**"Do nothing" Tariff outcomes**

ACIL Allen's analysis clearly shows that, in the "do nothing" cases, the capital component of tariffs rises over time as the load declines under the *Step Change* and *Delayed Step Change* scenarios. However, the tariff increase is relatively muted under the *Progressive Change* scenario. This is to be expected, as the *Progressive Change* scenario features volumes remaining relatively stable into the longer term (note that the *Progressive Change* and *Delayed Step Change* scenario lines overlap in the first 5 years of the analysis).

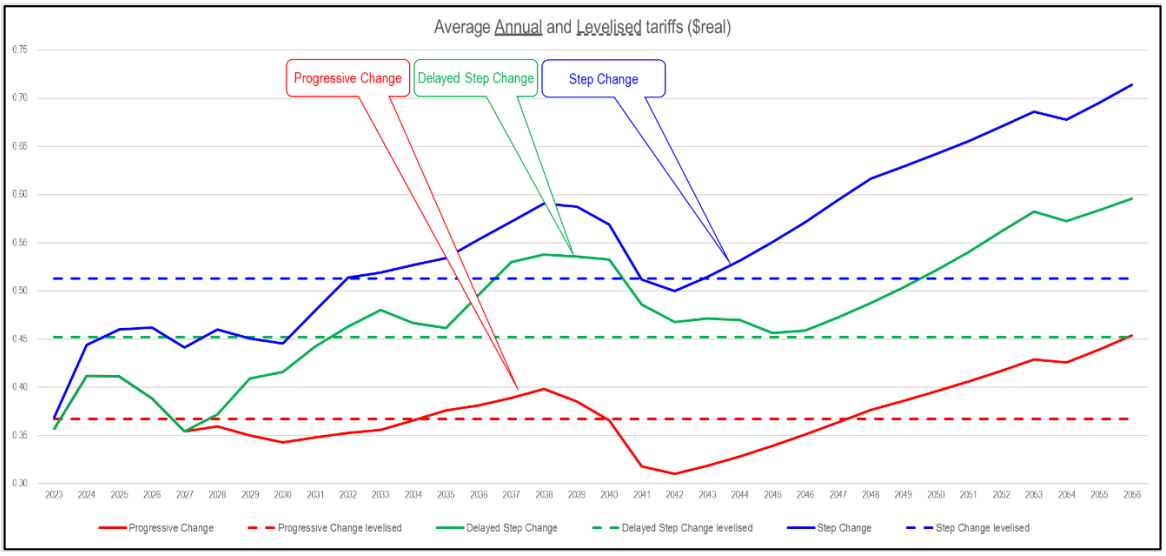
[17] AEMO's *Strong Electrification* scenario features more rapid volume declines than its *Step Change* scenario.




Source: APA after ACIL Allen

### Levelised tariff outcomes

We then asked ACIL Allen to calculate the amount of depreciation that would need to be charged in each year to deliver levelised tariffs, in real terms, over the analysis period. This analysis delivered the following levelised tariff paths:[18]




Source: APA after ACIL Allen

This analysis clearly shows:

- If the *Progressive Change* scenario is the adopted load forecast, there does not appear to be any benefit to adjusting the depreciation to deliver levelised tariffs to reduce tariff impacts to

[18] ACIL Allen did not seek to change the depreciation rate applicable to particular asset classes – rather, it calculated the composite amount of depreciation required to deliver the levelised tariff outcomes

vulnerable customers – over the course of the analysis period, there are many years in which the levelised tariffs are higher than the "do nothing" tariffs;

- In both the *Step Change* and *Delayed Step Change* scenarios, an increase in depreciation today results in future levelised tariffs being lower than the "do nothing" tariffs;

- In order to achieve the levelised tariffs in the face of *Step Change* forecast volumetric declines, the capital component of tariffs in this access arrangement would need to rise by a greater amount than under the *Delayed Step Change* scenario;

- The levelised tariff under the *Delayed Step Change* scenario are lower into the longer term. This is to be expected, as the *Delayed Step Change* scenario features higher volumes (and therefore greater scope for capital reduction) in the earlier years of the analysis than the *Step Change* scenario. In line with the WOOPS model, early action to reduce the capital base, while there are still significant volumes delivered, will have a greater impact than deferring action until volumes have commenced a more rapid decline.

**Consequences of delay**

In section 4.4.1.1 of its draft decision, the AER commented:

> While we are open to taking small steps, we note that in this case the remaining life stage of VTS assets is not significantly different from the proposed 30 year cap. We note that about 98% of VTS's existing assets have a WARL [Weighted Average Remaining Life] of 34 years or less as at 1 January 2023. This means that compared to a network with a technical life of 50 years, for example, the costs of delaying a decision on when the network may become uneconomic are less. We have calculated that to apply a 25 year cap at the next review, for example, to the largest asset class of 'Pipelines' (currently representing 72% of the existing capital base) would incrementally add approximately 1% to revenues compared to the impact of applying a 30 year cap now—that is, a total approximate revenue impact of 6% from a 25 year cap at the next access arrangement review in 5 years. Delaying such a decision could avoid revenues going up by 5% now and then reducing by over 5% at the next access arrangement review, if at that review it is confirmed that the network will be able to reach the end of its current remaining life.

APA does not disagree with the AER's analysis insofar as the extent to which a change to the depreciable life of assets will affect the regulated revenue requirement in five years' time. However, the reference to the revenue requirement alone does not include the significant tariff impact of declining volumes.

The key principle in the Crew & Kleindorfer model is the need to start reducing the capital base early, *while volumes remain high*, to reduce the tariff impact in both the near term and the longer term. The consequence of delay will depend on the forecast analysed:

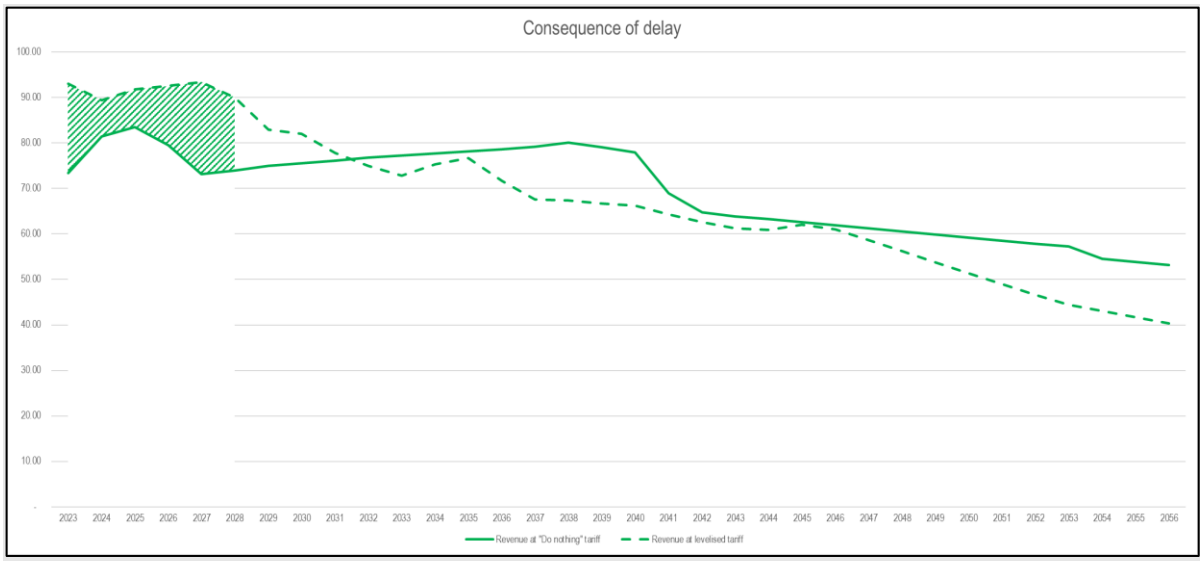
- As discussed above, if the *Progressive Change* scenario is the adopted view, there is no obvious need to accelerate depreciation, so there would be no consequence of delay.

- If the *Step Change* scenario represented the adopted view, we would expect tariffs to follow the *Step Change* "do nothing" line for the period of delay, and then step up from that line as the rate of depreciation is increased in the future over a lower volume.
  As the delay to act would have resulted in no erosion of the capital base in the early years,

the levelised tariffs under this delay scenario would be higher than the levelised tariffs under the *Step Change* "start now" scenario.

- If the *Delayed Step Change* was the considered view, then we would expect tariffs to follow the *Progressive Change* "do nothing" path for the period of delay (up to 5 years) and then increase in a manner like the Step Change case.
  As the delay to act would have resulted in no erosion of the capital base in the early years, the levelised tariffs under this scenario would be higher than the levelised tariffs under the *Delayed Step Change* "start now" scenario.

Using the *Delayed Step Change* scenario as an example, and noting that the present value of revenue under the "do nothing" and levelised tariffs is the same, delaying action to the 2028 access arrangement review would result in shifting the shaded area of the graph below (the lost opportunity) to increase the level of the levelised tariff in future years.




Source: APA after ACIL Allen

**Translating the analysis to action**

In the context of this revised proposal, APA needs to propose revised asset lives, applicable to particular asset classes, that will deliver the results calculated by ACIL Allen.

In order to do this, APA:

- Calculated the average depreciation-driven tariff increase applicable to the 2023-27 AA period from the ACIL Allen analysis;
- Adjusted the standard and remaining asset lives of the Pipelines asset class to deliver approximately the same tariff impact.

The ACIL Allen tariff impacts to deliver the levelised tariffs are as follows:

| ACIL Allen capital-related tariff impacts | 2023 | 2024 | 2025 | 2026 | 2027 | Volume-weighted Average |
|---|---|---|---|---|---|---|
| *Step Change* | 0.3690 | 0.4441 | 0.4603 | 0.4621 | 0.4414 | 0.4337 |
| *Step Change* levelised | 0.5128 | 0.5128 | 0.5128 | 0.5128 | 0.5128 | 0.5128 |
| Δ | 0.1438 | 0.0687 | 0.0525 | 0.0507 | 0.0714 | 0.0791 |
| *Delayed Step Change* | 0.3570 | 0.4117 | 0.4115 | 0.3884 | 0.3545 | 0.3843 |
| *Delayed Step Change* levelised | 0.4524 | 0.4524 | 0.4524 | 0.4524 | 0.4524 | 0.4524 |
| Δ | 0.0954 | 0.0407 | 0.0409 | 0.0640 | 0.0979 | 0.0681 |

This indicates that, in order to be able to achieve the levelised tariffs associated with the *Step Change* scenario, we would need to adjust the depreciation to deliver a capital-related tariff increase of $0.079/GJ (noting this is on top of the "Do Nothing" *Step Change* tariff outcome). In order to be able to achieve the levelised tariffs associated with the *Delayed Step Change* scenario, we would need to adjust the depreciation to deliver a capital-related tariff increase of $0.068/GJ.

Consistent with expectations under the WOOPS model, the ACIL Allen analysis indicates that a larger tariff increase is required to deliver levelised tariffs under the *Step Change* scenario relative to the *Delayed Step Change* scenario (acknowledging that both the "do nothing" and levelised tariffs are greater under the *Step Change* scenario relative to the *Delayed Step Change* scenario). This also provides some insights into the higher level of required tariff increases if we delay action to the next access arrangement period.

APA then tested the capital-related tariff impacts of changing the standard and remaining depreciable life of the Pipelines asset class to deliver a capital-related tariff increase in line with the ACIL Allen calculations.

More specifically, we observed the Return on and Return of capital components of the AER's draft decision PTRM:

| Year | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|
| **Building Block Components ($m, Nominal)** | | | | | |
| Return on Capital | 63.60 | 68.75 | 70.24 | 70.76 | 71.08 |
| Return of Capital (regulatory depreciation) | 11.93 | 17.40 | 20.68 | 18.29 | 13.32 |

And calculated the average volume-weighted tariff under the Delayed Step Change scenario over the access arrangement period:

| Capital-related revenue requirement: | 2023 | 2024 | 2025 | 2026 | 2027 | Volume-weighted Average |
|---|---|---|---|---|---|---|
| **AER draft decision:** | | | | | | |
| Return on Capital | 63.60 | 68.75 | 70.24 | 70.76 | 71.08 | |
| Return of Capital | 11.93 | 17.40 | 20.68 | 18.29 | 13.32 | |
| Total | 75.53 | 86.15 | 90.92 | 89.05 | 84.40 | |
| ÷ *Delayed Step Change* volumes (PJ) | 205.66 | 197.75 | 202.92 | 204.63 | 206.52 | |
| Average capital-related tariff | 0.3672 | 0.4357 | 0.4480 | 0.4352 | 0.4087 | 0.4187 |

We then amended the standard and weighted average remaining life of the Pipelines asset class to 30 years[19] in the PTRM Inputs:

| Asset Class Name | Opening Asset Value (Partially As Incurred) | Opening Asset Value (As Commissioned) | Average Remaining Life (Year) | Standard Life (Year) | Opening Tax Asset Value | Average Tax Remaining Life (Year) | Tax Standard Life (Year) |
|---|---|---|---|---|---|---|---|
| Pipelines | 866.26 | 733.80 | 30.0 | 30.0 | 259.77 | 14.6 | 20.0 |
| Compressors | 211.21 | 153.06 | 18.4 | 30.0 | 95.45 | 11.1 | 20.0 |
| City Gates & Field Regulators | 58.96 | 54.49 | 18.1 | 30.0 | 25.04 | 11.5 | 20.0 |
| Odourant Plants | 0.22 | 0.22 | 12.5 | 30.0 | 0.07 | 8.0 | 20.0 |
| Gas Quality | 1.28 | 0.26 | 7.7 | 10.0 | 0.98 | 16.7 | 20.0 |
| Other - short life | 48.59 | 44.32 | 3.6 | 5.0 | 46.33 | 5.4 | 7.5 |
| General Building | 32.36 | 23.72 | 48.9 | 60.0 | 20.72 | 52.9 | 60.0 |
| General Land | 7.32 | 7.32 | n/a | n/a | 4.50 | n/a | n/a |
| Integrity Inspections | - | - | n/a | 10.0 | - | n/a | n/a |
| | - | - | | | - | | |
| | - | - | | | - | | |
| | - | - | | | - | | |
| Other - long life | | | | 15.0 | | n/a | 15.0 |

And observed the change in the capital-related tariff impact:[20]

[19] Consistent with our December 2021 proposal.

[20] It should be noted that this analysis retains the inflation forecast in the AER draft decision, which features a forecast rate of inflation of 3.25% for 2023. To the extent the AER adjusts the 2023 forecast rate of inflation upwards in the final decision, the indexation of the capital base and consequential depreciation adjustment will cause the Depreciation building block to fall, which will reduce the tariff impact of shortening the standard and remaining life of the Pipelines asset class. A downwards adjustment would have the opposite effect.

| Capital-related revenue requirement: | 2023 | 2024 | 2025 | 2026 | 2027 | Volume-weighted Average |
|---|---|---|---|---|---|---|
| **30 year Pipeline asset life:** | | | | | | |
| Return on Capital | 63.60 | 68.59 | 69.78 | 69.95 | 69.89 | |
| Return of Capital | 14.90 | 23.22 | 27.18 | 25.26 | 20.74 | |
| Total | 78.50 | 91.81 | 96.95 | 95.22 | 90.63 | |
| ÷ *Delayed Step Change* volumes (PJ) | 205.66 | 197.75 | 202.92 | 204.63 | 206.52 | |
| Average capital-related tariff | 0.3817 | 0.4643 | 0.4778 | 0.4653 | 0.4389 | 0.4453 |
| **Change relative to AER draft decision** | **0.0144** | **0.0286** | **0.0297** | **0.0301** | **0.0302** | **0.0266** |

The ACIL Allen analysis indicated that we need to increase our current year depreciation charges to deliver a 2023-27 average tariff increase in the order of $0.068/GJ. We see from this analysis that reducing the standard and remaining life of the Pipelines asset class to 30 years delivers a result well short of this requirement.

APA then tested the impact of reducing the standard and remaining life of the Pipelines asset class to 25 years, and similarly observed the change in the capital-related tariff impact. This resulted in a volume-weighted average tariff increase of $0.0586/GJ. We note that, while closer, this is still less than that recommended by ACIL Allen to deliver the levelised tariff outcome.

In reviewing these options, APA is conscious of two key decision factors:

- Our proposal has always been to “start small, start early, and monitor”. The lower tariff increase associated with the 30 year Pipelines asset life is more consistent with this principle.
- APA is conscious of the current cost of living pressures being faced by Victorian households, and in that regard is minded to adopt a proposed course of action that results in a lower tariff impact.

APA therefore proposes to reduce the standard and weighted average remaining asset lives of the Pipelines class to 30 years. This will, based on current AEMO forecasts and the hybrid *Delayed Step Change* scenario, deliver the lowest possible tariff outcomes to current and future customers.

Further information can be found in the ACIL Allen report, APA VTS - ACIL Allen - APA VTS Accelerated Depreciation analysis - Aug 2022 – Public.

# 15. Operating expenditure & step changes

## 15.1. Initial proposal

The APA initial proposal adopted the AER base-step-trend approach to forecasting opex. However, this approach required a number of adjustments to accommodate

- Items requiring adjustment to the base year which were identified subsequent to the base year (VTS property taxes)
- Increases on opex relating to significant capex programs (notably opex associated with the Winchelsea compressor, SoCI and technology costs), and
- Opex associated with new initiatives (purchase of carbon offset certificates).

Many of these costs do not fit well into the AER's opex framework. The AER's framework presumes the business is in a steady state, and only allows for changes to the base year opex where there have been clear legislative changes, or scope changes associated with trended growth.

The AER's opex assessment framework does not readily accommodate required adjustment to base year costs, or opex associated with "lumpy" capex.

## 15.2. Stakeholder submissions

Stakeholder submission reflected a lack of detailed consultation on the opex forecasts, in particular the "step change" adjustments. Submissions were therefore not supportive of these adjustments.

## 15.3. AER Draft Decision

The AER's Draft Decision accepted the increased opex associated with the WORM, and included a placeholder amount for the opex associated with the Winchelsea compressor, but rejected all other adjustments to develop the opex forecast.

The AER also removed long-standing allowances for a return on the working capital associated with line pack and carrying a spares inventory, and a long-standing opex allowance for preparing the next access arrangement.

The AER draft decision required the following amendments to be made to the proposed access arrangement:

| | |
|---|---|
| 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. |

APA has made all necessary amendments to address the issues raised in its Draft Decision, as discussed in this revised proposal.

| | |
|---|---|
| Revision 8.5 | Amend table on page 10 of Access Arrangement 2023–27 so that it contains the following: |

**Approved forecast operating expenditure for the incentive mechanism ($ million, 2022)**

| | 2020 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| Forecast total opex | 29.9 | 31.2 | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 |
| Less debt raising costs | 0.1 | 0.1 | 0.6 | 0.7 | 0.6 | 0.6 | 0.6 |
| Less category specific forecast | 0.3 | 0.3 | – | – | – | – | – |
| **Forecast opex for the OEIM** | **29.5** | **30.9** | **33.8** | **33.8** | **33.9** | **33.9** | **33.9** |

Note: may not add due to rounding

APA has adjusted the structure of the table as required under this Revision, but has populated it with relevant data from this revised proposal.

**Operating Expenditure Incentive Mechanism**

The AER draft decision required the following amendments to be made to the access arrangement:

| | |
|---|---|
| Revision 8.1 | Amend clause 3.6 (c) so that it reads:<br><br>The efficiency gain for 2023 is to be calculated in accordance with the following formula:<br>$E_{2023} = (F_{2023} – A_{2023}) – (F_{2022} – A_{2022}) + (F_{2020} – A_{2020})$<br><br>where:<br>$E_{2023}$ is the Service Provider's efficiency gain in 2023<br>$F_{2023}$ is the Service Provider's forecast operating costs for 2023 as specified in section 3.6(h)<br>$A_{2023}$ is the Service Provider's actual operating costs for 2023 as specified in section 3.6(g)<br>$F_{2022}$ is the Service Provider's forecast operating costs for 2022 as specified in section 3.6(h)<br>$A_{2022}$ is the Service Provider's actual operating costs for 2022 as specified in section 3.6(g)<br>$F_{2020}$ is the Service Provider's forecast operating costs for 2020 as specified in section 3.6(h)<br>$A_{2020}$ is the Service Provider's actual operating costs for 2020 as specified in section 3.6(g). |

This Revision has been adopted.

| | |
|---|---|
| Revision 8.2 | Insert clause 3.6(g)(iii) that reads:<br>adjust reported actual opex for the 2023–27 period to exclude any movements in provisions. |

This Revision has been adopted.

| | |
|---|---|
| Revision 8.3 | Rename clause 3.6(g)(iii) to clause 3.6(g)(iv) |

This Revision has been adopted.

| | |
|---|---|
| Revision 8.4 | Insert clause 3.6(k) that reads:<br>The AER will exclude any cost that the AER determines to exclude from the operation of the Operating Expenditure incentive Mechanism because the AER are satisfied it would not promote the NGO.[21] |

This Revision has been adopted.

### 15.4. APA revised proposal

This revised proposal addresses the AER's draft decision concerns.

### 15.5. Winchelsea compressor operating costs

In its December 2021 proposal, APA proposed to construct two new compressors to expand the SWP, one at each of Stonehaven and Pirron. APA included, in that proposal, an opex step change for the costs of operating and maintaining two stand-alone compressors.

As events subsequently unfolded, APA worked closely with the Victoria Government, [22] AEMO and the AER to reach a decision to install a second compressor at Winchelsea in order to avoid potential shortfalls in 2023. This would be a second unit at an existing site.

As the decision to invest in the Winchelsea compressor was finalised close to the release of the AER's draft decision, the AER has not had opportunity to sufficiently review the proposed operating costs for the second Winchelsea unit. It would be reasonable to update the opex step change to reflect the cost of the additional Winchelsea unit rather than the two stand-alone Stonehaven and Pirron units.

The AER's draft decision includes, as a placeholder, the APA estimate of the operating costs associated with the second Winchelsea compressor, $1.25 million ($2022), or $250,000 per year.

This amount is based on the costs associated with a similar investment, an additional compressor at the Wollert site, associated with the WORM.[23] Like the Winchelsea unit, Wollert unit 6 is an additional compressor at an existing site. APA notes that the AER has approved these costs as part of the WORM operating costs.

[21] Wording amended from draft decision through email communication with AER 13 July 2022.
[22] See Hon Lily D'Ambrosio MP - Letter of support to AER for duplication of compression at Winchelsea - 13 April 2022.pdf
[23] The detail of this information was provided to the AER in response to its information request #IR002.

The operating costs associated with adding an additional unit to an existing site are understandably lower than the operating costs associated with a greenfield site. For example, there are already technicians on site; electricity supply fixed costs, land taxes and the like are already included in the base year opex.

We expect Winchelsea operating hours (and costs) to be higher in the upcoming access arrangement period than have been observed over the current access arrangement period. With the declining production from Longford, we expect more gas to be sourced from western Victoria, which will require more operating hours from the Winchelsea compressor station.

The AER's draft decision presumes that the operating cost of the second Winchelsea compressor will be low, commenting that "costs may be relatively minor as the asset will be new and used relatively minimally for peak demands".[24] APA considers that this is not a reasonable presumption, as described following.

The Winchelsea compressors will be configured to run in series (the outlet of one compressor feeds into the inlet of the other) rather than parallel (side by side). While this delivers a slightly lower peak capacity, operating costs are lower as the units can be run singly, depending on demand. In parallel configuration it would be necessary to almost always run both units simultaneously, regardless of the level of demand.

The maximum capacity of the Winchelsea compressor station is achieved when both units are operating. While it may be reasonable to expect simultaneous operation to occur on only the top peak days, we anticipate that the Winchelsea compressor station will most frequently operate with a single unit running. But it is not reasonable to assume that the existing unit will be the primary duty compressor and that the new unit will operate infrequently.

APA believes that the Winchelsea compressor station will run more frequently as more gas is sourced from western Victoria. While AEMO will be responsible for dispatching the compressors, good operating practice suggests that the compressors will be dispatched to levelise the operating hours across the two units. With the expected increased role of the Winchelsea station, it would not be unreasonable to expect that each of the two Winchelsea units might operate as much as the existing single unit does now.

## 15.6. Carbon offsets

In its December 2021 proposal, APA included a forecast of approximately $1.5 million over the 5 year period for the acquisition of carbon offset certificates related to the operation of the VTS.

APA takes on board the comments of the Consumer Challenge Panel, as expressed in its 1 February 2022 public forum presentation, that:

*"Increasingly communities expect governments (and businesses) to take action to respond to climate change"*

This is especially important now that the *Climate Change Bill 2022* has been passed through the lower house and is poised to become legislation.

[24] Attachment 6, p7.

In order to understand how the APA proposal aligns with this expectation, it is important to understand how VTS carbon emissions are calculated.

The carbon emissions of transmission pipelines are not directly measured, per se; but Scope 1 emissions are estimated following section 3.76 of the National Greenhouse and Energy (Measurement) Determination 2008. The emission calculation is based on the pipeline length multiplied by an emission factor. For the VTS, this calculation is:

2,260 (VTS pipeline length in km) x 11.62 (Emission factor tCO2-e/km)[25] = 26,261.2 TCO2e

This emission factor aims to address the combination of methane emissions caused by fugitive emissions (unintended loss of methane as a result of the operation of the pipeline system) and vented emissions for operational reasons. Greenhouse gas emissions associated with the fuel gas used in compressor operations are reported by AEMO, as AEMO operates the VTS compressors.[26]

As APA's methane emissions reported under the NGER Act are determined by length of pipe multiplied by an emission factor, APA cannot reduce its reported emissions through making operational or equipment changes but rather only through the purchase of offsets.

APA acknowledges that there is, at time of lodgement, no clear legislative obligation for it to purchase carbon offset certificates. However, in line with the expectations of communities as outlined by CCP28, APA considers this is the only practicable avenue available to meet those consumer expectations.

APA VTS estimates that the tariff impact of acquiring carbon offsets is approximately 0.17¢/GJ, or approximately 9¢ per residential customer per year.

## 15.7. Security of Critical Infrastructure

### APA Initial Proposal

On 1 December 2021, APA submitted expenditure forecasts for VTS share of APA's SoCI Program. The four components of the program included cyber security, physical security and natural hazards, personnel security, and supply chain security.

APA's initial proposal provided a description of the SoCI legislative framework (that was in place at the time) and the new obligations placed on APA and the Victorian Transmission System.

APA submitted that the new SoCI legislation was imposing incremental capital expenditure (and operating expenditure) costs on APA. To be clear, the SoCI program and forecasts is separate from the Inofmaiton and Technology portfolio forecasts.

[25] DISER, National Greenhouse Accounts Factors, Australian National Greenhouse Accounts, October 2020 s2.4.2.7 and Table 18.

[26] The Clean Energy Regulator has ruled that the Australian Energy Market Operator (AEMO) has operational control of the VTS excluding maintenance facilities. This is in effect emissions from the combustion of gas in the VTS compressors to achieve required pipeline pressures. APA maintenance emissions are principally as a result of pipeline fugitive emissions with minor contribution from transport vehicles. Transport vehicles, due to their minor nature, were excluded from our access arrangement submission.

**AER Draft Decision**

The AER accepted APA's proposed capital and operating expenditure on cyber security contained in the original business case submitted with APA's Access Arrangement Proposal for the VTS in December 2021. The AER did not accept the proposed expenditure for the other domains.

The AER did not consider that APA's physical and program components were prudent and did not accept APA's proposal. The AER considered that the SoCI requirements apply only to 'material risks' which is described in terms of risks that have a substantial impact on availability, reliability and integrity of the critical infrastructure asset. AER explained that it assessed that the risk level being contemplated is a 'very material' level of risk (and according to notes to the SoCI material) that such that a hazard would cause the stoppage or major slowdown of a critical infrastructure asset's functioning for an unmanageable period.

AER further explained that SoCI will only be relevant to the extent that a material risk exists that is not adequately managed by the current risk management controls. And that APA's initial submission does not demonstrate that this is the case.

**APA Revised Proposal**

APA has prepared a revised business case that addresses the matters raised by the AER.

The revised business case provides an overview of the options considered to address the need for an investment program to meet all compliance obligations under the SoCI Act and, consistent with APA's internal practices, we have developed a detailed business case in support of the recommended option.

The revised business case will enable APA to meet its regulatory obligations and compliance with the SoCI Act by the expected defined date. This program increases the capability within APA to mitigate and minimise the potential of risk events occurring.

The risks APA faces on the VTS (as with all its assets) are increasing and have the potential for significant consequence across society with potential to result in billions of dollars in impacts to customers, consumers and the economy. This program is designed to address the necessary capabilities within APA and appropriately increase its security and resilience.

APA's revised business case has been submitted to the AER on a confidential basis.

Further information found in APA - SoCI VTS Business Case - Revised - August 2022 - Confidential.

## 15.8. Information Technology

APA's initial proposal included $9.4 million for a step change in Information and Operational Technology. The IOT step change was associated with APA's systems migrating to cloud based computing. This shift to cloud-based computing was driven by end of life of systems with vendors no longer supporting older systems.

This meant that more of the infomraiton technology expenditure would be classified as operating expenditure in accordance with accounting standards.

The revised step change in IOT operating expenditure is shown in the following table.

| IOT | Unit | 2023 | 2024 | 2025 | 2026 | 2027 | Total |
|---|---|---|---|---|---|---|---|
| TOTAL | $2022, $m | 3.7 | 2.2 | 0.8 | 0.8 | 0.7 | 8.1 |

Further information about APA Information and Operational Technology Progams and the programs relevant to VTS can be found in:

- VTS - VTS Information Technology Program - Revised proposal - August 2022 - Public
- VTS - VTS Operational Technology Program - Revised proposal - August 2022 - Public
- VTS - APA EPMO Project & Program Governance Overview – August 2022 – Public.

## 15.9. Property taxes

The AER's draft decision did not accept a proposed step change for increases in property taxes. While it is not obvious that this item should be classified as a step change, specific forecast, or adjustment to the base year costs, it is clear that the base year opex does not include the actual level of property taxes to be incurred by APA VTS in the provision of the reference service.

The AER raised a number of matters on which it required additional information. The AER's comments are in *italics* below:

- Legislative change

  *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*

  Property taxes are levied by the Victoria State Revenue Office (SRO) under the Victorian *Taxation Administration Act 1997*. Relevant Sections of the Taxation Administration Act provide:

  8 General power to make assessment

  (1) The Commissioner may make an assessment of a tax liability of a taxpayer.

  (2) An assessment of a tax liability may consist of or include a determination that there is not a particular tax liability.

  9 Reassessment

  (1) The Commissioner may make one or more reassessments of a tax liability of a taxpayer.

  (2) Nothing prevents the Commissioner—

  (a) from making a reassessment of a tax liability of a taxpayer after an amount previously assessed as being payable by the taxpayer has been paid; or

  (b) from making a reassessment of a tax liability under which the taxpayer is assessed as having liabilities that are additional to or greater than those under the previous assessment.

  The Commissioner is empowered to assess, or re-assess, the tax liability. No legislative or policy change is required for the Commissioner to assess, or re-assess, the tax liability.

  The scope for re-assessment is important. In the current case, APA had accrued, in the base year opex, an estimate of property taxes based on the (then) most recent assessment. The Commissioner subsequently re-assessed the level of property taxes, resulting in the base year accrual being insufficient to reflect actual costs attributable to the base year, and therefore serve as an inadequate level from which to commence the base-step-trend forecasting process.

  We later learned that the under-accrual was caused by an error in the SRO assessment for 2018, in which the assessed land values were incorrectly understated relative to the 2017 assessments. As no further assessments were received until 2021, the 2020 base year accrual was based on the most recently received assessment (the incorrect 2018 assessment).

- Basis of assessment

  *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.*

  *In our assessment of this step change, it was not apparent what the driver of these tax assessment changes was ...*

  APA has undertaken a further analysis of the drivers of the increase, and finds that both the land valuation and tax rate have increased. For example the assessed land value of the relevant Dandenong properties increased from $19.4 million in 2016 to $37.1 million in 2022. Over the same period, the tax rate increased from 2.146% in 2016 to 2.4933% in 2022.

  As the Commissioner is "at large" to assess or re-assess tax liability, the methodology applied by the Commission in reaching that assessment is only obliquely relevant relative to the amount of tax assessed. APA provided documented evidence of the amount of tax assessed by the SRO – as APA cannot influence the foundation of the assessment, it is not clear that the methodology applied by the Commissioner in reaching that assessment is helpful to the AER's determination of the costs incurred by APA in providing the reference service.

- Prudence and efficiency

  *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.*

  *[APA] should also provide evidence of the basis for the cost increases being efficient*

  APA notes that it has no influence over the amount of property taxes levied by the Victoria SRO[27] – it is therefore not possible to "provide evidence of the basis for the cost increases being efficient" or to suggest that they are in any way imprudent or inefficient.

  As these costs are truly uncontrollable opex, they should be excluded from the application of the OEIM. In this regard, APA suggests that they should be treated as a specific forecast rather than as an adjustment to the base year, or as a step change.

- Expectation to continue

  *In our assessment of this step change, it was not apparent ... whether these were due to temporary or permanent measures.*

  As the Commissioner is "at large" to assess or re-assess tax liability, it not possible to say with certainty that the current level of property taxes will continue at the currently assessed level. However, this is the best forecast available at the time of this access arrangement proposal. It has not been APA's experience of that a tax, once levied, should be expected to be reduced in the future.

[27] Except, as APA VTS has done, to propose 1) that all APA VTS properties are captured in a group assessment, and 2) that relevant noise buffer land is classified as pasture, which then qualifies for a lower rate.

- Properties used for regulated purposes

  *... whether all the properties included by APA as part of the VTS property tax assessment step change are used solely for regulated purposes.*

  APA has reviewed the scope of the land tax assessments (noting, as has the AER, that the SRO has arbitrarily amended the land description and reference information) and has ascertained that the step change proposed in the December 2021 submission did include some land tax associated with land in Dandenong that APA leases to third party tenants. APA has adjusted to relevant land tax assessment to remove, on a pro rata basis, the land tax attributable to that leased area.

In summary, the Step Change applicable to property taxes is calculated as follows:

| **VTS Property taxes** | **2021 Assessment** | **2022 Assessment** |
|---|---|---|
| Total State Revenue Office assessment | 1,532,027 | 2,077,522 |
| Less: Amount not applicable to regulated assets: | | |
| ELGAS: 120 Greens Rd Dandenong | - 342,978 | - 451,287 |
| LNG Buffer Land: 184 Frankston-Dandenong Rd | - 194,923 | - 281,743 |
| BOC: 351 Hammond Rd Dandenong | - 102,937 | - 117,559 |
| Property taxes related to regulated assets | 891,189 | 1,226,932 |
| Less: amount related to leased land: | - 82,496 | - 117,724 |
| Property taxes related to regulated business | 808,693 | 1,109,208 |
| Amount recorded in 2020 base year: | | 574,800 |
| **Step change from 2020 base Year** | | **534,408** |

As APA cannot influence the level of property taxes assessed, this $1.1m pa is considered a category specific forecast for the purposes of the Opex Efficiency Incentive Mechanism.

## 15.10. Allowances for return on line pack and spares

### Line pack

When a pipeline is first constructed the air in the pipe must be purged and replaced with natural gas, up to the minimum operating pressure, before the pipeline can be operated. This gas injected at commissioning is called line pack, and forms part of the capital cost of constructing the pipeline.

A legacy feature of the VTS access arrangement is that an allowance for a return on the capital invested in line pack, at the regulated WACC, has been included in operating expenditure. From a building block revenue requirement perspective, this treatment is the same as if the line pack had been capitalised and not depreciated.

In section 6.4.4.2, the AER's draft decision concluded that a return on line pack should not be considered as opex.

APA agrees. It is not clear why line pack was historically afforded this unique treatment, and we accept that the line pack should be included in the regulatory capital base. However, the AER's draft decision did not include an amount of the capital invested in line pack in the regulatory capital base.

Moreover, the AER comments that "[o]ur 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)." This is partially correct – APA VTS has received, through the allowance treatment, a return *on* the capital invested in the line pack, but not a return *of* that invested capital.

It is therefore necessary to adjust the regulatory capital base for the transfer of the value of the line pack from an opex item to a capital item.

Line pack is tracked through the tariff model. The November 2017 AER-approved tariff model for the 2018-22 access arrangement period indicates the following amounts of line pack to be in the system at that time:[28]

**Working Capital Assumptions**

**VTS Tariff Model**

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**Gas Prices**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Gasnet Transmission System | 4.31 | 4.41 | 4.52 | 4.63 | 4.75 | 4.86 |
| Murray Valley | 4.49 | 4.60 | 4.71 | 4.82 | 4.94 | 5.06 |
| Interconnect | 4.49 | 4.60 | 4.71 | 4.82 | 4.94 | 5.06 |
| SWP | 4.50 | 4.61 | 4.72 | 4.84 | 4.96 | 5.08 |
| WTS | 4.31 | 4.41 | 4.52 | 4.63 | 4.75 | 4.86 |
| Brooklyn Corio Loop | 4.38 | 4.48 | 4.59 | 4.70 | 4.82 | 4.94 |
| WORM Stage 1 | 3.86 | 3.50 | 3.59 | 3.67 | 3.76 | 3.86 |
| WORM Stage 2 | | | | | | |
| Anglesea | 3.89 | 3.98 | 4.08 | 4.18 | 3.79 | 3.89 |
| Northern Looping | 3.89 | 3.98 | 4.08 | 3.70 | 3.79 | 3.88 |

**Energy (base linepack data)** **TJ**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Gasnet Transmission System** | 462.1 | 2,039.2 | 2,089.2 | 2,140.4 | 2,192.8 | 2,246.5 |
| **Murray Valley** | 2.1 | 9.8 | 10.1 | 10.3 | 10.5 | 10.8 |
| **Interconnect** | 9.7 | 44.7 | 45.8 | 46.9 | 48.1 | 49.3 |
| **SWP** | 22.0 | 101.3 | 103.8 | 106.3 | 108.9 | 111.6 |
| **WTS** | 6.1 | 27.0 | 27.6 | 28.3 | 29.0 | 29.7 |
| **Brooklyn Corio Loop** | 8.7 | 39.2 | 40.1 | 41.1 | 42.1 | 43.1 |
| **WORM Stage 1** | 3.1 | 10.9 | 11.1 | 11.4 | 11.7 | 12.0 |
| **WORM Stage 2** | - | - | - | - | - | - |
| **Anglesea** | 1.5 | 6.0 | 6.1 | 6.3 | 5.7 | 5.8 |
| **Northern Looping** | 5.7 | 22.6 | 23.1 | 21.0 | 21.5 | 22.0 |
| **Total Cost** | **-** | **2,300.6** | **2,356.9** | **2,412.0** | **2,470.3** | **2,530.8** |
| **Return on Linepack** | | 132.3 | 135.5 | 138.7 | 142.0 | 145.5 |

There are a number of salient features to the line pack calculation worth noting:

- The price of the line pack does not "mark to market". Rather, it reflects the market cost of gas at the time the pipeline was commissioned, as adjusted for inflation each year. This approach parallels that in the AER's roll forward model. Under this approach, there is no

[28] AER, AER - APA VTS Final decision Tariff Model - November 2017 – Confidential, tab Working_Capital_BA

depreciation associated with line pack.

- The volume of the line pack remains static each year. The volume of line pack is calculated as the amount of gas required to bring the pipeline up to the minimum operating pressure. The management of the level of line pack between the minimum and maximum operating pressure, a key operational tool, it undertaken by AEMO through its system operation function.

- No line pack is associated with WORM Stage 2. This line pack will be included in the total capital cost of the WORM when it is commissioned.

Applying the actual CPI numbers to the 2017 values will deliver the amount by which the capital base needs to be adjusted for line pack to be included in the regulatory capital base:

## Working Capital Assumptions
### VTS Tariff Model

| | | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| December CPI | | 1.91% | 1.78% | 1.84% | 0.86% | 3.50% | 6.00% |
| **Gas Prices** | | | | | | | Per AER draft decision RFM |
| Gasnet Transmission System | | 4.31 | 4.38 | 4.46 | 4.50 | 4.66 | 4.94 |
| Murray Valley | | 4.49 | 4.57 | 4.65 | 4.69 | 4.85 | 5.14 |
| Interconnect | | 4.49 | 4.57 | 4.65 | 4.69 | 4.85 | 5.14 |
| SWP | | 4.50 | 4.58 | 4.66 | 4.70 | 4.87 | 5.16 |
| WTS | | 4.31 | 4.38 | 4.46 | 4.50 | 4.66 | 4.94 |
| Brooklyn Corio Loop | | 4.38 | 4.45 | 4.54 | 4.57 | 4.73 | 5.02 |
| WORM Stage 1 | | 3.86 | 3.93 | 4.00 | 4.04 | 4.18 | 4.43 |
| WORM Stage 2 | | | | | | | |
| Anglesea | | 3.89 | 3.96 | 4.03 | 4.06 | 4.21 | 4.46 |
| Northern Looping | | 3.89 | 3.96 | 4.03 | 4.06 | 4.21 | 4.46 |

| **Energy (base linepack data)** | TJ | | | | | |
|---|---|---|---|---|---|---|
| **Gasnet Transmission System** | 462.1 | 2,026.0 | 2,063.2 | 2,081.0 | 2,153.8 | 2,283.0 |
| **Murray Valley** | 2.1 | 9.7 | 9.9 | 10.0 | 10.4 | 11.0 |
| **Interconnect** | 9.7 | 44.4 | 45.3 | 45.6 | 47.2 | 50.1 |
| **SWP** | 22.0 | 100.6 | 102.5 | 103.4 | 107.0 | 113.4 |
| **WTS** | 6.1 | 26.8 | 27.3 | 27.5 | 28.5 | 30.2 |
| **Brooklyn Corio Loop** | 8.7 | 38.9 | 39.6 | 40.0 | 41.4 | 43.8 |
| **WORM Stage 1** | 3.1 | 12.2 | 12.4 | 12.5 | 13.0 | 13.7 |
| **WORM Stage 2** | - | - | - | - | - | - |
| **Anglesea** | 1.5 | 5.9 | 6.0 | 6.1 | 6.3 | 6.7 |
| **Northern Looping** | 5.7 | 22.4 | 22.8 | 23.0 | 23.8 | 25.3 |
| **Total Cost** | | **-** | **2,287.0** | **2,329.1** | **2,349.2** | **2,431.4** | **2,577.2** |

To bring line pack into the capital base, an adjustment of $2,577,200 is required to the opening value of the Pipelines asset class.

APA has made this adjustment in the revised proposal PTRM and removed the allowance for line pack in the PTRM and the tariff model.

### Spares inventory

Like line pack, a return on spares inventory was included as an allowance in the operating expenditure. Similarly, APA agrees with the AER that spares inventory should be included in the capital base rather than as an operating expense allowance consistent with legacy treatment.

Like line pack, spares inventory is tracked through the tariff model. The November 2017 AER-approved tariff model for the 2018-22 access arrangement period indicates the following amounts of spares to be in inventory at that time:[29]

**Working Capital Assumptions**
**VTS Tariff Model**
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| | | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| **Inventory** | | | | | | | |
| **Opening Inventory Value** | | 627.4 | 642.7 | 658.5 | 674.6 | 691.1 | 708.1 |
| **Additions** | 33.0% | 207.0 | 212.1 | 217.3 | 222.6 | 228.1 | 233.7 |
| **Write Off** | 33.0% | (207.0) | (212.1) | (217.3) | (222.6) | (228.1) | (233.7) |
| **Inflation** | | 15.4 | 15.7 | 16.1 | 16.5 | 16.9 | 17.3 |
| **Closing Inventory Values** | | 642.7 | 658.5 | 674.6 | 691.1 | 708.1 | 725.4 |

There are a number of salient features to the spares calculation worth noting:

- The price of the spares does not "mark to market". Rather, it remains static, as adjusted for inflation each year. This approach parallels that in the AER's roll forward model. Under this approach, there is no depreciation associated with spares.

- Spares are assumed to "turn over" over a three year cycle as they are used in normal operating activities.

Similar to the treatment afforded line pack above, if we apply the actual CPI over the period, we can determine the required adjustment to the regulatory capital base to bring the spares inventory into capital.

**Working Capital Assumptions**
**VTS Tariff Model**

| | | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|
| December CPI | | 1.91% | 1.78% | 1.84% | 0.86% | 3.50% | 6.00% |
| **Inventory** | | | | | | | Per AER draft decision RFM |
| **Opening Inventory Value** | | 627.4 | 639.3 | 650.7 | 662.7 | 668.4 | 691.8 |
| **Additions** | 33.0% | 207.0 | 211.0 | 214.7 | 218.7 | 220.6 | 228.3 |
| **Write Off** | 33.0% | (207.0) | (211.0) | (214.7) | (218.7) | (220.6) | (228.3) |
| **Inflation** | | 12.0 | 11.4 | 12.0 | 5.7 | 23.4 | 41.5 |
| **Closing Inventory Values** | | 639.3 | 650.7 | 662.7 | 668.4 | 691.8 | 733.3 |

An adjustment of $733,300 is required to the "Other – short life" asset class to move the return on spares from an operating allowance to capital.

[29] AER, AER - APA VTS Final decision Tariff Model - November 2017 – Confidential, tab Working_Capital_BA

APA VTS has made this adjustment in the revised proposal PTRM and removed the spares inventory allowance from the PTRM and from the Tariff Model.

## 15.11. Access arrangement preparation costs

In its December 2021 proposal, APA forecast opex costs of $2 million to prepare the 2028-32 access arrangement, divided equally between the 2026 and 2027 years. Including these costs in the final two years' opex forecasts reflects a legacy treatment of these costs.

The AER rejected this forecast on the grounds that access arrangement preparation costs are "business as usual" costs and are therefore presumed to be included in ongoing opex. However, the AER also acknowledged that these costs are unlikely to be included in the base year applied in the base/step/trend approach. APA can advise that there are no access arrangement preparation costs included in the 2020 base year opex amounts used as the foundation of the base/step/trend approach.

The AER's reasoning, that opex costs, including access arrangement preparation costs, remain relatively level over time,[30] must assume that other opex activities are suspended or curtailed to allow for the incurrence of the lumpy access arrangement preparation costs. This assumption does not reflect actual practice – it is not practicable to reduce operating and maintenance expenditure to "make room" in the opex allowance for access arrangement preparation costs.

APA agrees with the AER's commentary that costs associated with the preparation of an access arrangement are "fundamentally directly related to a business' regulatory obligations to submit a proposal for the subsequent access arrangement period." Where these costs have not been provided for in the base/step/trend approach, they must be explicitly provided for elsewhere. Under the AER's draft decision, they have not been provided for at all.

The AER's refusal to accept this opex cost forecast does, however, give us the opportunity to review the legacy treatment of these costs as opex, rather than capex. The VTS has long been unique in its treatment of access arrangement preparation costs as opex, when other businesses capitalise these costs and amortise them over the period of the access arrangement to which the costs relate.

APA draws the AER's attention to the attached advice from PricewaterhouseCoopers, previously provided to the AER, which makes it clear that the costs attributable to preparing an access arrangement are capital in nature.

APA therefore accepts the reduction in opex associated with access arrangement preparation costs, and has included an additional capex amount of $2.0 million, divided equally between the 2026 and 2027 years, in the "Other – short life" class.

In terms of assessing the reasonableness of the proposed amount, APA acknowledges that there is some uncertainty associated with the actual costs of preparing the 2028-32 access arrangement. Based on current experience and feedback from the AER and the Consumer Challenge Panel, this amount is likely to be understated. APA can advise that the current costs associated with preparing the 2023-27 access arrangement as at 30 June 2022 (at the time the AER released its Draft

[30] Attachment 6, page 31. Reviewing the AER's Figure 6-1, it is not clear how the AER arrives at this conclusion.

Decision) was $1.378 million.[31] It would not be unreasonable to expect a further half this amount to be incurred through the processes of responding to the AER draft decision and stakeholder submissions, further information requests and implementation of the AER's final decision.

As commentary from the AER and CCP28 make it clear that both have higher expectations of the level of consumer engagement to be undertaken in the next access arrangement review, we anticipate that the costs incurred to prepare the next access arrangement will significantly exceed the costs to prepare the current access arrangement. We consider the $2 million forecast will likely underestimate, rather than overestimate, the actual costs.

[31] We note that this amount does not include any consultancy costs associated with real labour cost increases or productivity improvement. APA VTS posited, and the AER's analysis confirmed (Attachment 6 p18), that these two factors would largely offset.

# 16. Rate of return

## 16.1. AER Rate of Return Instrument

APA acknowledges the AER's draft decision that its final determination will apply the 2018 Rate of Return instrument, with updates to reflect movements in parameters such as the risk free rate.

The AER accepted the APA's proposed averaging periods for calculating the risk free rate and the cost of debt.

**Return on equity**

APA has not updated the AER's estimation of the cost of equity in this revised proposal. The AER's draft decision calculated the cost of equity based on a placeholder averaging period of the 20 business days ending 29 April 2022. The AER's draft decision was clear that the cost of equity would be updated to reflect market conditions closer to the time of the final decision.

APA notes that the yield on 10-year Commonwealth bonds (as a proxy for the risk free rate applied in the Capital Asset Pricing Model) for the 20 business days ended 29 April 2022 was 3.01%.[32] Applying a simple average over the 20 business days ended 29 July 2022, the yield on 10-year Commonwealth bonds was 3.41%, which would result in an increase in the cost of equity (applicable to 40% of the capital base) in the order of 0.4%. Depending on the forecast of inflation (discussed below), this would result in an increase in required revenue in the order of $10-20 million over the five year period.

**Inflation**

APA has not updated the AER's forecast of inflation in this revised proposal; APA is mindful that the inflation figures may be amended by the AER and may be higher. The AER's draft decision features a 2023 forecast of inflation of 3.25%.

An increase to the PTRM rate of inflation increases the indexation of the capital base, and causes an offsetting reduction in the Depreciation building block. An increase in the inflation rate therefore paradoxically results in a decrease in the calculation of required revenue.

An increase in 2023 forecast inflation to 4.0%[33] would result in a decrease in the revenue requirement in the order of $18.6 million over the five year period. This would bring the estimated annual cost per residential customer to $31.33/GJ, a net increase of $3.07 per year relative to the AER draft decsion.

Notwithstanding that the effect of this would be NPV-neutral over the long term,[34] such a change to the forecast inflation rate would have an impact on the effectiveness of accelerating depreciation as a way of decreasing the capital base to reduce future tariff impacts on vulnerable customers.

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[32] AER draft decision Table 3.1. Note that the AER's calculation of the risk free rate is more complex than a simple average of RBA-reported yields.

[33] RBA Statement by Philip Lowe, Governor: Monetary Policy Decision, 2 August 2022. See https://www.rba.gov.au/media-releases/2022/mr-22-21.html#:~:text=The%20Bank's%20central%20forecast%20is,3%20per%20cent%20over%202024.

[34] Noting that "long term" in the AER's PTRM assumes that the assets, or their replacements, will be in service in perpetuity – this assumption is not appropriate in the context of Australia's dearbonisation initiatives, including the Commonwealth Climate Change Bill 2022 and the Victoria Government's Gas Substitution Roadmap.

However, this presents an opportunity to reduce the Pipelines asset life below the 30 years featured in this revised proposal without causing further tariff impacts in current customers.

# 17. Total revenue requirement tariff impacts

The total revenue requirement is a function of the interaction of all the matters discussed above. These matters have been reflected in the capex model, the Roll Forward Model and Post Tax Revenue Model as appropriate.

## 17.1. Initial proposal

The APA initial proposal featured the following revenue path:

| Year | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| **Building Block Components ($m, Nominal)** | | | | | | | |
| **Initial Capital Base** | | **1,132.28** | | | | | |
| Return on Capital | | | 48.39 | 51.38 | 52.89 | 51.39 | 48.99 |
| Return of Capital (regulatory depreciation) | | | 24.92 | 36.20 | 44.86 | 50.67 | 48.64 |
| Operating Expenditure | | | 36.00 | 37.99 | 38.07 | 39.28 | 40.07 |
| Revenue Adjustments | | | 0.07 | - 1.58 | - 2.95 | - | - 0.82 |
| Net Tax Allowance | **NPV** | | - | - | - | - | - |
| Total Revenue (unsmoothed) | | **569.74** | 109.38 | 123.99 | 132.87 | 141.34 | 136.87 |

Total revenue over the period was proposed to be ($nominal) $644.45 million.

The load and demand forecast was based on AEMO 2021 GSOO, which forecast total volumes of 1,223.33 PJ over the forecast period. This delivered a composite tariff of $0.5286 per GJ, on average over the 5-year period.

## 17.2. AER Draft Decision

The AER draft decision outcomes are summarised as follows:

| Year | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| **Building Block Components ($m, Nominal)** | | | | | | | |
| **Opening RAB** | | **1,226.21** | | | | | |
| Return on Capital | | | 63.60 | 68.75 | 70.24 | 70.76 | 71.08 |
| Return of Capital (regulatory depreciation) | | | 11.93 | 17.40 | 20.68 | 18.29 | 13.32 |
| Operating Expenditure | | | 35.44 | 36.51 | 37.59 | 38.68 | 39.74 |
| Revenue Adjustments | | - | 2.37 | - 1.96 | - 2.14 | - | 3.33 |
| Net Tax Allowance | **NPV** | | - | - | - | - | - |
| Total Revenue (unsmoothed) | | **523.63** | 108.61 | 120.70 | 126.37 | 127.73 | 127.46 |

The AER draft decision featured total revenue over the period of ($nominal) $610.87 million.

The AER's draft decision adopted, as a placeholder, AEMO's 2022 GSOO volumes. As these were lower than the 2021 GSOO volumes underpinning the APA initial proposal, the AER draft decision composite tariff is higher than that proposed by APA, as shown below.

Following all the amendments discussed above, the APA Revised proposal features a total revenue of ($nominal) $695.98 million.

| Year | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
|---|---|---|---|---|---|---|---|
| **Building Block Components ($m, Nominal)** | | | | | | | |
| **Opening Capital Base** | | **1,243.53** | | | | | |
| Return on Capital | | | 64.49 | 71.93 | 73.69 | 74.21 | 74.53 |
| Return of Capital (regulatory depreciation) | | | 16.08 | 26.93 | 32.09 | 34.94 | 27.36 |
| Operating Expenditure | | | 40.21 | 39.92 | 39.76 | 40.94 | 42.05 |
| Revenue Adjustments | | - | 2.37 | - 1.96 | - 2.14 | - | 3.33 |
| Net Tax Allowance | **NPV** | | - | - | - | - | - |
| Total Revenue (unsmoothed) | | **595.69** | 118.41 | 136.82 | 143.40 | 150.09 | 147.26 |

The revised proposal is also based on the AEMO 2022 GSOO forecasts. The composite tariff impact is therefore more comparable to the AER draft decision, as shown below.

## 17.3. Tariff impacts

APA has calculated a composite tariff impact over the 5-year access arrangement period. Actual results may vary geographically, and also between years, based on the outputs of the tariff model.

As discussed in the load forecast section, the total volumes forecast to be delivered over the 5-year period under AEMO's *Progressive Change*[35] scenario are 1,176.12 PJ.

The composite tariff impacts of the revised proposal, relative to the AER's draft decision, are as follows:

| | APA VTS Initial proposal | AER Draft decision | APA VTS Revised proposal |
|---|---|---|---|
| Total revenue over the 5-year period ($m nominal) | 644.45 | 610.87 | 695.98 |
| Total volumes over the 5-year period (PJ) | 1,223.33 | 1,176.12 | 1,176.12 |
| Composite tariff | $0.5268/GJ | $0.5194/GJ | $0.5918/GJ |
| Estimated annual cost per residential customer | $28.68 pa | $28.26 pa | $32.19 pa |
| Estimated annual cost per commercial customer | $263.40 pa | $259.70 pa | $295.88 pa |

The impact of APA's revised proposal is an average increase of $3.95 per year to a residential customer bill relative to the AER draft decision.

It should be noted that the difference in the composite tariff between the original proposal and the draft decision is affected by the reduction in forecast volumes between AEMO's 2021 and 2022 GSOO.

The AER draft decision required the following Revision to the access arrangement:

| | |
|---|---|
| Revision 9.5 | We require APA to amend the quantum of the proposed initial reference tariffs to reflect the draft decision on APA's building block proposal for the VTS. |

APA has amended the quantum of the proposed initial tariffs to reflect this revised proposal.

## 17.4. Reference tariff variation mechanism

The AER required a number of changes to the proposed reference tariff variation mechanism, as follows:

| | |
|---|---|
| Revision 10.1 | Remove the tariff adjustment mechanism where actual volumes in a given regulatory year fall either higher or lower than 5.5% of forecasts |

[35] APA VTS has adopted a *Delayed Step Change* scenario for the purposes of this access arrangement. The *Delayed Step Change* scenario adopts AEMO's *Progressive Change* forecast volumes for the first five years, being the length of the 2023-27 AA period.

This revision has been adopted (see Appendix D.4)

| | |
|---|---|
| Revision 10.2 | Amend the timing of the annual tariff variations back to APA submitting 50 business days prior to the commencement of the new pricing period and 20 business days for the AER's assessment |

This Revision has been adopted.

| | |
|---|---|
| Revision 10.3 | Revise the proposed initial reference tariffs and X factors to reflect the changes to the forecast total revenue identified in section 3 [sic] of the Overview to this draft decision. |

The proposed initial reference tariffs in the accompanying proposed revised access arrangement reflect this revised proposal. They may require modification to reflect the AER's Final Decision.

The X factors in section 2 of the AER's overview are drawn from the tariff model supporting the AER's draft decision PTRM. The X factors in the accompanying proposed revised access arrangement reflect this revised proposal, and may need to be modified to reflect the AER's Final Decision.

| | |
|---|---|
| Revision 10.4 | Amend the definitions of the Insurance Credit Risk, Natural Disaster and Terrorism events as per Table 10.1. |

These revisions have been adopted.

| | |
|---|---|
| Revision 10.5 | Remove the Pre-approved Capex event. |

APA has not adopted this revision.

With its December 2021 proposal, APA lodged three applications under Rule 80 of the National Gas Rules. An application under Rule 80 seeks the AER's pre-approval that capital expenditure, if made in accordance with the application, will be considered to be conforming capital expenditure at the commencement of the next access arrangement period. However, this does not allow the service provider to earn a return on the capital invested between the time the investment comes into service and the commencement of the next AA period.

APA proposed a new pass through provision, a "pre-approved capex" pass through, to allow it to recover the return on invested capital over this intervening period.

Reflecting the dynamic nature of the gas supply and demand balance underpinning this access arrangement proposal, APA committed to build an additional compressor at Winchelsea, which was not envisioned at the time of the December 2021 proposal. This ultimately caused the AER to reject the Rule 80 applications on the grounds that the proposed investments were no longer required.

Following an extensive discussion of the nature of pass through events, the AER's draft decision did not accept the pre-approved capex pass through on the grounds that it had not accepted the Rule 80 applications lodged with our original proposal (Overview p29 and Attachment 10 p14):

> We have not accepted APA's applications under rule 80, rendering the proposed pass through event redundant for that purpose. ...
>
> We have not accepted the pre-approved capex applications under rule 80 of the NGR. This means that the proposed pass through event for that purpose should be removed.

Having regard to the dynamic supply/demand balance underpinning this access arrangement, APA considers the rejection of this pass-through would limit flexibility to address potential supply shortfalls occurring during the upcoming access arrangement period. It is possible that further expansion of the VTS may be required in the upcoming access arrangement period for security of supply purposes, for which a Rule 80 application may be required.

We note that the proposed pass through mechanism is twice subject to the AER's discretion, first on any Rule 80 application that may be submitted, and then on the reasonableness of the costs proposed to be passed through. The combination of a Rule 80 application and this proposed pass through go some way to replicate the contingent project provisions in electricity regulation.

APA therefore proposes to retain this pass through provision in the proposed access arrangement.

# Glossary

| Acronym | Name | Acronym | Name |
|---|---|---|---|
| **24VDC** | 24 Volts Direct Current | **PRS** | Pressure Regulating Station |
| **AA** | Access Arrangement | **PTRM** | Post-tax revenue model |
| **AEMC** | Australian Energy Market Commission | **RAB** | Regulatory Asset Base |
| **AEMO** | Australian Energy Market Operator | **RFM** | Roll forward model |
| **AER** | Australian Energy Regulator | **RIN** | Regulatory Information Notice |
| **CAM** | Cost allocation method | **SIB** | Stay-in-business |
| **CCP28** | Consumer Challenge Panel (28) | **SMS** | Safety Management Studies |
| **DWGM** | Declared Wholesale Gas Market | | |
| **EES** | Environment Effects Statement | **SoCI** | Security of Critical Infrastructure |
| **EPMO** | Enterprise Program Management Office | **SWP** | South West Pipeline |
| **FID** | Final Investment Decision | **VGPR** | Victorian Gas Planning Report |
| **GSOO** | Gas Statement of Opportunities | **VGSR** | Victorian Gas Substitution Roadmap |
| **HDD** | Horizontal directional drilling | **VTS** | Victorian Transmission System |
| **IASR** | Inputs Assumptions and Scenarios Report | **WACC** | Weighted Average Cost of Capita |
| **IT** | Information Technology | **WOO** | Window of Opportunity |
| **NPV** | Net Present Value | **WOOPS** | Window of Opportunity Passed |
| **PKGT** | Port Kembla Gas Terminal | **WORM** | Western Outer Ring Main |
| | | | |