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APA VTS 2023-27 Access Arrangement Reset RIN Response - Public

Access Arrangement RIN response and Basis of Preparation

December 1, 2021

Contents

Introduction

On 3 September 2021, the Australian Energy Regulator ("AER") issued APA VTS Australia (Operations) Pty Ltd ("APA VTS" or "VTS") (the Service provider for the Victorian Transmission System) with a Regulatory Information Notice ("RIN") under Division 4 of Part 1 of Chapter 2 of the National Gas (Victoria) Law ("NGL").

The RIN specifies information to be provided to the AER by VTS in the context of revisions to the VTS Access Arrangement for the 2023-27 period.

Data supplied in this RIN relates to the historical information and the regulatory years (as defined in the workbook 2 of Appendix A to the RIN) ("2018 to 2022") from calendar year 2018. "2015-16 to 2019-20").

This combined RIN Response and Basis of Preparation document applies to the RIN issued to APA VTS and the service provider is APA VTS Australia (Operations) Pty Ltd.

For ease of reference, this document is laid out in the same fashion as the RIN itself.

Appendix A Schedule 1 – General requirements

A.1 Provide information

A.1.1 Provide information in templates

1.	**PROVIDE INFORMATION**
1.1	Provide the information required in each *regulatory template* in the Microsoft Excel workbooks attached at Appendix A completed in accordance with:
	(a) this *notice*;
	(b) the instructions in the relevant Microsoft Excel workbooks attached at Appendix A; and
	(c) the instructions provided in Appendix E.

The information required by the RIN has been provided.

A.1.2 Basis of preparation

1.2	For all information, other than *forecast information*, provide in accordance with this *notice* and the instructions in *Appendix E*, a *basis of preparation* demonstrating how *VTS* has complied with this *notice* with respect to information provided in each of the *regulatory templates*.

This document is the combined RIN Response and Basis of Preparation.

A.1.3 Changes to allocation methodology

1.3	Where changes to the methodology for allocation of costs have been made within the *current access arrangement period*, explain the changes and the effect of the each change to the information reported in response to this *notice*.

There have been no changes to the cost allocation methodology in the current access arrangement period.

APA's approach to cost allocation is set out the Cost Allocation Methodology (CAM) document prepared for APA regulatory reporting purposes. The CAM has been developed with reference to the AER's guideline for electricity distribution businesses as set out in "Electricity transmission network service providers, cost allocation guidelines" published in June 2008. The AER's 2008 Cost Allocation Guideline has been used because there are no cost allocation methodology guidelines available for gas transmission businesses.

The purpose of the CAM is to set out the policy for attributing and allocating cost to services in accordance with the National Gas Rules, and for reporting operating and capital costs information to the AER. The CAM provides guidance for APA management and staff in relation to cost allocation principles, policies, and ongoing obligations as they relate to the operations and delivery of the services. APA's most recent CAM was submitted to the AER in April 2021 as part of the information submitted for the VTS Annual Regulatory Information Notice.

VTS's current CAM has been applied consistently since the second half of the calendar year 2015 and is in line with the CAM applied to APA's other regulated businesses.

APA Group Cost Allocation Method (CAM) is attached to the Reset RIN response as VTS - RRIN Response Schedule 3 Appendix 2 – APA Cost Allocation Methodology - Dec 2021 - Public.

A.1.4 Provide material used

1.4	Provide material used for the purposes of preparing the *access arrangement proposal* including:
	(a) all consultants' reports commissioned and relied upon in whole or in part;
	(b) all *material* assumptions relied upon;
	(c) a table that references each response to a paragraph in Schedule 2 of this *notice* and where it is provided in or as part of the *access arrangement proposal*;
	(d) a table that references each document provided in or as part of the *access arrangement proposal* and its relationship to other *documents* provided; and
	(e) each *document* identified in paragraph 1.4(d) must be given a meaningful filename in the form:
	[*VTS*]– [Author] – [title] – [date] – [public/confidential], where:
	(i) **Author** is the author of the file if not *VTS* for example a consultant or other *third party*;
	(i) **Title** provides a meaningful description of the content of document, with limited reliance on acronyms or cross references, for example "Appendix 1A" is not meaningful, but "Appendix 1A – Cost allocation method" is;
	(ii) **Date** is a relevant date associated with the file, generally the date the document was created;
	(iii) **Public/confidential** identifies if the file in its entirety can be published (public); or if it contains any information which is the subject of a claim for confidentiality in accordance with paragraph 2 of this Schedule (confidential).

Relevant material has been provided as required.

Material assumptions

The material assumptions are set out in response to question 1.5 below on key assumptions. APA VTS considers material and key assumptions to be aligned.

A document index is provided. Files have been named in accordance with the AER file naming standard.

A.1.5 Material assumptions

1.5	Provide for each *material* assumption identified in the response to paragraph 1.4(b):	
	(a)	its source or basis;
	(b)	if applicable, its quantum;
	(c)	whether, and how, the assumption has been applied and was taken into account; and
	(d)	the effect or impact of the assumption on the *capital* and *operating expenditure* forecasts in the *next access arrangement period* taking into account:
		(i) the actual expenditure incurred during the *current access arrangement period*; and
		(ii) the sensitivity of the forecast expenditure to the assumption.

The key assumptions underpinning the access arrangement proposal are summarised below:

- Forecast supply and demand in the south east Australia gas market, and for Victoria in particular, is drawn from the AEMO March 2021 Gas Statement of Opportunities (**GSOO**), and accompanying Gas Statement of Opportunities report figures and data and the AEMO forecasting data portal, which presents the detailed figures behind the GSOO, and the 2021 AEMO Victorian Gas Planning Report (**VGPR**). This underpins the forecast need for the SWP expansion, and also forms the foundation of the tariff calculation. Demand is forecast to fall over the forecast period, from 193 PJ/year in 2023 to 184 PJ/year in 2027.

- Forecast regulatory cost of capital is derived from the application of the AER's 2018 Rate of Return Instrument. Based on a risk free rate of 1.243% (based on September trading data for 10-year Commonwealth bonds, as reported by the Reserve Bank of Australia), the resulting cost of equity is 4.903%. The cost of debt assumes that the cost of debt applied in the calculation of the portfolio cost of debt is equal to the most recent on-the-day rate as advised by the AER in the most recent cost of debt update (October 2021), 2.43%. The outturn 2023 regulatory WACC is 4.27%.

- Forecast inflation is based on the AER's Post Tax Revenue Model approach, which uses a geometric mean of forecast inflation over the next 5 years. The parameters have been taken from the recent Amadeus final decision, with 2023=1.5%; 2024=1.75%; subsequent years = 2.5%. Composite average over the 5-year period is 2.0%.

- The costs of forecast capital expenditure projects are based on current experience with similar projects. The forecast cost of the WORM is based on current internal cost estimates related to the in-flight project.
- The cost of Security of Critical Instructure (SoCI) program is based on SoCI Amendment Bill and that SoCI Amendment Bill will not significantly alter with respect to the Risk Management Program and definition of domains which require consideration. The reforms will be passed in their entirety by the end of 2022, with the first component, Security Legislation Amendment (Critical Infrastructure) Bill 2021, passed 24 November 2021.
- Operating expenditure is derived using the AER's base-step-trend approach, using Calendar 2020 as the base year. Step changes have been determined by relevant subject matter experts, for the opex costs associated with the WORM, for new compressors proposed for the SWP expansion, Security of Critical Infrastructure (SOCI) and Information Technology portfolio (IT) costs.
- Depreciable asset lives have been drawn from the AER's Asset Base Roll Forward Model. Where the standard or remaining asset lived produced by the RFM were more than 30 years, they have been curtailed to 30 years to align with the Victoria Net Zero 2050 target in the Victoria Climate Change Act 2017.
- The net tax allowance is calculated using the AER's Post Tax Revenue Model (PTRM). The PTRM calculates a tax allowance based on assumption of accelerated tax depreciation for new assets (applicable to the WORM and SWP expansion in particular) and immediate tax expensing of much of our stay-in-business capex (eg pigging). The result is a zero tax allowance for all years.
- For tariff calculation purposes, forecast withdrawals by System Withdrawal Zone have been allocated to individual withdrawal zones on the basis of 2019 volumes, as AEMO has advised that the load patterns in 2020 and 2021 have been affected by Covid-19 related lockdowns in Victoria.

A.2 Confidential information

A.2.1 Application

2.	**CONFIDENTIAL INFORMATION**
2.1	This clause applies to any information *VTS* provides:
	(a) in response to Schedules 1, 2 and 3;
	(b) in an *access arrangement proposal* for the *next access arrangement period* (a *proposal*);
	(c) in a revision or amendment to a *proposal*; and
	(d) in a submission *VTS* makes regarding a *proposal* or a revised or amended *proposal*; (together, *VTSs'* information).

Acknowledged.

APA VTS claims confidentiality for the Security of Critical Infrastructure (SoCI) business case - VTS Business Case Roadmap to compliance under the Security Legislation Amendment (Critical Infrastructure) Bill 2020 – December 2021 – Confidential (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential). The confidential version has been lodged with the AER.

A redacted version has been made publicly available. (Filname VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Public).

APA VTS claims confidentiality for VTS - 2023-27 Access Arrangement Reset RIN Response - December 2021 – Confidential for parts of Table 2 in Section/ paragraph B.5.6 - Process undertaken to identify and quantify, pages 66 to 67. The information relates to the confidential SoCI program information.

A public version of the VTS - 2023-27 Access Arrangement Reset RIN Response - December 2021 has redacted the confidential SoCI program information. (Filename VTS - 2023-27 Access Arrangement Reset RIN Response - December 2021 - Public).

A.2.2 Confidentiality claim

2.2	If *VTS* wishes to make a claim for confidentiality over any of the *VTS'* information, provide the details of that claim in accordance with the requirements of the *AER's Confidentiality Guideline*, as if it extended and applied to that claim for confidentiality.

Acknowledged.

APA VTS claim for confidentiality made in the confidential information document (filename VTS - 2023-27 Access Arrangement revision: Confidential information - December 2021 - Public).

A.2.3 Details of confidentiality claim

2.3	*VTS* must provide any details of a claim for confidentiality in response to paragraph 2.2 at the same time as making the claim for confidentiality.

Acknowledged.

APA VTS details of the claim for confidentiality is made in the confidential information document (filename VTS - 2023-27 Access Arrangement revision: Confidential information - December 2021 - Public).

A.3 Resubmission of information

A.3.1 Required information

3. RESUBMISSION OF INFORMATION

3.1 If the *VTS* is required to resubmit information provided under this *notice* in subsequent *regulatory years*, *VTS* must provide:

(a) the relevant Microsoft Excel Workbook(s) fully populated with the latest submitted data and with revised information marked as amended using the 'Mark selection as AMENDED' tool within the Microsoft Excel Workbook(s);

(b) the reason for the resubmission;

(c) a statement as to whether or not the resubmitted information results in a *material* change in *VTS'* response to this *notice*.

There is no resubmitted information in this lodgement.

A.3.2 Assurance where material change

3.2	If *VTS* resubmits information which results in a material change to its response to this *notice*, the *AER* may request *VTS* provide assurance over this information by: (a) verifying the resubmitted information by way of a statutory declaration in accordance with Appendix B of *this notice*; and (b) provide the necessary *audit opinion report* and the *review conclusion statements* as applicable for the resubmitted information, prepared in accordance with the requirements set out in Appendix C of this *notice*.

There is no resubmitted information in this lodgement.

A.3.3 Assurance over resubmitted information

3.3	If the *AER* requests assurance over the resubmitted information in accordance with paragraph 3.2, such assurance information must be provided at the time the next annual response to this *notice* is due or on a date otherwise agreed to by the *AER*.

There is no resubmitted information in this lodgement.

A.4 Audit opinion reports and review conclusion statements

A.4.1 Provide audit opinion reports and review conclusion statements

4.1	Provide the *audit opinion report* and *review conclusion statements* as applicable, prepared in accordance with the requirements set out in Appendix C.

The audit opinion report and review conclusions report are provided as required.

A.4.2 Provide reports to management

4.2	Provide all reports from the *auditor* to *VTSs'* management regarding the review conclusion statements and/or *auditors'* opinions report or assessment.

There are no reports from the the auditor to APA VTS' management regarding the review conclusion statements or auditor's opinions.

A.5 Director Certification

5.	**DIRECTOR CERTIFICATION**
5.1	Provide, by the directors of *VTS*, a certification of the reasonableness of the key assumptions relating to the methodology used for developing *VTSs'* operating expenditure and capital expenditure forecasts.

At the APA VTS board meeting of 29 November 2021, the Board of APA VTS Australia (Operations) Pty Ltd certified the reasonableness of the key assumptions relating to the methodology used for developing VTS' operating expenditure and capital expenditure forecasts.

A.6 Statutory declaration

A.6.1 company officer to attest to the quality of the information provided

6.1	The *notice* requires a company officer of *VTS* to attest to the quality of the information provided in response to the *notice*, in accordance with the statutory declaration set out at Appendix B [of the Notice].

A company officer of VTS has provided a statutory declaration attesting to the quality of the information provided in response to the notice, in accordance with the statutory declaration set out at

Appendix B [of the Notice]. This is lodged with the submission package as VTS - RIN Statutory declaration Robert Wheals - December 2021 - Public.

A.6.2 Take into account relevant factors – forecast information

6.2	When attesting to the quality of the *forecast information* provided the officer of *VTS* should take into account relevant factors including (but not limited to) whether *forecast information* provided in response to this *notice*:
	(i) meets the requirements of the *NGL* and the *NGR* that should be taken into account when preparing the information for the *notice* and *access arrangement proposal;*
	(ii) meets the requirements of this *notice;*
	(iii) reflects the outcomes of the consumer consultation undertaken to prepare the *access arrangement proposal;*
	(iv) is consistent with the information provided in the *access arrangement proposal* of *VTS*, including the models for asset roll forward, operating expenditure, capital expenditure and revenue forecasts;
	(v) is based on assumptions, which are identified in response to paragraph 1.4(b) of Schedule 1 to this *notice,* and are justified and supported by evidence;
	(vi) is consistent with applicable *AER* Guidelines, or where it varies from those guidelines, is consistent with the variation as set out in the *access arrangement proposal;* and
	(vii) is consistent, to the extent possible, with historical information previously provided to the *AER*.

The company officer of VTS that provided a statutory declaration attesting to the quality of the information provided in response to the notice, in accordance with the statutory declaration set out at Appendix B [of the Notice], has taken these matters into account in making the declaration.

A.6.3 Take into account relevant factors – historical information

6.3	When attesting to the quality of the historical information provided the officer of *VTS* should take into account relevant factors including (but not limited to) whether estimated historical information provided in response to this *notice*:
	(i) meets the requirements of this *notice;*
	(ii) is based on assumptions, which are identified in response to paragraph 1.4(b) of Schedule 1 to this *notice;* and are justified and supported by evidence;
	(iii) is consistent with applicable *AER* Guidelines, or where it varies from those guidelines, is consistent with the variation as set out in the *access arrangement proposal;* and
	(iv) is consistent, to the extent possible, with historical information previously provided to the *AER*.

The company officer of VTS that provided a statutory declaration attesting to the quality of the information provided in response to the notice, in accordance with the statutory declaration set out at Appendix B [of the Notice], has taken these matters into account in making the declaration.

Appendix B Schedule 2 – Reset information

General requirements

B.1 Service provider details and business context

1. SERVICE PROVIDER DETAILS AND BUSINESS CONTEXT
Local agent of a service provider
1.1 Provide all details of any local agent(s) of *VTS* (s. 11 of the *NGL*).

APA VTS Australia (Operations) Pty Limited is not a foreign company and does not have a local agent.

B.2 Background to the pipeline

B.2.1 Pipeline and pipeline services

2. BACKGROUND TO THE PIPELINE
Pipeline and pipeline services
2.1 For the *current access arrangement period* for each *pipeline service* provided by way of *VTSs' gas transmission pipeline* that are *other services provided as a covered pipeline* in *VTSs' access arrangement proposal*, provide in the materials submitted to the *AER*:
(a) the annual volume of gas metered as having been transported by the *gas transmission pipeline*; and
(b) the number of *users*.

This information has been provided in the Annual Reporting RINS covering the periods 2011-19 and 2020, respectively:

	2018	2019	2020
Volume (GJ)	253,461,020	266,277,984	258,110,207
User numbers	39	43	53

Note that the volumetric information includes volumes associated with underground and LNG storage refill.

B.3 Capital expenditure

B.3.1 Information relating to all pipeline services

EXPENDITURE REQUIREMENTS	
3.	**CAPITAL EXPENDITURE**
3.1	The information required to be provided, prepared, kept or maintained in this part of the *notice* relates to all *pipeline service*s, including *reference services* and *other services provided as a covered pipeline*.

The information provided, prepared, kept and maintained relates to the single reference service for VTS the Tariffed Transmission Service.

Consistent with its role as the Declared Transmission System (DTS) service provider, APA VTS provides a single reference service for the VTS. APA VTS makes the DTS available to the Australian Energy Market Operator Limited (AEMO) under s.91BE(2) of the National Gas Law (NGL) to operate in accordance with the Service Envelope Agreement under NGL s91BA(b).

In accordance with the operation of the Declared Wholesale Gas Market, APA VTS will levy charges for the use of the DTS under a single service, the Tariffed Transmission Service.

B.3.2 Capital expenditure in the previous and current access arrangement period

Capital expenditure in the *previous and current access arrangement period*	
3.2	Provide *capital expenditure* at a *project* level and at a *capital expenditure* subcategory level in *Workbook 2 – Historical expenditure* and *Workbook 4 – 2021 expenditure, regulatory templates* E2 to E13. Where data is either not available to *VTS* or it is not practical to produce the data: (a) explain why; and (b) provide data at the most disaggregated level available.

Project level capital expenditures, at the project level with total expenditures [exceeding $500,000], have been provided in the completed regulatory template Workbook 2 – Historical data. (Workbook 4).

Replacement capital expenditure, by project, is provided in section E2.2.1 of worksheet E2. Repex of Workbook 2.

No volumes have been provided in section E2.2.2 of worksheet E2. Repex. The units of projects which APA VTS has undertaken cannot be assessed on the dimension of length. The projects are for specific items of equipment associated with the proper functioning of the pipeline.

B.3.3 Capital expenditure in the current access arrangement period

Capital expenditure in the *current access arrangement period*

3.3 Explain in the materials submitted to the *AER*:

(a) in terms of the nature of the work undertaken (scope, scale or other deviation from proposed works), the volume and the cost (deviation in unit rates), any *material difference* for each *capital expenditure category* between:

(i) the *capital expenditure* approved by the *AER* and the actual and/or estimated capital expenditure for the *current access arrangement period*; and

(ii) the *capital expenditure* proposed by *VTS* and the actual and/or estimated capital expenditure for the *current access arrangement period*; and

(b) whether and how *VTS* considers that *conforming capital expenditure* to be added to the *capital base* in the *current access arrangement period* meets the requirements of r. 79 of the *NGR*.

Comparing AER approved with actual and estimated capital expenditure

The AER's 2017 final decision approved a total capital expenditure forecast of $242.6 million ($2022) for the 2018-2022 access arrangement period.

APA VTS actual and estimated expenditure for the 2018-2022 period totals $293.6 million ($2022) and is $51 million or 21% over the AER 2017 final decision. The expenditure by asset categories and variances are shown in the below table.

Table 1 **Material difference by capital expenditure category 2018-2022 ($m, 2022)**

Capital expenditure	Unit	2018	2019	2020	2021	2022	2018-2022
AER final decision 2017							
Expansion	$m,2022	45.7	59.0	59.0	-	-	**163.6**
Replacement	$m,2022	13.1	12.2	9.6	12.9	14.3	**62.0**
Other	$m,2022	-	-	-	-	-	-
Non-System	$m,2022	4.2	3.6	3.3	3.6	2.3	**16.9**
Total	$m,2022	**63.0**	**74.8**	**71.8**	**16.5**	**16.6**	**242.6**
APA actual, estimated capex							
Expansion	$m,2022	13.3	17.7	11.0	30.6	97.3	**169.9**
Replacement	$m,2022	4.6	12.1	11.7	29.3	19.7	**77.5**
Other	$m,2022	-	-	-	-	3.7	**3.7**
Non-System	$m,2022	7.8	15.3	10.5	5.3	3.5	**42.4**
Total	$m,2022	**25.7**	**45.1**	**33.3**	**65.2**	**124.2**	**293.6**
Variance							
Expansion	$m,2022	-32.3	-41.3	-48.0	30.6	97.3	**6.3**
Replacement	$m,2022	-8.5	-0.1	2.2	16.4	5.5	**15.5**
Other	$m,2022	0.0	0.0	0.0	0.0	3.7	**3.7**
Non-System	$m,2022	3.5	11.7	7.3	1.8	1.2	**25.5**
Total	$m,2022	**-37.3**	**-29.6**	**-38.5**	**48.7**	**107.7**	**51.0**
Variance %							
Expansion	%	-71%	-70%	-81%	nan	nan	**4%**
Replacement	%	-65%	0%	23%	127%	38%	**25%**
Other	%	-	-	-	-	nan	**nan**
Non-System	%	83%	329%	223%	49%	52%	**150%**
Total	%	**-59%**	**-40%**	**-54%**	**295%**	**651%**	**21%**

Capital expenditure by driver

Expansion

The variance between the forecast and actual expansion capital expenditure was not material. There were some deviations in project scope and delays in investment.

- Anglesea was forecast in the 2018-2022 period but the project did not go ahead.
- Victorian Northern Interconnector Expansion looping
- Western Outer Ring Main project was delayed.

Table 2 **Material difference by expansion capital expenditure project 2018-2022 ($m, 2022)**

Expansion	Unit	2018	2019	2020	2021	2022	2018-2022
Angelsea							
AER 2017 final decision	$m,2022	14.1	12.7	-	-	-	26.8
APA VTS actual	$m,2022	-	-	-	-	-	-
Variance	$m,2022	**- 14.1**	**- 12.7**	-	-	-	**- 26.8**
	%						nan
VNIE looping							
AER 2017 final decision	$m,2022	1.6	-	-	-	-	1.6
APA VTS actual	$m,2022	9.2	1.9	1.4	0.2	-	12.7
Variance	$m,2022	**7.6**	**1.9**	**1.4**	**0.2**	-	**11.0**
	%						673%
Western Outer Ring Main							
AER 2017 final decision	$m,2022	23.8	44.2	59.0	-	-	127.0
APA VTS actual	$m,2022	1.0	7.6	9.6	30.4	97.3	146.0
Variance	$m,2022	**- 22.7**	**- 36.7**	**- 49.4**	**30.4**	**97.3**	**19.0**
	%						15%

Anglesea Pipeline

Anglesea Pipeline connection was proposed to AusNet Services Waurn Ponds City Gate. On 5 July 2019, APA VTS received correspondence that AusNet Services had made the decision to not proceed with construction of a Waurn Ponds City Gate and would be considering alternative options.

This decision by AusNet Services meant that there was no longer a need to augment capacity and the project did not proceed.[1]

[1] APA VTS can provide a copy of the letter received from AusNet if required.

Victorian Northern Interconnector

The Victorian Northern Interconnector Expansion (VNIE) looping project was delivered in stages starting from 2014 and was to originally to be fully completed by 2017. However, the project was not completed in 2017 and continued into the current period.

Western Outer Ring Main

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 tightening of supply / demand balance forecast by AEMO in March 2017. The 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.

In the AER's 2017 Final Decision 2018-22 on the access arrangement for VTS, a total of $127 million was included in the VTS capital program to undertake the WORM project. The WORM was justified based on the need to maintain system security.

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 key cost variances from the original forecast in 2017 are due to:

- Forecast increase in construction costs ($24 million) due to the number and length of horizontal directional drilling and rock disposal (the need for this discovered during the EES), additional EES conditions, Department of Transport requirements, and Covid related costs
- Land access and approval costs ($20 million) including EES process itself, net gain offsets, land access compensation, cultural heritage salvage works
- Materials procurement ($7.5 million) due to higher steel prices and delays in placement of orders due to EES.

APA is currently 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.

Replacement

Actual replacement expenditure for the current period of $75.5 million is $15.5 million (or 25%) higher than the AER 2017 forecast. The AER 2017 approved capital expenditure was a point-in-time forecast using the best information available when it was made.

The APA Asset Management Policy and Framework, used by APA VTS, embeds continuous review and re-prioritisation of capital projects as more up-to-date information becomes available closer to project delivery. The continuous review of projects results in changes to the capital expenditure requirements compared to those approved in 2017.

All proposed projects undergo risk assessment during an identification stage which is validated and adjusted, if necessary, during a subsequent concept development stage. Risk assessment is carried out against APA's corporate risk matrix, which is based on AS2885.6 but also incorporates additional APA criteria.

During the access arrangement period project delivery is reviewed each month, and expenditure is re-assessed, by project delivery teams. Capital projects are closely monitored and scrutinised, ensuring expenditures can be kept to a minimum while meeting APA's preferences for risk.

This process has resulted in:

- Prioritisation of projects that had not been anticipated for the 2018-2022 APA VTS Access Arrangement revision. This has resulted in deferral of programs & projects and the acceleration of other programs & projects
- Variance between the AER 2017 approved capital expenditure and the actual expenditure in the current access arrangement period.

The variance in key projects is shown in the table below.

Material difference by replacement expenditure programs & projects 2018-2022 ($m, 2022)

BC 258 Integrity	Unit	2018	2019	2020	2021	2022	2018-2022
AER 2017 final decision	$m,2022	4.0	3.4	0.6	4.5	4.3	16.8
APA VTS actual	$m,2022	1.7	3.7	4.0	7.4	3.3	20.2
Variance	$m,2022	-2.3	0.3	3.5	2.9	-1.0	3.4
Variance	%						20%

BC 259 Unpiggables	Unit	2018	2019	2020	2021	2022	2018-2022
AER 2017 final decision	$m,2022	0.6	2.0	0.2	0.0	0.0	2.9
APA VTS actual	$m,2022	1.0	6.2	2.0	10.4	16.8	36.3
Variance	$m,2022	0.3	4.1	1.8	10.4	16.8	33.4
Variance	%						1166%

BC 204 Brooklyn Compressor Station	Unit	2018	2019	2020	2021	2022	2018-2022
AER 2017 final decision	$m,2022	-	-	2.4	2.4	2.4	7.1
APA VTS actual	$m,2022	0.01	0.53	0.90	1.07	0.12	2.6
Variance	$m,2022	0.0	0.5	-1.5	-1.3	-2.3	-4.5
Variance	%						-63%

BC230 High consequence areas	Unit	2018	2019	2020	2021	2022	2018-2022
AER 2017 final decision	$m,2022	1.19	2.61	-	-	1.93	5.73
APA VTS actual	$m,2022	0.21	0.01	0.02	0.00	-	0.24
Variance	$m,2022	-1.0	-2.6	0.0	0.0	-1.9	-5.5
Variance	%						-96%

The most notable change in the replacement stay-in-business program has been an increase in the focus on asset integrity and unpiggables program. As shown in the above table, actual expenditure on the asset integrity program was $3.4 (20%) more than forecast and actual unpiggables was $33.4 million (1166%) more than forecast.

Prioritisation of asset integrity and unpiggables as meant that 13 programs were partially deferred and three completely deferred. Two projects that were partially deferred include BC204 Brooklyn Compressor Station and BC230 High consequence areas. These programs saw lower than forecast expenditure. These programs have been resubmitted as part of this access arrangement proposal.

Partially deferred and completely deferred projects have been resubmitted for the 2023-2027 access arrangement period.

Further information about APA's asset management policy is provided in APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public).

Non-system

APA VTS invested $42.1 million in non-system programs and projects which was $25.5 million (150%) more than the AER 2017 forecast. The key reasons for this included:

- Refurbishment of Dandenong office and storage
- VTS share of APA enterprise-wide Information Technology portfolio
- Change in the accounting standards for right of use leases for buildings and motor vehicles

Dandenong office & storage

APA VTA has forecast to invest $5 million to renovate Dandenong office in the 2014 to 2017 access arrangement period. The expenditure had been accepted by the AER as conforming expenditure.

Actual expenditure for Dandenong office & storage was incurred during 2018 – 2022 access arrangement period. The expenditure profile is shown in the following table.

Non-system	Unit	2018	2019	2020	2021	2022	2018-2022
Buildings							
AER 2017 final decision	$m,2022	0	0	0	0	0	0
Dandenong office & storage redevelopment	$m,2022	0.4	5.2	3.4	1.0	-	**10.1**

APA owns and operates Critical Infrastructure. During 2018-2022 APA Group evaluated the requirements of the Australian Government Security of Critical Infrastructure (SoCI) Amendment Bill and identified required changes to capabilities to comply with SoCI legislation.

Further information on the Security of Critical Infrastructure (SoCI) program provided in VTS Business Case Roadmap to compliance under the Security Legislation Amendment (Critical Infrastructure) Bill 2020) (refer to supporting material VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

APA VTS allocation of SoCI program costs is shown in the following table.

Other capital expenditure	Unit	2018	2019	2020	2021	2022	2018-2022
SoCI program							
SoCI cyber security	$m,2022	0	0	0	0	0.4	**0.4**
SoCI management, governance, procurement and personnel	$m,2022	0	0	0	0	0.5	**0.5**
SoCI physical security	$m,2022	0	0	0	0	2.9	**2.9**
Total SoCI program	**$m,2022**	**0.0**	**0.0**	**0.0**	**0.0**	**3.7**	**3.7**

During 2018-2022, APA VTS applied Australian accounting standard AASB 16, Leases, to right-of-use leases for land and buildings and motor vehicles. Their capitalised value is a non-system asset. The capitalised value for APA VTS determined in accordance with AASB 16 totals is $4.8 million as shown in the following table

Non-system	Unit	2018	2019	2020	2021	2022	2018-2022
APA VTS share of							
Right of use leases buildings	$m,2022	-	2.3	0.5	0.8	1.0	**4.5**
Right of use leases motor vehicles	$m,2022	-	-	-	0.2	0.2	**0.3**
Total ROU leases	**$m,2022**	-	**2.3**	**0.5**	**1.0**	**1.1**	**4.8**

Capital expenditure proposed by VTS in 2017 compared to actual in 2018-2022

APA VTS's 2017 revised proposal included a total of $259.9 million in capital expenditure for 2018 to 2022. APA VTS actual capital expenditure for the current period was $293.6 million which was $33.7 million (or 13%) higher than our 2017 revised forecast/

Material difference capital expenditure proposed by APA 2017 and actual 2018-2022 ($m, 2022)

Capital expenditure	Unit	2018	2019	2020	2021	2022	2018-2022
APA VTS proposed 2017							
Augmentation	$m,2022	45.1	50.5	61.9	0.0	0.0	157.4
Replacement	$m,2022	29.5	18.9	9.7	14.4	12.8	85.4
Non-System	$m,2022	4.3	3.6	3.3	3.6	2.3	17.2
Total	**$m,2022**	**78.9**	**73.0**	**74.8**	**18.1**	**15.1**	**259.9**
APA VTS actual, estimated							
Augmentation	$m,2022	13.3	17.7	11.0	30.6	97.3	169.9
Replacement	$m,2022	4.6	12.1	11.7	29.3	19.7	77.5
Non-System	$m,2022	7.8	15.3	10.5	5.3	3.5	42.4
Total	**$m,2022**	**25.7**	**45.1**	**33.3**	**65.2**	**124.2**	**293.6**
Variance $m							
Augmentation	$m,2022	-31.7	-32.7	-50.9	30.6	97.3	12.5
Replacement	$m,2022	-24.9	-6.8	2.1	14.9	6.9	-7.8
Non-System	$m,2022	3.5	11.7	7.2	1.7	1.2	25.2
Total	$m,2022	**-53.1**	**-27.9**	**-41.6**	**47.1**	**109.1**	**33.7**
Variance %							
Augmentation	%	-70%	-65%	-82%	nan	nan	8%
Replacement	%	-84%	-36%	21%	103%	54%	-9%
Non-System	%	81%	324%	219%	47%	50%	147%
Total	%	**-67%**	**-38%**	**-56%**	**261%**	**720%**	**13%**

Conforming capital expenditure

Capital expenditure in the current access arrangement period is conforming and can be added to the capital base

Conforming capital expenditure is expenditure that:

- would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services
- is justifiable against the criteria of r. 79(2) of the NGR.

The criteria of NGR r. 79(2) are:

- the overall economic value of the expenditure is positive
- the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure
- the capital expenditure is necessary to:
  - maintain and improve the safety of services
  - maintain the integrity of services
  - comply with a regulatory obligation or requirement
  - maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity).

APA VTS considers that the actual and estimated capital expenditure in the current access arrangement period is conforming capital expenditure in accordance with the requirements of r. 79(2).

APA VTS's asset management approach has complied, and continues to comply, with relevant Australian Standards and representing good industry practice.

APA VTS has in place detailed capital expenditure governance processes to ensure that projects undertaken are prudent, efficient and in line with overall strategy. Prudent asset management involves reviewing expenditure requirements closer to delivery to take into consideration new information, changes in customer requirements and changes in circumstances.

The capital expenditure over 2018-2022 reflects what would be incurred by a prudent service provider acting efficiently. APA's asset management approach over the 2018-2022 period reflects a reasonable and prudent basis for making efficient decisions about capital investment needs.

Further information about APA's asset management policy is provided in APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2027 Asset Performance and Life Cycle Plan –December 2021 – Public).

B.3.4 Speculative capital expenditure account, reused redundant assets, redundant assets and disposals in the current access arrangement period

Speculative capital expenditure account, reused redundant *assets*, redundant *assets* and *disposals* in the *current access arrangement period*
3.4 Provide an explanation in the materials submitted to the *AER* whether and how *VTS* considers the requirements of r. 79 of the *NGR* are met for any amounts added to or deducted from the opening *capital base*: (a) from the *speculative capital expenditure account*; (b) for the reuse of redundant *assets*; (c) for redundant *assets*; and (d) for *disposals*.

No amount from a speculative capital expenditure account has, in the current access arrangement period, been added to the opening capital base for the next access arrangement period.

No amount for the reuse of redundant assets in the current access arrangement period has been added to the opening capital base for the next access arrangement period.

No amount for redundant assets in the current access arrangement period has been deducted from the opening capital base for the next access arrangement period.

No amount of asset disposals in the current access arrangement period has been deducted from the opening capital base for the next access arrangement period.

This information is provided in VTS – RFM – December 2021 -Public (Roll Forward Model).

B.3.5 Forecast conforming capital expenditure next access arrangement period

Forecast *conforming capital expenditure* in the *next access arrangement period*

3.5 For each *capital expenditure category* identified in the *Workbook 1 – Reset (forecast) data, regulatory templates* E2 to E13, provide in the materials submitted to the *AER* an overall description including:

(a) a definition and explanation of any materiality threshold test that *VTS* intends to apply to categorise forecast conforming *capital expenditure projects*;

(b) the nature of forecast conforming *capital expenditure projects* or *programs material* to each *capital expenditure category*, including a brief description of the *capital expenditure* and, where relevant, the location of the expenditure on the *transmission pipeline*;

(c) key drivers of the proposed expenditure;

(d) an explanation of how expenditure is distinguished between:

(i) *expansion capital expenditure*, *replacement capital expenditure, non-system capital expenditure* and *other capital expenditure*; and

(ii) any *capital expenditure category* or *operating expenditure category* where *VTS* considers that there is reasonable scope for ambiguity in categorisation or *capitalisation*.

(e) details as to whether the forecast conforming *capital expenditure* is to be funded by parties other than *VTS*; and

(f) details of contractual agreements with parties where *capital contributions* are made by *users* to new capital expenditure (see r. 82).

Materiality threshold

APA VTS has not used a materiality threshold to categorise forecast conforming capital expenditure projects. The capital expenditure forecasts have been prepared using a bottom-up approach based on best available information at this time.

Note that in response to Worksheet 1 – E2.1 – APA VTS has reported has programs with a value greater than $500,000 and aggregated projects with a value under $500,000.

Nature and drivers of the conforming capital expenditure

The nature of the conforming capital expenditure is set out in the following table.

Category	Nature	Driver(s)
Expansion	The nature of the expansion capital expenditure is to improve security of supply in the VTS to ensure reliable services for customers and consumers. Expansion capital expenditure for Western Outer Ring Main and South West Pipeline is driven by the need to maintain APA VTS's capacity to meet levels of demand for existing services.	Reliability and security of supply.
Replacement	The nature of the replacement capital expenditure projects is for replacement of assets, components and equipment on the VTS. The nature of the replacement capital expenditure is to maintain assets on the VTS to 'stay-in-business'. It includes expenditures to replace items of plant and equipment that have reached end-of-life, and expenditures to prolong the service lives of plant and equipment. Replacement expenditure also includes expenditures on the replacement of equipment required for continued operation which can no longer be maintained because components and technical expertise are no longer available from equipment manufacturers or suppliers.	Key primary drivers are safety, reliability, integrity. Secondary drivers include obsolescence for legacy assets.
Other - hydrogen safety & integrity testing	Investigation into safety and integrity of carrying hydrogen on the VTS, and what the impacts on pipeline material, operational envelope and overall capacity of the transmission network may be.	Safety and integrity following Energy Ministers' September agreement
Other - SoCI	APA VTS compliance with Australian Government Security of Critical Infrastructure (SoCI) Amendment Bill	New obligations under Security of Critical Infrastructure legislation
Non-system – Information Technology	Information Technology portfolio covers three core functions: • Enterprise Program Management Office • Operational Technology • Information Technology.	Replacement of obsolete legacy systems (and migration to cloud-based systems at the same time) Routine upgrades and maintenance (licensing, system upgrades).

Non-system – right of use leases	Right of use leases for building and property and motor vehicles Since 2019, APA VTS has applied Australian Accounting Standard AASB 16, Leases, in respect of right-of-use assets, and has reported the capitalised value of the future lease payments as a liability in respect of which depreciation and interest on the liability are reported annually	Safety, reliability and integrity
Capital overheads	From 2023, APA VTS has separated capital overheads y from expansion, replacement, and non-network asset categories. Where a department or employee provides services to support the project team and capital activities, these costs are recorded in the respective departments. To the extent that the labour costs qualify as "directly attributable" the costs are recharged and capitalised to the respective capital project by way of an "overhead allocation of capital costs". This aligns with APA's Accounting policy – Capitalisation of Labour Costs.	Safety, reliability, and integrity

Distinguishing categories of expenditure

APA VTS has applied the definitions of asset categories as set out in AER Reset RIN Appendix F for expansion, replacement, other, non-system (non-network) and capital overheads.

Funding

No scope exists for ambiguity in the categorisation or capitalisation of expenditures planned for the next access arrangement period.

Noting that interactions between APA VTS's forecast conforming capital expenditure and forecast operating expenditure includes:

- Migration of technology programs from in-house to cloud-based services. The driver for this shift is due to exogenous factors
    - Cloud-based services becoming the primary platform for many applications vendors
    - Obsolete systems including no or limited warranty/ support and service from vendors
    - Hard to find components and spare parts and outdated software
    - Clarification of accounting standards by IFRIC Interpretations Committee (IFRIC®). clarifying how arrangements in respect of a specific part of cloud technology, Software-as-a-Service (SaaS), should be accounted for.
    - Cloud-based services has shifted technology programs from capital to operating expenditure including Asset Management, Back Office (Enterprise Resource Planning) and Field Mobility.

More discussion about the Information Technology portfolio can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

Capital contributions

None of the forecast capital expenditure is to be funded by a party other than APA VTS.

B.3.6 New capital expenditure criteria

3.6	For forecast *conforming capital expenditure*, in total and in terms of each *capital expenditure category*, explain in the materials submitted to the *AER*:
	(a) how it reasonably reflects the new *capital expenditure* criteria set out in r. 79(1) of the *NGR*, and how *VTS* has interpreted these criteria;
	(b) how the forecast conforming *capital expenditure* is justified under r. 79(2) of the *NGR* and how *VTS* has interpreted these sub-rules; and
	(c) how any plans, policies, procedures, regulatory obligations or requirements, consultants' reports, *economic analysis* and assumptions have been used to justify the forecast conforming *capital expenditure*.

Replacement capital expenditure

Explanation for proposed replacement (stay-in-business) capital expenditure are provided in the document APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public) and Business cases.

Security of supply expansion

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – - December 2021 – Public).

Other capital expenditure

Explanation for proposed SoCI program is provided in the Business Case for Security of Critical Infrastructure (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

Explanation for proposed hydrogen testing is provided in Capital expenditure Business Case Number 200 Evaluating and mitigating hydrogen safety and integrity risks on the VTS (filename VTS - BC200 AA23-27. Hydrogen safety and integrity - December 2021 - Public).

Non-system - Information Technology portfolio

Explanation about the Information Technology portfolio can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

B.3.7 Economic value

3.7	If r. 79(2)(a) is relied on to justify the forecast conforming *capital expenditure*, provide in the materials submitted to the *AER*:
	(a) the calculations of the economic value of the capital expenditure that directly accrues to the *service provider*, gas producers, *users* and end users; and
	(b) an explanation of the nature and quantification of the economic value that directly accrues to the *service provider*, gas producer, *users* and end users (see r. 79(3)).

APA VTS has not relied on r.79(2)(a) to justify any of the forecast conforming capital expenditure.

B.3.8 Incremental revenue

3.8	If r. 79(2)(b) is relied on to justify forecast *conforming capital expenditure*, provide in the materials submitted to the *AER*: (a) the information *VTS* relied on to determine the expected incremental revenue to be generated as a result of the forecast *conforming capital expenditure*; (b) a description of the incremental service or services (see r. 79(4)(a)); (c) the gross revenue derived from the incremental service (see r. 79(4)(b)); (d) the incremental expenditure (see r. 79(4)(b)); and (e) the discount rates that *VTS* used to determine the present value of the incremental revenue.

APA VTS has not relied on r.79(2)(b) to justify any of the forecast conforming capital expenditure.

B.3.9 Rule 79(2)(c)(i), (ii) or (iii)

3.9	If r. 79(2)(c)(i), (ii) or (iii) is relied on to justify the forecast conforming *capital expenditure*, provide in the materials submitted to the *AER*: (a) an explanation of which item in r. 79(2)(c)(i), (ii) or (iii) is relied on; (b) the relevant *regulatory obligation or requirement* (if any) and the relevant authority or body enforcing it; (c) an explanation of whether and how *VTS* considers that the forecast conforming *capital expenditure* satisfies the item in r. 79(2)(c)(i), (ii) or (iii) being relied on; and (d) any supporting technical or other external or internal reports about whether and how *VTS* considers that the forecast conforming *capital expenditure* addresses the relevant item in r. 79(2)(c)(i), (ii) or (iii).

APA VTS has relied on r. 72(2)(c)(i), (ii) and (iii) to justify conforming capital expenditure. The explanations, relevant regulatory obligation or requirements, and how the forecast conforming capital expenditure satisfies r. 72(2)(c)(i), (ii) and (iii) are provided in supporting technical documents.

Replacement capital expenditure

Justification for proposed replacement (stay-in-business) capital expenditure are provided in the document APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public) and Business cases.

Other capital expenditure

Justification for proposed SoCI program is provided in the Business Case for Security of Critical Infrastructure (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

Justification for proposed hydrogen testing is provided in Capital expenditure Business Case Number 200 Evaluating and mitigating hydrogen safety and integrity risks on the VTS (filename VTS - BC200 AA23-27. Hydrogen safety and integrity - December 2021 - Public).

Non-system - Information Technology portfolio

Justification about the Information Technology portfolio can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

B.3.10 Rule 79(2)(c)(iv)

3.10	If r. 79(2)(c)(iv) is relied on to justify forecast conforming *capital expenditure*, provide in the materials submitted to the *AER*: (a) an explanation of how the conforming *capital expenditure* is necessary to maintain *VTS's* capacity to meet levels of demand for services; and (b) any reports or other information and documentation that supports whether and how *VTS* considers that the forecast *capital expenditure* will maintain the capacity to meet the levels of demand for services.

Security of supply expansion - South West Pipeline

Justification for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – - December 2021 – Public).

It should be noted that the SWP expansion will require a supportive investment environment in order to proceed. As discussed throughout this proposal, there is a strong tension between the needs for peak day security of supply and annual supply adequacy on one hand, against the ambitions of the Victorian government to reduce gas use through the Net Zero 2050 target Gas Substitution Road Map on the other.

The APA VTS access arrangement proposal includes three elements to create the supportive investment environment required to allow this project to proceed:

- If gas demand falls as envisioned by the Victorian Gas Substitution Road Map, the Infrastructure Victoria interim report and the AEMO IASR, the investment required to accommodate this project may only be required for a relatively short term – less than the long term nature of the required capital investment. There is a risk that gas may not play a sufficient role in the Victorian energy mix to enable APA VTS to recover its capital over the technical life of the assets required to be built. The APA VTS proposed access arrangement therefore proposes to limit depreciable asset lives to 30 years, and to review depreciable asset lives at each VTS access arrangement review going forward. This investment would be subject to the curtailed regulatory depreciation asset lives.

- If gas demand falls after these expansions are completed, the investment could be exposed to the National Gas Rules Capital Redundancy provisions in Rule 85. The APA VTS access arrangement proposal includes a Fixed Principle under Rule 99 that the capital redundancy provisions of Rule 85 or the Access Arrangement are never to apply to investment to expand the capacity of the VTS during the upcoming access arrangement period. This investment would be subject to that Fixed Principle.

For the avoidance of doubt, APA VTS sees investment in the SWP_570 expansion as being contingent on the AER's approval of a supportive investment environment as proposed in this AA proposal.

If these elements are not accepted by the AER in the APA VTS access arrangement, the resultant risk/reward balance will render it impossible to attract capital to this project. APA VTS has been frank on this point with project proponents, the AER, AEMO, state and federal government agencies, and consumer representatives and industry participants through the stakeholder consultation process.

Security of supply expansion -Western Outer Ring Main

APA VTS has relied on r. 79(2)(c)(iv) to justify forecast conforming capital expenditure for the Western Outer Ring Main and South West Pipeline upgrade.

The Western Outer Ring Main was commenced in the current access arrangement period and will continue to be constructed in the next access arrangement period.

Consideration of Non-Network options to avoid augmentation capital expenditure

Relating particularly to the SWP expansion, one of the key dynamics in this access arrangement revision proposal is the interaction between:

- the need to provide injection capacity to meet current levels of demand;
- declining supply capability from Longford; and
- potential reductions in demand caused by the Victorian government's decarbonisation initiatives.

There is a concern that the proposed SWP expansion investment, while required for security of supply purposes in the 2018-2022 access arrangement period, may not be required in future access arrangement periods – that we are proposing to invest long term capital to address what could be a short-term supply pinch.

To address this concern, APA VTS investigated other options that would obviate the need to undertake the SWP expansion. APA VTS examined the scope to curtail demand on peak days, such that the existing VTS would be capable of meeting those (reduced) peak days. If the costs associated with compensating some large users for peak day curtailment was less than the costs of undertaking the SWP expansion, then it would be more efficient to compensate large users for curtailing their demand on those peak days.

For example, the annualised cost of the SWP augmentation could be estimated as follows:

Capital costs of 2 compressors	$100,000,000	
WACC	5%	
Return on capital		$5,000,000
Depreciation over	20 years	$5,000,000
Operating expenditure (2 compressors)		$500,000
Total annual cost of expansion		$10,500,000

In rough terms, the SWP augmentation will provide an additional (approximately) 100TJ/day of injection capacity. If we assume we would need to curtail large users on ten peak days, this suggests that we could pay large users up to $10,500/TJ per day to curtail their load before the cost of expansion became more cost effective. Moreover, if peak demand were to fall as envisioned by the Victorian Gas Substitution Road Map, the Infrastructure Victoria interim report and the AEMO IASR, the curtailment payments to large users would only be required for a few years, as opposed to

the costs of the SWP expansion, which would endure for the 30-year life of the compression equipment.

There is clearly an opportunity to investigate demand side options in assessing the need for augmentation capital expenditure.

However, under the market carriage model as governed by Part 6, Division 2 of the National Gas Law and Part 19 of the National Gas Rules, it is AEMO that is responsible for operating the system, including the injection and withdrawal of gas through the Declared Wholesale Gas Market. AEMO is responsible for managing the gas supply and demand balance over the course of the day, and for declaring a Threat to System Security or a Gas Emergency as the case may be. Moreover, APA VTS does not have a customer relationship with users under which it can ask users to curtail demand, nor a mechanism under which it can report that demand response to the DWGM.

In summary, APA VTS considers that a demand response initiative would be a prudent course of action relative to SWP augmentation. However, the structural elements of the market carriage model place any such initiatives squarely in AEMO's area of responsibility.

As a demand response option is not open to APA VTS, it is left with the augmentation option proposed. APA VTS will continue to liaise with the AER and AEMO to ascertain the scope for demand response to be considered in the assessment of the SWP augmentation under Rule 79.

B.3.11 Project list

3.11	For the *expansion capital expenditure, replacement capital expenditure, non-system capital expenditure and other capital expenditure purpose* provide a *project* list which details for each *project* in the *capital expenditure purpose*:
	(a) an *internal identification code*, which will enable *VTS* to report *actual capital expenditure* against *forecast capital expenditure*;
	(b) the *project* name used internally by *VTS*;
	(c) the cost and timing of the *project capital expenditure*; and
	(d) a brief description of the *project* and its scope.

Information for capital expenditure programs on names, business case numbers, cost and timing is provided in the APA VTS capital expenditure model.

The only expansion related capital expenditure projects are the WORM and the SWP_570 expansion project. These are discrete projects.

Replacement capital expenditure

Project names the costing and timing of replacement capital expenditures, and brief descriptions of projects and their scopes are provided in the document Lifecycle Management Plan Victorian Transmission System 2023-2027 which is Attachment 1 to the Reset RIN response and Business Cases. More detail is provided in the individual business cases. These projects are:

Summary of replacement programs and projects
WCS A Process Safety (BC203)
Brooklyn CS Upgrade (BC204)
Compressor Station Vent Upgrade (BC205)
Iona CS Aftercooler Upgrade (BC211)
Battery Charger Upgrades (BC212)
Wollert CG & T74/T119 PRS Instrument Air (BC216)
T33 LV03 Pit (BC220)
Dandenong City Gate Gas Quality (BC224)
Control Valve Positioner Replacement (BC225)
SMS Aerial Photography (BC227)
Encroachment High Consequence (BC230)
Turbine Overhaul and Minor Upgrades (BC235)
Emergency Response Equipment (BC239)
BCS Unregulated Bypass Upgrade (BC242)
Security Physical (BC243) (now part of SOCI Program Scope)
CP Replacement (BC244)
Hazardous Area Rectification (BC249)
Pipeline Integrity (BC258)
VTS Unpiggables (BC259)
Liquids Management (BC260)
Pipe Support Replacement (BC263)
HMI ClearSCADA Upgrade (BC264)

Summary of replacement programs and projects
BCS Unit 12 Inlet Filter Upgrade (BC267)
Type B Compliance (BC271)
VTS Mainline Isolation Valve Upgrade (BC275)
Reliability Centred Maintenance (BC307)
Arc Flash Risk Mitigation (BC309)
Critical Spares (BC314)
Station Control Logic Review and Rectification (BC317)
VTS Waterbath Integrity (BC328)
VTS Facility Pipework Integrity (BC329)
Low Value Preventative & Reactive Maintenance (BC330)

A summary of the costs and timing of expenditure is provided in the capex model lodged with this proposal.

In the “Other” category are the Hydrogen Safety (VTS - BC200 AA23-27. Hydrogen safety and integrity - December 2021 – Public) and SoCI (VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 – Confidential) business cases, also discrete cases.

Description of programs and projects are provided for in the Business Cases submitted as supporting material to the proposal.

B.3.12 Capital expenditure forecast method

Capital expenditure forecast method
3.12 Describe in the materials submitted to the *AER* how the forecast conforming *capital expenditure* was prepared, including: (a) the forecasting methodologies used; (b) how its preparation differed or related to budgetary, planning and governance processes used in the normal running of *VTSs'* business; (c) processes for ensuring amounts are free of error and other steps in quality assurance; and (d) if and how *VTS* considered the resulting amounts, when translated into price impacts, were in the long term interest of consumers.

The forecasts for capital expenditure are based on the following methods for asset categories:

Replacement capital expenditure

Forecasting methods for replacement capital expenditure are discussed in APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public) and Business cases.

The replacement expenditure forecasts have been derived from actual historical costs for similar projects. APA VTS can draw from a significant database of historical costs, from across APA Group, including costs from original equipment manufacturers, and the costs of projects delivered by independent contractors.

Security of supply expansion - South West Pipeline

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – - December 2021 – Public).

The project is of routine nature to APA VTS and forecasts have been based on costs for similar projects. APA VTS can draw from a significant database of historical costs, from across APA Group, including costs from original equipment manufacturers, and the costs of projects delivered by independent contractors.

All construction work would be completed by technically proven contractors, to APA VTS's engineering design and specifications. All construction processes are overseen by APA VTS.

Security of supply expansion – Western Outer Ring Main

In the AER's 2017 Final Decision 2018-22 on the access arrangement for VTS, a total of $127 million ($2022) was included in the VTS capital program to undertake the WORM project. The WORM was justified based on the need to maintain system security.

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 key cost variances from the original forecast in 2017 are due to:

- Forecast increase in construction costs ($24 million) due to the number and length of horizontal directional drilling and rock disposal (the need for this discovered during the EES), additional EES conditions, Department of Transport requirements, and Covid related costs
- Land access and approval costs ($20 million) including EES process itself, net gain offsets, land access compensation, cultural heritage salvage works
- Materials procurement ($7.5 million) due to higher steel prices and delays in placement of orders due to EES.

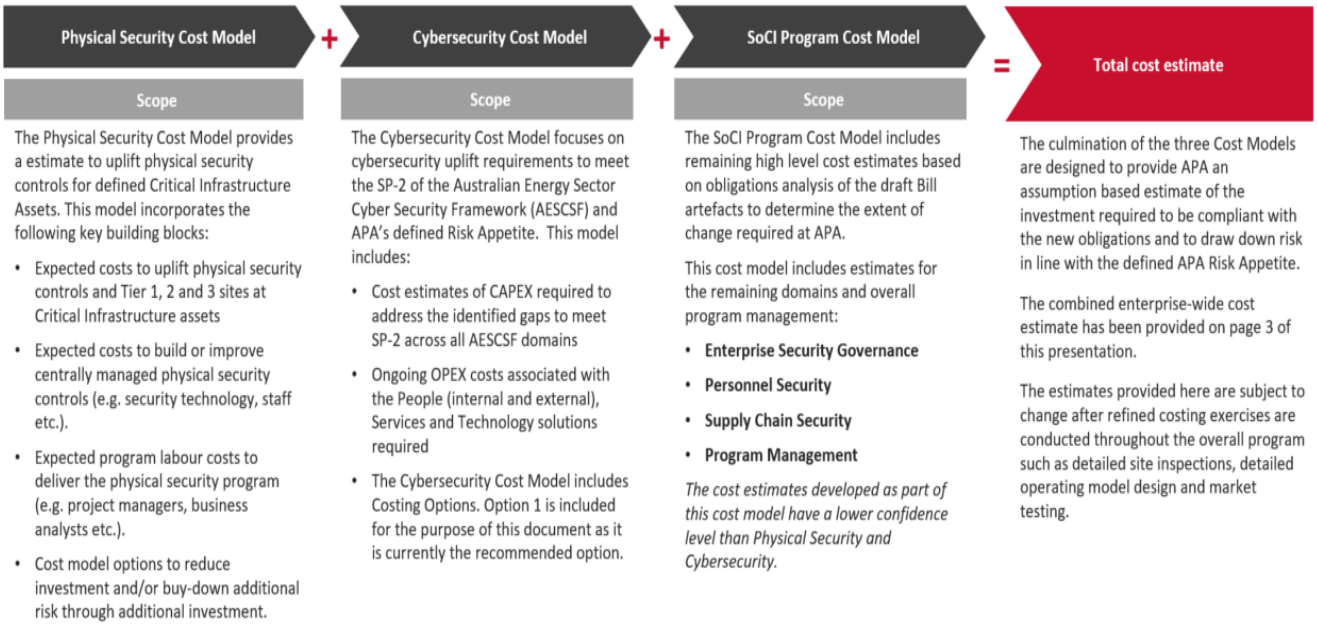
APA is currently preparing to go to market for pipeline and facilities construction. Depending on the planning approvals, we expect the WORM to be completed by mid-2023.

Other capital expenditure – SoCI

For the purposes of the VTS access arrangement proposal, APA's has prepared best estimates at the current time of SoCI program and project scopes and expenditure requirements required to meet SOCI requirements.

The enterprise-wide SoCI program cost estimates incorporate information from three cost models – physical security, cybersecurity and the remaining program domains.

An overview of the costing methodology is shown in the following diagram.



Further explanation for proposed SoCI program is provided in the Business Case for Security of Critical Infrastructure (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

Other capital expenditure – Hydrogen safety & integrity assessment

The VTS comprises of approximately 2,262 km of high-pressure gas transmission pipelines made up of 51 pipelines under 46 individual licences. In preparation for the VTS access arrangement submission, APA has completed preliminary desktop analysis of the network, including a high-level screening assessment for each of the pipelines and associated assemblies / facilities to determine the costs to complete the proposed safety and integrity assessment.

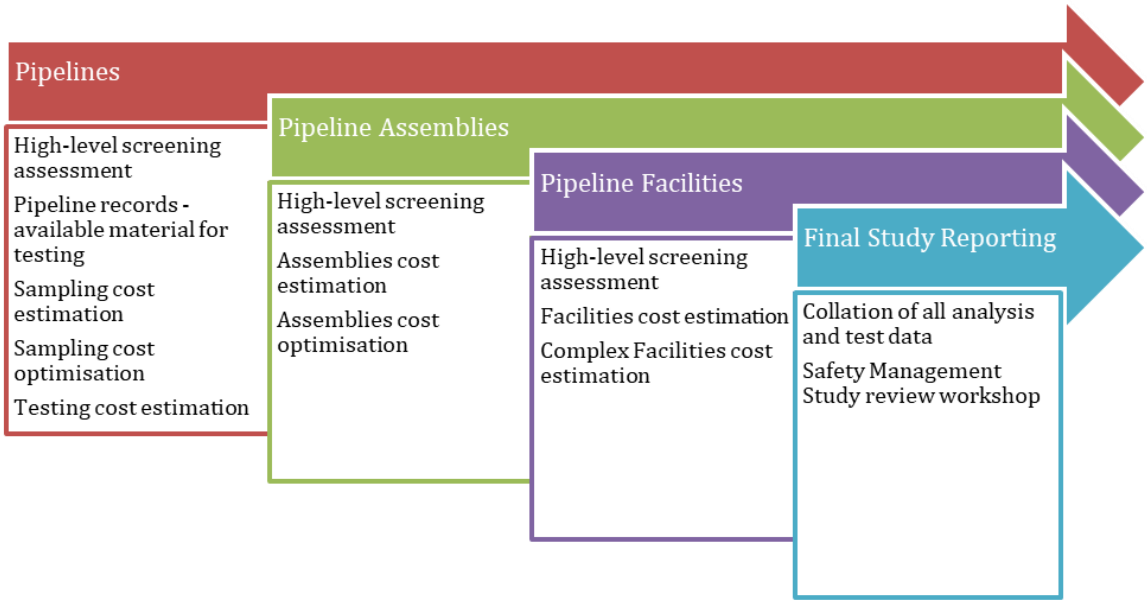
The cost estimation methodology is summarised in Figure 3 below. Our approach is underpinned by our understanding of the potential effects of hydrogen embrittlement, balanced by a pragmatic test approach that will optimise cost impacts to customers whilst maintaining the safe operation of the network.

The desktop analysis and high-level screening assessment for this VTS safety and integrity assessment has been developed in line with industry best practice and informed by our learnings from our Parmelia Gas Pipeline (PGP) Conversion Project.

Through our PGP Conversion Project, we have established an international advisory panel of experts who have guided the development of our test program and provide ongoing input and guidance to validate our approach and test results. This PGP project and associated test program has created

inhouse knowledge and has formed the foundation of the proposed VTS safety and integrity assessment.

Hydrogen assessment cost allocation methodology



Further explanation for proposed hydrogen testing is provided in Capital expenditure Business Case Number 200 Evaluating and mitigating hydrogen safety and integrity risks on the VTS (filename VTS - BC200 AA23-27. Hydrogen safety and integrity - December 2021 - Public).

Non-system - Information Technology portfolio

Cost methodologies for the Information Technology portfolio can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

Long term interest of consumers

The total capital expenditure forecast for the next access arrangement period is in the long-term interest of consumers. The capital expenditure in all categories it is necessary to continue safe, reliable, and secure service provision for customers and consumers of the VTS. The capital expenditure is aligned with reducing risk to as low as reasonably practicable.

B.3.13 Source material

3.13	In relation to any source material (including models, documentation or any other items containing quantitative data) used by *VTS* to develop its forecast *conforming capital expenditure*, provide in the materials submitted to the *AER*: (a) a copy of this source material; and (b) all calculations that demonstrate how data from the source material has been manipulated or transformed to generate data provided in the *regulatory templates*.

Refer to response to above question B.3.12.

B.3.14 Tender processes

3.14	Identify which particular items of *VTSs'* forecast conforming *capital expenditure* have been: (a) derived directly from competitive tender processes; (b) based upon competitive tender processes for similar *projects*; (c) based upon estimates obtained from contractors or manufacturers; (d) based upon independent benchmarks; (e) based upon actual historical costs for similar *projects*; and (f) are reflective of any amounts for risk, uncertainty or other unspecified contingency factors, and if so, how these amounts were calculated and deemed reasonable.

Replacement capital expenditure

Forecasting methods for replacement capital expenditure are discussed in APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public) and Business cases.

The replacement expenditure forecasts have been derived from actual historical costs for similar projects. APA VTS can draw from a significant database of historical costs, from across APA Group, including costs from original equipment manufacturers, and the costs of projects delivered by independent contractors.

Security of supply expansion - South West Pipeline

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570

TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – - December 2021 – Public).

The project is of routine nature to APA VTS and forecasts have been based on costs for similar projects. APA VTS can draw from a significant database of historical costs, from across APA Group, including costs from original equipment manufacturers, and the costs of projects delivered by independent contractors.

All construction work would be completed by technically proven contractors, to APA VTS's engineering design and specifications. All construction processes are overseen by APA VTS.

Security of supply expansion – Western Outer Ring Main

APA is currently preparing to go to market for pipeline and facilities construction for the WORM. Depending on the planning approvals, we expect the WORM to be completed by mid-2023.

B.3.15 Business cases

3.15	Provide in the materials submitted to the *AER* any relevant internal decision making *documents* relating to approval of the forecast *conforming capital expenditure* and any other internal or external documentation or models that justify the *forecast conforming capital expenditure*, including but not limited to: (a) business cases; (b) feasibility studies; (c) forecast demand studies and internal reports; and (d) the date of any relevant internal decision making body/management decisions and board decisions.

Replacement capital expenditure

Forecasting methods for replacement capital expenditure are discussed in APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public) and Business cases.

Security of supply expansion - South West Pipeline

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – December 2021 – Public).

Other capital expenditure - SoCI

Explanation for proposed SoCI program is provided in the Business Case for Security of Critical Infrastructure (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

Other capital expenditure – Hydrogen safety & integrity testing

Explanation for proposed hydrogen testing is provided in Capital expenditure Business Case Number 200 Evaluating and mitigating hydrogen safety and integrity risks on the VTS (filename VTS - BC200 AA23-27. Hydrogen safety and integrity - December 2021 - Public).

Demand forecasts

Oakley Greenwood, Issues Affecting Demand and Supply for Gas on the VTSVictorian Transmission System (14 October 2021) (refer to filename VTS - Oakley Greenwood - Issues Affecting Demand and Supply for Gas on the VTS - Sep 21 – Public).

APA VTS Board

APA VTS Australia (Operations) Pty Ltd subsidiary board met on 29 November 2021 to provide authority for a Director to issue a Director's certification on the Regulatory Information Notice that must be completed as part of the VTS Access Arrangement regulatory proposal, and to authorise an Officer to provide a statutory declaration in support of the information provided with that proposal.

B.3.16 Deliverability

3.16	Provide in the materials submitted to the *AER* all *documents* which were taken into account and relate to the *deliverability* of forecast *conforming capital expenditure* and explain the proposed *deliverability*.

Replacement capital expenditure

Forecasting methods for replacement capital expenditure are discussed in APA VTS 2023-2027 Asset Performance and Life Cycle Plan (refer to VTS – VTS 2023-2017 Asset Performance and Life Cycle Plan –December 2021 – Public) and Business cases.

Security of supply expansion - South West Pipeline

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570

TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – December 2021 – Public).

The project is of routine nature to APA VTS and will be delivered over two years.

B.3.17 Non-conforming capital expenditure in the next access arrangement period

Non-conforming capital expenditure in the *next access arrangement period*
3.17 Provide in the materials submitted to the *AER* in relation to *non-conforming capital expenditure*: (a) details of the mechanism to prevent *VTS* from benefiting, through increased revenue, from the *capital contributions* by a *user* in the *next access arrangement period* (see r. 82(3)).

Section 3.3 of the proposed VTS 2023-2027 access arrangement includes the following provision:

> *Service Provider (APA VTS) to charge Users a Surcharge where permitted by the National Gas Rules. Service Provider will notify the AER of any proposed Surcharge to be levied on Users of incremental services and designed to recover non-conforming capital expenditure or a specified portion of non-conforming capital expenditure. Non-conforming capital expenditure which is recovered by means of a Surcharge will not be rolled into the Capital Base.*

This provision prevents APA VTS from benefiting in relation to non-conforming expenditure.

Refer to the proposed VTS 2023-2027 access arrangement (filename VTS - VTS 2023-2027 access arrangement – tracked - December 2021 – Public).

B.3.18 Capital redundancy policy in the next access arrangement period

Capital redundancy policy in the *next access arrangement period*
3.18 If relevant, provide in the materials submitted to the *AER*: (a) an explanation of the proposed mechanism to remove redundant *assets* from the *capital base* including: (i) when the mechanism will take effect; and (ii) whether the mechanism includes a *proposal* for cost sharing between the *service provider* and *users* associated with a decline in demand for *pipeline services*; (b) an explanation of why the mechanism is being included; (c) an explanation of what uncertainty the mechanism may cause; and (d) the effect of this uncertainty on *VTS*.

The capital redundancy mechanism from the current access arrangement has been retained for the forecast access arrangement.

APA VTS proposes to include in the capital redundancy mechanism a Fixed Principle under Rule 99 that would prevent the capital redundancy provision from applying to expansions of the South West Pipeline.

Capital Redundancy Mechanism

> *In accordance with Rule 85, the AER may review, and if necessary, adjust the Opening Capital Base at 1 January 2028 based on the following principles:*
>
> *(a) any assets that cease to contribute as a whole to the delivery of the Reference Service to Users shall be removed from the Capital Base; and*
>
> *(b) costs associated with a decline in the volume of sales of the Reference Service provided by means of the VTS will be shared between Service Provider and Users.*
>
> *Subject to the New Capital Expenditure criteria under Rule 79, if, after the reduction of the Capital Base by the value of assets identified as redundant, the assets later contribute to the delivery of the Reference Service (however described at the time), the assets will be treated as New Capital Expenditure (for the purposes of Rules 79, 81 and 84) equal to the value of the assets identified as redundant increased annually on a compounded basis by the*

weighted average cost of capital from the time the assets identified as redundant were removed from the Capital Base.

This capital redundancy mechanism does not apply to any capital invested in expansion of the capacity of the South West Pipeline in the Sixth or subsequent Access Arrangement periods.(emphasis added)

Further information on the consideration of the proposed Fixed Principle is provided in A look at plans for the VTS – Overview of 2023-2027 access arrangement proposal (filename VTS – A look at plans for the VTS – Overview of 2023-2027 access arrangement proposal – December 2021 – Public).

B.4 Operating expenditure

B.4.1 Operating expenditure in the current access arrangement period

4. OPERATING EXPENDITURE
Operating expenditure in the *current access arrangement period*
4.1 For the *current access arrangement period* in the materials submitted to the *AER*:
(a) identify all relevant *related parties*; and
(b) provide an explanation of any non-recurring expenditures and the expenditure incurred for each non-recurring expenditures each *regulatory year*.

Related parties:

APA VTS operates as part of the APA Group, a business comprising a national portfolio of pipelines and other energy infrastructure assets. As part of its initiatives to achieve economies of scope and scale to the benefit of pipeline customers, many pipeline operating activities are carried out by national teams, with the costs attributable to the VTS being allocated through the cost allocation methodology. These amounts are not reported as related party transactions.

The APA Group organisational chart and a list of associates carrying on a related business was lodged with the AER on 19 October 2021 in the context of the APA VTS reporting under the annual compliance order of 7 November 2008.

APA VTS has not identified any non-recurring operating expenditure items.

B.4.2 Forecast operating expenditure in the next access arrangement period

Forecast operating expenditure in the *next access arrangement period*

4.2 For forecast total *operating expenditure* provide in the materials submitted to the *AER*:

(a) a description and explanation of the major drivers for the increase/decrease in expenditure for each *operating expenditure category* between the *current access arrangement period* and the *next access arrangement period*;

(b) information on any changes to the operations of the pipeline from the *current access arrangement period* that have resulted in *material* changes to *operating expenditure categories* and total *operating expenditure* in the *next access arrangement period*, including a definition of the materiality threshold used by *VTS* to identify such changes;

(c) the models or methodology used to develop the forecast total *operating expenditure*; and

(d) a description of how the forecast was prepared, including:

(i) how forecast *operating expenditure* reasonably reflects the criteria set out in r. 91(1) of the *NGR*;

(ii) if a revealed cost *base year* approach was used to forecast total *operating expenditure*;

(1) what the *base year* is; and

(2) why that *base year* represents efficient, recurrent costs;

(iii) if a revealed cost *base year* approach was not used to forecast total *operating expenditure*;

(1) whether there was a year of historical *operating expenditure* available that represents efficient, recurrent costs; and

(2) if not, why no year of historical *operating expenditure* represents efficient, recurrent costs; and

(iv) any non-recurrent expenditure in the *base year* and each year of the *next access arrangement period*.

APA VTS has applied the revealed cost base – step – trend approach to forecast operating expenditure for the upcoming AA period. 2020, being the last year for which actual data is available, is the base year applied.

There are several step changes applied in the development of the operating expenditure forecast, as discussed in B.5 below.

B.4.3 Output growth

Output growth
4.3 Provide in the materials submitted to the *AER*: (a) all output growth drivers included in the forecast; (b) any economies of scale factors applied to the growth drivers; (c) evidence that the growth drivers explain cost changes due to output growth; and (d) any weightings applied if multiple output growth drivers have been used.

APA VTS has not applied any of these factors in its forecast of operating expenditure.

B.4.4 Application of growth drivers

4.4 Explain in the materials submitted to the *AER*: (a) how the growth drivers have been applied in the *operating expenditure* forecast; and (b) how the forecast method accounts for economies of scale.

APA VTS has not applied any of these factors in its forecast of operating expenditure.

Load in the upcoming access arrangement period is forecast to be flat or declining. We would not expect to see any impact of system growth impacting the operating expenditure forecast.

B.4.5 Real price changes

Real price changes
4.5 Explain in the materials submitted to the *AER*: (a) how the real price measures have been applied in the *operating expenditure* forecast; and (b) whether the labour price measure compensates for any form of labour productivity change.

Operating expenditure is forecast to be flat in real terms – that is, it is expected to increase only by changes in the Consumer Price Index. No labour productivity has been forecast.

B.4.6 Productivity change

Productivity change
4.6 Explain in the materials submitted to the *AER*: (a) how the forecast changes in productivity have been applied in the *operating expenditure* forecast; (b) whether the forecast productivity changes capture the historical trend of cost increases due to new *regulatory obligations or requirements* and changes to industry best practice; and (c) whether the productivity measure used to forecast *operating expenditure* includes productivity change compensated for by the labour price measure used to forecast the change in the price of labour.

Operating expenditure is forecast to be flat in real terms – that is, it is expected to increase only by changes in the Consumer Price Index. No productivity improvement has been forecast.

That said, APA VTS customers and consumers benefit from economies and scale in a wide number of functions performed at the corporate level, including accounting and finance, Information Technology programs, Security of Critical Infrastructure, and capital overheads.

APA Group owns operates a large and diverse fleet of regulated and unregulated businesses, which provides considerable economies of scale to centralised functions. Overall cost control is exercised through APA's focus on cost control, as there is no opportunity to recover cost increases from contracted customers. Costs are allocated to APA VTS on a basis consistent with the allocation of costs to unregulated assets – this is discussed in the Cost Allocation Methodology lodged with this RIN response.

B.5 Step Changes

B.5.1 Description

5. STEP CHANGES

5.1 For all *step changes* in forecast *operating expenditure* (including due to changes in policies, strategies and obligations) provide in the materials submitted to the *AER*:

(a) a description of the *step change,* including when the change occurred, or when it is expected to occur, what its driver is, and how the driver has changed (e.g. the change in a regulatory obligation); and

(b) a demonstration, including all supporting justifications, for when and how the *step change* affected or is expected to affect expenditures (historical and forecast), with respect to:

(i) any of the *operating expenditure categories*; and

(ii) total *operating expenditure*.

This access arrangement revision proposal includes several operating expenditure items that are not included in the base year operating expenditure as discussed below.

Western Outer Ring Main step change

As the WORM was not in service in the 2020 base year, the related operating costs were not included in the base year costs.

APA VTS has conducted an analysis of the necessary WORM operating costs including easement patrol and maintenance, line valve operation checks, maintenance of water bath heaters, and regulators.

Where activities are required to be performed less frequently, APA VTS has calculated an annualised cost.

Operating expenditure associated with the WORM has been estimated at $605,800 ($2021) per year.

SWP570 expansion step change

The SWP expansion features two new compressors, at Stonehaven and Pirron, respectively.

APA VTS has conducted an analysis of the necessary compressor operating costs including routine turbine services and lubrication, instrumentation maintenance and other activities. Where activities are required to be performed less frequently, APA VTS has calculated an annualised cost.

Annual operating expenditure associated with compressor operation is estimated at $562,521 ($2021) per year per compressor.

This annual cost has been included from 2024 for the Stonehaven compressor, and from 2025 for the Pirron compressor.

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – December 2021 – Public).

Property taxes step change

The 2020 base year operating expenditure includes an accrual of $574,800 for land taxes, based on an average of previous years' assessments.

On 27 August 2021, the State Revenue Office of Victoria issued a land tax assessment which featured increases in the value of the lands assessed. The portion of this assessment attributable to the VTS is $1,189,050, an increase of $614,250 relative to the amount included in the base year operating expenditure.

As the land tax is an increase in government levies and charges that were not in place in the 2020 base year, and since the foundation of that increased assessment is the underlying land valuation, it is expected that land taxes of this order of magnitude will continue to be assessed into the future.

APA VTS has therefore applied a step change of $614,250 ($2021) representing the increase in state government charges.

Victoria Net Zero 2050 – carbon offsets step change

Section 6 of the Victoria Climate Change Act 2017 requires:

> **Long-term emissions reduction target**
>
> (1) For the purposes of this Act, the long-term emissions reduction target for the State is an amount of net zero greenhouse gas emissions by the year 2050.

Section 10 of the Climate Change Act 2017 requires:

> **Interim emissions reduction targets**
>
> (1) The Premier and the Minister must determine a greenhouse gas emissions reduction target for the State in respect of each of the following periods—
>
> (a) 1 January 2021 to 31 December 2025;
>
> (b) 1 January 2026 to 31 December 2030;
>
> (2) The interim emissions reduction target under subsection (1)(a) and (b) must be determined on or before 31 March 2020. ...

Section 15 of the Climate Change Act 2017 requires:

> **Publication of interim emissions reduction targets**
>
> (1) The Minister must cause an interim emissions reduction target to be laid before each House of the Parliament within 10 sitting days of that House after the determination of the target.
>
> (2) The Minister must publish an interim emissions reduction target on the Internet site of the Department as soon as practicable after the target is laid before each House of the Parliament under subsection (1).

The Minister undertook a consultation and an expert report recommending the interim targets. The interim targets were published as required under s15(2) of the Climate Change Act, on climatechange.vic.gov.au:

> The Victorian Government's interim target, for the period 2021–2025, is for emissions to reduce 28–33% below 2005 levels by the end of 2025.
>
> The Victorian Government's interim target, for the period 2026–2030, is for emissions to reduce 45–50% below 2005 levels by the end of 2030.

In 2019, progress towards the 2050 target was 24.8% below 2005 levels. If we extrapolate a straight-line transitional path from the current performance to the 2025 and 2030 targets, we can calculate the following annual targets:

	Calendar Years											
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Extrapolation of target (%)	24.8	26.2	27.5	28.9	30.3	31.6	33	36.4	39.8	43.2	46.6	50

Applying these targets to the VTS Access Arrangement, we note that the VTS currently produces 25,669 tonnes of Scope 1 CO2-e: 2,209km (VTS pipeline length in kms) x 11.62 (emission factor tCO2-e/km) = 25,669 TCO2e. Adding 51km for the WORM, the calculation would be: (2,209 + 51) = 2,260 x 11.62 = 26,261.2 tCO2-e.

As AEMO is responsible for dispatching compressors, it is responsible for those emissions.

Emssions Scope	**Calendar years in Access Arrangement Period**					**Total**
	2023	**2024**	**2025**	**2026**	**2027**	
Scope 1 TCO2e	26,261.2	26,261.2	26,261.2	26,261.2	26,261.2	131,306.0

Multiplying the VTS GHG (Greenhouse gas) emissions by the transitional reduction above tells us the number of carbon abatement certificates we would need to procure:

Emssions Scope	**Calendar years in Access Arrangement Period**					**Total**
	2023	**2024**	**2025**	**2026**	**2027**	
Scope 1 TCO2e	26,261.2	26,261.2	26,261.2	26,261.2	26,261.2	131,306.0
Extrapolation of target (%)	30.3%	31.6%	33.0%	36.4%	39.8%	
APA contribution to Vic Gov't Legislated Target	7,948	8,307	8,666	9,559	10,452	44,933

While the price of Australian Carbon Credit Units is quite volatile, market data as at 26 Oct 2021 indicates a price of $33.50 per tonne CO2-e, extending out to the following forecast cost:

Emssions Scope	**Calendar years in Access Arrangement Period**					**Total**
	2023	**2024**	**2025**	**2026**	**2027**	
Scope 1 TCO2e	26,261.2	26,261.2	26,261.2	26,261.2	26,261.2	131,306.0
Extrapolation of target (%)	30.3%	31.6%	33.0%	36.4%	39.8%	
APA contribution to Vic Gov't Legislated Target	7,948	8,307	8,666	9,559	10,452	44,933
Price of Australian Carbon Credit Units	$ 33.50	$ 33.50	$ 33.50	$ 33.50	$ 33.50	
Forecast cost of Australian Carbon Credit Units	$ 266,271	$ 278,294	$ 290,318	$ 320,229	$ 350,141	$ 1,505,253

These amounts (all in $2021) have been included in operating expenditure for the relevant years.

Security of Critical Infrastructure

APA VTS is incurring a step change related to new Security of Critical Infrastructure legislation. APA has engaged EY to conduct gap analysis and prepare program scope and forecasts to meet obligations. Incremental operating costs are shown in the table below.

Program	Unit	2023	2024	2025	2026	2027	2023-2027
SoCI Progam, cyber, physical	$2022	1,313,393	1,313,393	1,313,393	1,313,393	1,313,393	6,566,963
Total	$2022	**1,313,393**	**1,313,393**	**1,313,393**	**1,313,393**	**1,313,393**	**6,566,963**

These are new and incremental costs related to new regulatory obligations.

Explanation for step change related to SoCI program is provided in the SoCI business case (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

Information Technology

APA VTS is incurring a step change related to upgrade of the Information Technology program. APA has engaged external consultants to assist preparing program scope and forecasts to meet obligations. Incremental operating costs are shown in the table below.

Information Technology portfolio	Unit	2023	2024	2025	2026	2027	2023-2027
EPMO	$2022	2,380,900	2,955,600	1,683,050	1,067,300	1,067,300	9,154,150
Operational Technology	$2022	8,210	28,735	57,470	65,680	57,470	217,565
Information Technology	$2022	-	-	-	-	-	-
Total	$2022	**2,389,110**	**2,984,335**	**1,740,520**	**1,132,980**	**1,124,770**	**9,371,715**

These are new and incremental costs related exogenous factors relating to migration of IT systems to cloud based services.

Explanation for step change for the Information Technology portfolio can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

B.5.2 Step change not included in other operating expenditure

5.2	For each step change identified in response to paragraph 5.1, explain in the materials submitted to the *AER*: (a) why the efficient costs of the *step change* are not provided by other aspects of the *operating expenditure* forecast including, for example, base *operating expenditure*, output growth, real price growth or forecast productivity change; and (b) why the *step change* is required to contribute to a total forecast *operating expenditure* that reasonably reflects the criteria set out in r. 91(1) of the *NGR*.

The step changes proposed are required:

- To acquire carbon offset certificates in compliance with the Victorian Government Net Zero 2050 interim targets
- Operate additional assets serving the customers of Victoria (WORM, SWP compressor opex)
- To recover additional property taxes not billed or reflected in the base year
- To comply with legislative obligations (SOCI), or
- To accommodate costs associated with migrating financial and operating systems to cloud-based computing.

As these are new requirements, these costs are not included in the base operating expenditure, or in any other category of operating expenditure.

These are all costs that would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

B.5.3 Step change forecasts

5.3	For all *step changes* in forecast expenditure provide: (a) In *Workbook 1 – Reset (forecast) data, regulatory template* E17 the *step changes* expenditure: (i) forecast for each year of the *forthcoming access arrangement period*; and (ii) expected to be incurred in the *current access arrangement period*; and (b) a description of the step change.

This information is provided above and in RIN Workbook 1 Table 17.1.

B.5.4 Step change drivers

5.4	For each *step change* listed in response to paragraph 5.3, provide in the materials submitted to the *AER* an explanation of:
	(a) when the change occurred, or is expected to occur;
	(b) what the driver of the *step change* is;
	(c) how the driver has changed or will change (for example, revised legislation may lead to a change in a regulatory obligation or requirement); and
	(d) whether the *step change* is recurrent in nature.

	when the change occurred	driver of the step change	how the driver has changed	recurrent in nature?
Property taxes	2021	Increased assessment by local Council	Local council increased assessed rated	yes
WORM Opex from capex	2022	WORM is commissioned	WORM comes into service	yes
SWP Opex from capex	2024, 2025	Commissioning of Stonehaven (2024) and Pirron (2025) compressors	Compressors come into service	yes
Purchase of carbon offsets	2023	Compliance with Victoria Govt Net Zero 2050 interim targets	Interim targets have been announced	yes
Security of Critical Infrastructure	2022	Security of Critical Infrastructure	New obligation	yes
Information Technology	2022	Obsolete legacy IT systems	Migration to cloud-based computing	yes

	when the change occurred	driver of the step change	how the driver has changed	recurrent in nature?
		Cloud-computing replacing in-house systems meaning current systems bot supported and not fit-for-purpose		

B.5.5 Step change categories

5.5	For each *step change* listed in response to paragraph 5.3, provide in the materials submitted to the *AER* justification for when, and how, the *step change* affected, or is expected to affect: (a) the relevant *operating expenditure category*; (b) the relevant *capital expenditure* category; (c) total *operating expenditure*; and (d) total *capital expenditure*.

These step changes all affect the “Repairs and Maintenance” opex category.

Refer to response to question 5.4 above.

B.5.6 Process undertaken to identify and quantify

5.6	For each *step change* listed in response to paragraph 5.3, provide in the materials submitted to the *AER* the process undertaken by *VTS* to identify and quantify the *step change*; and the cost benefit analysis that demonstrates *VTS* proposes to address the *step change* in a prudent and efficient manner, including: (a) the timing of the *step change*; and (b) if *VTS* considered a ‘do nothing’ option, evidence of how *VTS* assessed the risks of this option compared with other options.

In the context of operating expenditure resulting from capital expenditure related step changes, a "do nothing" option was considered as part of the relevant capex business case.

A "do nothing" option is not available regarding assessed property taxes.

SWP570 expansion step change

Explanation for proposed security of supply expansion of the South West Pipeline (SWP570) is provided in Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection (filename VTS - Business Case – Capital Expenditure (Capex) South West Pipeline Expansion – Iona 570 TJ/d injection – December 2021 – Public).

Security of Critical Infrastructure

The increase in the scope of obligations and rules of the Security of Critical Infrastructure Act 2018 (SOCI Act) through the SoCI Amendment Bill (Bill 2020) requires a range of capabilities across APA to meet new compliance requirements. The new compliance requirements are covered in the following domains:

- governance
- personnel
- physical security
- cyber security
- supply chain.

APA engaged EY to conduct a gap analysis of APA's capabilities to meet the SoCI obligations. The gap analysis by EY was based on relevant government guidelines and frameworks and international standards for respective domain areas.

EY found that the scope of obligations under SoCI 2020 is significantly greater than the existing legislative mandate within SoCI 2018. High-level findings of the gap analysis are presented in **Table 2**.

Table 2 High-level summary of gap analysis by domain

Domain	Assessment guideline, framework, standard	High-level gap analysis
Governance (APA-wide)	Organisation-wide security governance has been analysed based on SOCI obligations and rules, Security governance guidelines from PSPF, and AS HB 167-2006 security risk management.	[Marked confidential].

Personnel security	Personnel security has been analysed based on Sector Specific Personnel Security obligations and rules and personnel security guidelines from PSPF.	[Marked confidential].
Physical security	Physical security has been analysed based on Sector Specific physical Security obligations and rules, physical security guidelines from PSPF, and Energy Networks association document 015-2006.	[Marked confidential].
Cyber security	Cyber security has been analysed based on Sector Specific Cyber Security obligations and rules, cyber security guidelines from AESCSF, and Cyber Security Sub-Plan from VIC state Government.	[Marked confidential].
Supply chain	Supply chain security has been analysed based on Sector Specific supply chain Security obligations and rules and required ISO Standards.	[Marked confidential].
Natural hazard security	Natural Hazard security has been analysed based on obligations and rules, national and state Emergency Management Plans, and Emergency Management Act for Critical Assets Resilience.	[Marked confidential].

Explanation for step change related to SoCI program is provided in the SoCI business case (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

B.5.7 Change in a regulatory obligation or requirement

5.7	If the *step change* was due to a change in a regulatory obligation or requirement provide in the materials submitted to the *AER*: (a) an explanation of any variations or exemptions granted from a regulatory obligation or requirement during the *previous access arrangement period* or the *current access arrangement period*; and (b) any compliance *audits* conducted during the *previous access arrangement period* or the *current access arrangement period*.

Security of Critical Infrastructure

The SoCI related step change is related to a change in a regulatory obligation. There is no exemption applying to APA VTS.

Explanation for step change related to SoCI program is provided in the SoCI business case (filename VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

B.5.8 Relevant legislative instruments

5.8	For each *step change* listed in response to paragraph 5.7, provide in the materials submitted to the *AER*, with reference to specific clauses of the relevant legislative instrument(s), the: (a) previous *regulatory obligation or requirement*; and (b) how the changed *regulatory obligation or requirement* is driving the *step change*.

Security of Critical Infrastructure

The existing Security of Critical Infrastructure Act 2018 (the Act)[1] will be superseded by the Security Legislation Amendment (Critical Infrastructure) Bill (SoCI Amendment Bill) 2020 [2], proposed to pass in two separate Bills to address urgent elements of the reform as soon as possible. The first component of this, Security Legislation Amendment (Critical Infrastructure) Bill 2021 passed 24 November 2021, and the reforms are expected to be passed in their entirety by mid-2022.

APA Group (APA) is currently captured under the Act (2018) as the responsible entity for 27 Critical Infrastructure assets. The SoCI Amendment Bill not only increases the number of APA Critical Infrastructure assets captured, including an additional four renewable assets, but also increases the obligations and requirements APA must comply with.

A summary of the obligations that apply to APA can be viewed in Appendix A of the SoCI program business case.

Further information related to SoCI program is provided in the SoCI business case (filename VTS – VTS - VTS AA23-27 Business Case_SoCI Legislation - December 2021 - Confidential).

[1] https://www.legislation.gov.au/Details/C2018A00029

[2] https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r6657

B.5.9 Category specific operating expenditure

Category specific operating expenditure
5.9 For all *category specific forecasts* in *forecast operating expenditure* provide in the materials submitted to the *AER*: (a) a description of the *category specific forecast*; (b) the process undertaken to identify and quantify the *category specific forecast*, (c) an explanation of why the efficient costs of the *category specific forecast* is not provided by other aspects of the *operating expenditure* forecast including, for example, base *operating expenditure*, output growth, real price growth or forecast productivity change; and (d) an explanation of why the category specific forecast is required to contribute to a total forecast *operating expenditure* that reasonably reflects the criteria set out in r. 91(1) of the *NGR*.

Like the 2018-22 Access Arrangement, this access arrangement proposal includes an allowance for the carrying costs of line pack and spares inventory.

This has been calculated by applying a consistent (AER-approved) ratio to the value of the regulatory capital base, as demonstrated in the opex model lodged with this RIN response.

B.6 Forecast price changes

B.6.1 Labour and material price changes

6.	FORECAST PRICE CHANGES
6.1	Identify in the materials submitted to the *AER*, the labour and material price changes proposed in the estimation of the *forecast capital expenditure* and the forecast *operating expenditure.*

In the material submitted to the AER:

- There are no labour price changes reflected in the costs.
- Materials are based on historic costs.
- The exception is the forecast costs of the WORM.

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 key cost variances from the original forecast in 2017 are due to:

- Forecast increase in construction costs ($24 million) due to the number and length of horizontal directional drilling and rock disposal (the need for this discovered during the EES), additional EES conditions, Department of Transport requirements, and Covid related costs
- Land access and approval costs ($20 million) including EES process itself, net gain offsets, land access compensation, cultural heritage salvage works
- Materials procurement ($7.5 million) due to higher steel prices and delays in placement of orders due to EES.

APA is currently 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.

B.6.2 Models

6.2	Provide in the materials submitted to the *AER*:
	(a) the model(s) used to derive and apply all price changes assumed in the estimation of the forecast capital expenditure *proposal* and the forecast *operating expenditure proposal*, including any proprietary model(s) provided by a *third party*;
	(b) in relation to labour escalators, a copy of the current *Enterprise Agreement* or equivalent agreement; and
	(c) evidence that the price measures explain those cost changes which are attributed to price changes, including evidence of any materials price forecast method which explains the historical change in the price of materials purchased by network *service providers*.

Labour escalators

No current Enterprise Agreement or equivalent agreement has provided a basis for determining labour cost escalation, and no copies of agreements are provided with the Reset RIN response.

Materials

The costs of programs and projects, including materials, has been based on historic cost information (Replacement, Expansion, Right of Use leases) or information provided by external consultants (IT costs).

B.6.3 Methodology

6.3	Explain in the materials submitted to the *AER*:
	(a) the methodology underlying the calculation of each price change, including sources, data conversions, the operation of any models provided under paragraph 6.2(a) and the use of any assumptions, such as lags or productivity gains;
	(b) whether the same price changes have been used in developing both *the forecast capital expenditure proposal* and forecast *operating expenditure proposal*; and
	(c) if the response to paragraph 6.3(b) is no, why it is appropriate for different expenditure escalators to apply.

Opex has been forecast using the base/step/trend approach, where historical actual opex has been escalated by CPI. No more sophisticated modelling was applied.

B.6.4 Agreement renewals

6.4	If an agreement provided in response to paragraph 6.2(b) is due to expire during the *next access arrangement period*, explain in the materials submitted to the *AER* the progress and outcomes of any negotiations to date to review and replace the current agreement.

No agreement has been provided in response to paragraph 6.2(b).

B.7 Interactions between capex and opex

B.7.1 Material interactions

7.	**INTERACTIONS BETWEEN CAPEX AND OPEX**
7.1	Identify in the materials submitted to the *AER* any *material* interactions between *VTSs'* forecast conforming *capital expenditure* and forecast *operating expenditure*.

There is additional opex forecast associated with the WORM and SWP_570 project capital expenditure, as discussed above.

Material impacts between VTS's forecast conforming capital expenditure and forecast operating expenditure includes:

- Migration of technology programs from in-house to cloud-based services. The driver for this shift is due to exogenous factors
    - Cloud-based services becoming the primary platform for many applications vendors
    - Obsolete systems including no or limited warranty/ support and service from vendors
    - Hard to find components and spare parts and outdated software

- Clarification of accounting standards by IFRIC Interpretations Committee (IFRIC®). clarifying how arrangements in respect of a specific part of cloud technology, Software-as-a-Service (SaaS), should be accounted for.
- Clou-based services has shifted technology programs from capital to operating expenditure including Asset Management, Back Office (Enterprise Resource Planning) and Field Mobility.

More information about the Information Technology portfolio can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

B.7.2 How interactions have been taken into account

7.2	Explain in the materials submitted to the *AER* how these interactions have been taken into account when developing forecasts of *capital expenditure* and *operating expenditure*, and otherwise in providing responses to items under paragraphs 5 and 6.

More of APA VTS Information Technology will migrate to cloud-based services. Often the business solutions are software-as-a-service and deemed to be operating expenditure by IFRIC accounting clarification.

Information on interactions between operating and capital expenditure resulting from migration to the cloud can be found in the Information Technology Information Paper (filename VTS - VTS Access Arrangement Proposal. Information Paper. Information Technology – December 2021 – Public).

B.8 Capital base and tax reporting

B.8.1 Calculation of the capital base using the AER's RFM and PTRM

CAPITAL BASE AND TAX REPORTING	
8.	**CAPITAL BASE**
8.1	Provide *VTSs'* calculation of the *capital base* using the *AER's RFM* and *PTRM* which are to be submitted as part of the *access arrangement proposal*, including *VTSs'* calculation of the opening and closing capital base for each *regulatory year* of the *current access arrangement period* and *next access arrangement period*.

APA VTS has applied the AER's Roll Forward Model, included with this revision proposal package.

B.8.2 Changes to underlying methods

8.2	If *VTS* proposes to change the underlying methods in the *AER's RFM* and/or *PTRM* compared with the *current access arrangement's AER* final decision *RFM* and/or *PTRM* for the calculation referred to in paragraph 8.1, describe in the materials submitted to the *AER* the reasons for the changes.

APA VTS has made no changes to the underlying methods in the AER's RFM or PTRM.

B.8.3 Redundant assets

8.3	If the opening value of the capital base as at the start of the *next access arrangement period* is proposed to be adjusted because of re-use of redundant *assets* or exclusion of redundant *assets*, provide details in the materials submitted to the *AER* including relevant supporting information used to calculate that *adjustment* value.

The VTS includes no redundant assets.

B.9 Depreciation schedules

B.9.1 Calculation of depreciation amounts

9.	**DEPRECIATION SCHEDULES**
9.1	Provide in the materials submitted to the *AER VTSs'* calculation of the depreciation amounts for the relevant *gas transmission pipeline* for each *regulatory year* of:
	(a) the *current access arrangement period* using the *AER's RFM*, which is to be submitted as part of the *access arrangement proposal;* and
	(b) the *next access arrangement period* using the *AER's PTRM*, which is to be submitted as part of the *access arrangement proposal*.

The calculation of the depreciation amounts for the current access arrangement period is provided using the AER's RFM; the calculation of the depreciation amounts for the next access arrangement period is provided using the AER's PTRM.

Both models are submitted as part of the access arrangement proposal.

B.9.2 Change to underlying depreciation methods

9.2	If *VTS* proposes to change the underlying depreciation methods in the *AER's RFM* and/or *PTRM* compared with the *current access arrangement's AER* final decision *RFM* and/or *PTRM* for the calculations referred to in paragraph 9.1, describe in the materials submitted to the AER the reasons for the changes.

APA VTS is not proposing any changes to the underlying depreciation methods in the AER's RFM or PTRM compared with the current access arrangement's AER final decision RFM or PTRM.

B.9.3 Changes to standard asset lives

9.3	For the standard *asset* lives applied in the *PTRM*, identify any changes from the standard *asset* lives approved in the *AER's* final decision for the *current access arrangement* for existing *asset classes*. Explain in the materials submitted to the *AER* the reason/s for the change and provide relevant supporting information.

APA VTS has proposed a change to both standard and remaining asset lives in these proposed AA revisions.

Stakeholder engagement

The key theme throughout this access arrangement consultation process is the Victorian Government's Net Zero 2050 initiatives and their impact on future gas consumption levels. We presented the view that under the legislated Victorian Government policy there is a risk that the VTS assets will not be in service long enough to recover the value of the assets over what was originally set as their life. That is, the government driven policy change affects the economic life of prudent and

efficient investments. We presented the view that these investments need to be recovered from users through accelerated depreciation (which would be reflected in VTS tariffs).

Initially, there was mixed response to the proposal to accelerate depreciation. Some stakeholders noted that in the future, VTS may carry hydrogen or other gases therefore maintain economic life of the VTS assets. Other stakeholders considered that future generations should not be burdened with costs of assets that benefit current generations and were not opposed to accelerated depreciation for this reason.

As we continued to discuss this matter with the stakeholder round table, stakeholders acknowledged and accepted the need to reduce the regulated revenue requirement early to avoid large price shock to vulnerable customers in future years.

APA response and proposed approach

We are concerned that, as gas consumption levels decline, unit costs will increase. Moreover, as decarbonisation increases pace, those customers with choice will be expected to choose energy efficient or non-gas alternatives, leaving 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 family living in rental accommodation. We are concerned that the decisions we make today may have significant adverse impact on some disadvantaged customer groups in the future.

The landmark work by renowned regulatory economists Crew and Kleindorfer[2] 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 return capital to investors and reduce the future revenue requirement through small increases in tariffs 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 recover relatively small amounts of prudently invested capital from users while usage is still high. This will facilitate smoother tariff impacts by reducing tariff impacts in later years as the system usage starts to decline.

Importantly for this access arrangement proposal, our goal is to allow the amount of invested capital 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.

This was discussed at the Stakeholder Forum, Roundtable 9:

[2] 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.

Interaction of depreciation, revenues, volumes and prices

Our goal is to create a declining revenue path that will fall in line with volumes, producing stable prices to protect vulnerable customers

Under the indexed straight line depreciation framework the return of capital is weighted later in the asset life.

We seek to accelerate depreciation to cause the revenue requirement to fall over the life of the asset.

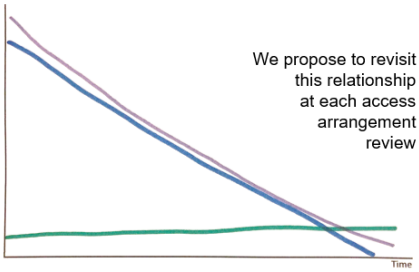
This will produce more stable prices in an environment of declining consumption in response to government policy change.

- AEMO now forecasts that half the home heating load will be electrified by the mid-2030s.

Falling revenues ÷ falling demand = more stable prices

Accelerated depreciation

- With Accelerated Depreciation, the return of capital occurs more evenly over the remaining asset life, resulting in a declining capital base
- This causes the revenue requirement to fall over time
- With falling load, prices remain stable over time



We propose to revisit this relationship at each access arrangement review

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APA VTS proposes to "*start small, start early and monitor*" - to reduce the value of the regulatory asset base through small tariff increases to customers early, while the load is still high, to avoid large increases to disadvantaged customers in the future as load declines. We also propose to 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 this is a more equitable approach – for current customers to contribute rather than leaving later generations to face higher prices.

APA VTS had originally engaged with customers on a proposal to amend asset lives to 25 years to align with the Victorian Net Zero 2050 Initiatives. This proposal had received support from the consumer round table. However, customers had expressed concern over other factors that might tend to put upward pressure on tariffs.

As a way to balance these tensions, our proposal is to cap all standard and remaining asset lives to 30 years. This will mostly affect the "pipelines" and "WORM" asset classes. The impact of this change on existing assets is quite small, as the "pipelines" class currently has a weighted average remaining life of approximately 34 years, and the current weighted average remaining life of the "compressors" class is about 18 years (shorter than the 2050 horizon). This change will also affect the "buildings" asset class, although this accounts for a relatively small proportion of total invested capital.

While the proposal to reduce the standard asset lives does have an impact on the depreciable life of the Western Outer Ring Main (WORM), it does not affect the standard asset life of the SWP_570 expansion.

B.9.4 New asset classes

9.4	For any proposed new *asset* classes, explain the reason/s for using these new *asset* classes and provide in the materials submitted to the *AER* the relevant supporting information on their proposed standard *asset* lives.

APA VTS proposes a number of new asset classes:

Integrity inspections – APA VTS is required to undertake integrity management inspections of its pipelines on a 10-year cycle. The costs of this pigging have been included in a dedicated asset class and depreciated over the 10-year cycle. Pigging costs were previously included in the "Other" class and depreciated over 5 years.

WORM – a separate asset class has been established for the WORM, to better enable users and the AER to track its asset value and depreciation over time. This is depreciated over the proposed 30-year asset life.

SWP_570 - a separate asset class has been established for the SWP_570 expansion, to better enable users and the AER to track its asset value and depreciation over time. This is depreciated over the proposed 30-year asset life, which aligns to the current standard asset life for compressors.

Hydrogen Safety – a separate class has been established for the Hydrogen Safety study to better enable users and the AER to track its asset value and depreciation over time. This is proposed to be depreciated over the proposed 5-year asset life.

For the WORM and SWP_570 asset classes in particular, the new asset classes are proposed to allow the AER to apply accelerated tax depreciation, as envisioned in the April 2021 PTRM. The Integrity inspections and Hydrogen safety expenditure is considered to be immediately deductible for tax purposes and is so entered in the PTRM.

B.9.5 Removal of asset classes

9.5	If existing *asset* classes approved in the *AER's* final decision for the *current access arrangement* are proposed to be removed at the start of the *next access arrangement period* and their residual values are to be reallocated to other *asset* classes, explain in the materials submitted to the *AER* the reason/s for the change and provide relevant supporting information. This should include a demonstration of the materiality of the change on the forecast depreciation allowance.

APA VTS does not propose to remove any asset classes.

B.9.6 Method used to depreciate existing asset classes

9.6	Describe in the materials submitted to the *AER* the method used to depreciate existing *asset* classes as at 1 January 2023 and provide supporting calculations. This may include calculations to estimate remaining *asset* lives.

APA VTS has used the methods included in the AER's RFM and PTRM to depreciate existing asset classes as at 1 January 2023. See the discussion above regarding standard and remaining asset lives.

B.9.7 Forecast immediate expensing capital expenditure

9.7	Explain in the materials submitted to the *AER* the approach *VTS* used to forecast its *immediate expensing capital expenditure* for the *next access arrangement* period, as provided in the *access arrangement proposal PTRM*.

APA VTS has included those classes of capital expenditure that are immediately deductible for tax purposes. These include inline inspections (pigging), the stay-in-business capex in the "Other" class, and the costs of the Hydrogen Safety Testing.

B.9.8 Diminishing value (DV) method for tax depreciation

9.8	The *AER's PTRM* applies the diminishing value (DV) method for tax depreciation purposes to all new depreciable *assets* except for certain *assets*. Where *VTS* proposes *capital expenditure* associated with buildings and in-house software to be exempted from the DV method of tax depreciation, please confirm that the proposal satisfies the following requirements: (a) buildings: *capital expenditure* for buildings may be depreciated using the SL method if it satisfies the definition of a capital work under section 43.20 of the Income Tax Assessment Act 1997 (ITAA); and (b) in-house software: *capital expenditure* for in-house software may be depreciated using the SL method if it satisfies the definition of in-house software under section 995.1 of the ITAA, and may be depreciated using the SL method, consistent with section 40.72 of the ITAA.

APA VTS has applied the PTRM to calculate depreciation and tax depreciation for all asset classes. To the extent the PTRM applies declining balance tax depreciation for new capital expenditure, then declining balance depreciation will have been applied to that capex. APA VTS has not made any amendments for any asset classes.

APA VTS does not clam any exemption for buildings or in-house software.

B.10 Corporate income tax

B.10.1 Estimated cost of corporate income tax

10.	**CORPORATE INCOME TAX**
10.1	Provide *VTS's* calculation of the estimated cost of corporate income tax for the *next access arrangement period* using *the AER's PTRM,* which is to be submitted as part of the *access arrangement proposal*.

APA VTS has calculated the estimated cost of corporate income tax using the AER's PTRM submitted as part of this AA proposal.

B.10.2 Departures from PTRM

10.2	Provide in the materials submitted to the *AER* the details of each departure from the *AER's PTRM* for the calculations referred to in paragraph 10.1, and the reasons for that departure.

APA VTS has not departed from the AER's PTRM.

B.10.3 Changes to standard tax asset lives

10.3	Identify in the materials submitted to the *AER* any changes to standard tax *asset* lives for existing *asset* classes approved for the *current access arrangement*. Explain the reason/s for the change and provide relevant supporting information, including Federal tax laws governing depreciation for tax purposes.

APA VTS has made no changes to standard tax asset lives.

B.10.4 Method used to depreciate existing asset classes

10.4	Describe in the materials submitted to the *AER* the method used to depreciate existing *asset* classes as at 1 January 2023 for tax purposes and provide supporting calculations, if the approach differs from that in the *current access arrangement's AER* final decision *RFM*.

The APA VTS approach to depreciate existing asset classes for tax purposes has not changed from the current AER approved final decision RFM. See the discussion on asset lives above.

B.10.5 Calculation of the tax asset base

10.5	Provide *VTS's* calculation of the tax *asset* base for each *regulatory year* of the *current access arrangement period* and *next access arrangement period* using *the AER's RFM and PTRM*.

The APA VTS tax asset base has been calculated using the AER's RFM and PTRM. To the extent the PTRM applies accelerated tax depreciation in the calculation of the tax allowance, this will be reflected in the PTRM's calculation of the tax asset base.

B.10.6 Changes to the underlying methods in the AER's RFM

10.6	If *VTS* proposes to change the underlying methods in the *AER's RFM and/or PTRM* for the calculations referred to in paragraph 10.5 describe in the materials submitted to the *AER* the reasons for the changes.

APA VTS has not proposed any changes to the underlying methods in the AER's RFM or PTRM.

B.10.7 Differences in capitalisation

10.7	Identify in the materials submitted to the *AER* any differences in the *capitalisation* of expenditure for regulatory accounting purposes and tax accounting purposes. Provide reasons and supporting calculations to reconcile any differences between the two forms of accounts.

The only difference identified by APA VTS is the immediate expensing, for tax purposes, in the next access arrangement period, of integrity inspection costs, and certain items of equipment which are treated as capital for regulatory accounting purposes. The Hydrogen safety study will also be considered as immediately deductible for tax purposes

B.10.8 Immediately expensing capital expenditure

10.8	Provide in the materials submitted to the *AER* the following information regarding the forecast immediately expensing capital expenditure for the next access arrangement period as provided in the *access arrangement proposal* PTRM, if any:
	(a) List and explain the types of capex (such as refurbishment capex and capitalised overheads) associated with the forecast immediate expensing capital expenditure. (b) Explain the approach VTS used to forecast its immediate expensing capital expenditure for the next access arrangement period. (c) State if VTS intends to change its tax policy on immediate expensing capital expenditure from its current policy.

APA VTS has included those classes of capital expenditure that are immediately deductible for tax purposes. These include inline inspections (pigging), the stay-in-business capex in the "Other" class, and the costs of the Hydrogen Safety Testing.

While APA VTS is taxed as part of the tax consolidated entity, APA VTS does not propose to change its tax policy on immediately expensing capital expenditure.

B.10.9 Exemptions from DV method of tax depreciation

10.9	The AER's PTRM applies the diminishing value (DV) method for tax depreciation purposes to all new depreciable assets except for certain assets. Where VTS proposes capital expenditure associated with buildings and in-house software to be exempted from the DV method of tax depreciation, please confirm that the proposal satisfies the following requirements: (a) buildings: *capital expenditure* for buildings may be depreciated using the straight-line (SL) method if it satisfies the definition of a capital work under section 43.20 of the Income Tax Assessment Act 1997 (ITAA); and (b) in-house software: *capital expenditure* for in-house software may be depreciated using the SL method if it satisfies the definition of in-house software under section 995.1 of the ITAA, and may be depreciated using the SL method, consistent with section 40.72 of the ITAA.

APA VTS does not propose any exemptions from DV method of tax depreciation.

B.11 Demand

B.11.1 Drivers, inputs and methodology

NETWORK INFORMATION REPORTING

11. DEMAND

11.1 Provide in the materials submitted to the *AER*:

(a) an explanation of any trends in demand and volumes over the *current access arrangement period* and the *next access arrangement period*;

(b) details of the key drivers behind the demand forecasts provided in response to *Workbook 1 – Reset (forecast) data, regulatory template* N1. Demand;

(c) any methodology and models that have been used to develop the demand forecasts;

(d) any data sets used as inputs into the models;

(e) any key inputs and assumptions that have been used in the models (including in relation to economic growth, *user* numbers and policy changes) and any associated models or data relevant to justifying these inputs and assumptions and how demand for *pipeline services* is differentiated;

(f) an explanation of any weather normalisation models used by *VTS* and how weather data has been used, as well as an explanation as to how *VTSs'* approach to weather normalisation has changed over time;

(g) how the forecasting methodology used is consistent with, and takes into account, historical observations (where appropriate), including any calibration processes undertaken within the model (specifically whether the load forecast is matched against actual historical load); and

(h) an explanation of how the demand forecasts have been used to develop *VTSs' capital expenditure* and *operating expenditure* forecasts.

The response to this RIN requirement has been provided in a separate document, VTS – B.11 Demand – Dec 2021 – Public.

B.11.2 Independent verification

11.2 Provide in the materials submitted to the *AER*: (a) evidence that any independent verifier engaged has examined the reasonableness of the method, processes and assumptions in determining the forecasts and has the requisite expertise to undertake a verification of forecasts; and (b) all documentation, analysis and models evidencing the results of the independent verification provided in paragraph 11.2(a).

While not a verification, APA VTS did engage Oakley Greenwood to review the reasonableness of the AEMO forecasts considering announcements made after the Gas Statement of Opportunities was published. The Oakley Greenwood report is provided as part of this submission package.

B.12 Proposed incentive mechanism

B.12.1 Efficiency increments or decrements

INCENTIVE SCHEMES AND OTHER REPORTING **12. PROPOSED INCENTIVE MECHANISM** 12.1 Provide in the materials submitted to the *AER*, for each incentive mechanism (including existing incentive mechanisms), details of the forecast *revenue* referable to increments for efficiency gains or decrements for efficiency losses for the *next access arrangement period*.

APA VTS has applied the efficiency carryover mechanism of section 3.6 of the VTS Access Arrangement to calculate increments for efficiency gains, and decrements for efficiency losses, for the next access arrangement period.

The calculation of these increments and decrements is provided in the worksheet ECM of the completed regulatory template VTS 2023-27 – Reset RIN – Workbook 3 - ECM.

The output from the worksheet ECM (row 65, labelled PTRM inputs) has been used, without change, as an input into the Post-tax Revenue Model for calculation of the total revenue for the next access arrangement period. The input is in row 453, Operating Efficiency Carryover Mechanism, of the PTRM inputs worksheet of the Post-tax Revenue Model.

Operation and rationale of the proposed incentive mechanism

12.2 Provide in the materials submitted to the *AER*, for each proposed incentive mechanism: (a) an explanation of the operation of the proposed incentive mechanism; (b) an explanation of the rationale for the proposed incentive mechanism; (c) reference to the source *documents* used to derive exclusions and inclusions to calculate efficiency gains and losses for the *next access arrangement period; and* (d) any relevant analyses or reports that support the proposed incentive mechanism.

APA VTS has retained the Efficiency Carryover Mechanism in section 3.6 of the VTS 2023-2027 Access Arrangement.

No new incentive mechanism is proposed.

B.13 Rate of return

B.13.1 Apply the binding Rate of Return Instrument

13. RATE OF RETURN 13.1 *VTS* is required to apply the binding *Rate of Return Instrument* (December 2018) for determining the rate of return in its *access arrangement proposal*.

APA VTS has applied the 2018 Rate of Return Instrument to calculate the rate of return.

The cost of equity has been calculated featuring:

Cost of Equity Parameters	
Risk free rate (see below)	1.243%
Beta	0.6
Market Risk Premium	6.1%
Cost of Equity	4.903%

A value for Gamma of 0.585 has been applied in the Post Tax Revenue Model.

The cost of debt has been calculated by applying the 10-year trailing average approach, featuring:

The cost of debt in the AER's 2018 APA VTS AA determination, 4.7167%;
The annual cost of debt in the AER's 2019 cost of debt update, 4.5927%;
The annual cost of debt in the AER's 2020 cost of debt update, 3.0775%;
The annual cost of debt in the AER's 2021 cost of debt update, 2.4305%;

The 2021 annual cost of debt has been applied for 2022 and subsequent years, delivering the following portfolio trailing average cost of debt:

Regulatory year	Weighting of 2018 Final Decision cost of debt	Annual update cost of debt	Calculated portfolio estimate
2018	100%		4.7167
2019	90%	4.5927%	4.7043
2020	80%	3.0775%	4.5403
2021	70%	2.4305%	4.3117
2022F	60%	2.4305%	4.0831
2023F	50%	2.4305%	3.8545
2024F	40%	2.4305%	3.6259
2025F	30%	2.4305%	3.3972
2026F	20%	2.4305%	3.1686
2027F	10%	2.4305%	2.9400

B.13.2 Averaging periods

13.2 The averaging periods nominated by *VTS* in accordance with the *Rate of Return Instrument* (December 2018) will be kept confidential by the *AER*.

APA raises capital at the corporate level and does not raise capital to fund any particular asset or business within the portfolio. As a result, nominating a particular averaging period to observe the cost of debt in order to align with planned debt raising in the market to act as a hedge, may not be applicable.

Risk free rate

Clauses 7 and 8 of the AER 2018 Rate of Return Instrument provide:

7. The ***risk free rate averaging period*** is:

a) the period nominated by a ***service provider*** which satisfies the conditions set out in clause 8, whether the period was nominated before or after the commencement of this instrument, or

b) if no period is nominated in accordance with clause 7a), or a period is nominated that does not meet the conditions set out in clause 8 for the ***regulatory control period*** to which this instrument is being applied, a period of 20 consecutive ***business days*** in length that finishes 3 ***months*** before the start of the ***regulatory control period***.

8. A ***risk free rate averaging period*** nominated in accordance with clause 7a) must:

a) be over a period of 20 or more ***business days*** up to a maximum of 60 ***business days.***

b) start no earlier than 7 ***months*** prior to the commencement of the ***regulatory control period***

c) finish no later than 3 ***months*** prior to the commencement of the ***regulatory control period***, and

d) be nominated both:

i. prior to the start of the ***risk free rate averaging period***, and

ii. no later than the date of lodgement of the regulatory proposal for the regulatory control period, unless the service provider is specified in clause 25, in which case the ***risk free rate averaging period*** must be nominated prior to the start of the ***risk free rate averaging period***.

APA VTS nominates [marked confidential].

Cost of debt

Clauses 23 and 24 of the AER 2018 Rate of Return Instrument provides:

23. The ***return on debt averaging period*** is:

a) the period nominated by a ***service provider*** to which this instrument is being applied and which satisfies the conditions set out in clause 243, whether the period was nominated before or after the commencement of this instrument, or

b) if no period is nominated in accordance with clause 23 a), or a period is nominated that does not meet the conditions set out in clauses 24 for a specific ***regulatory year*** within the ***regulatory control period*** to which this instrument must be applied, a period of 20 consecutive business days in length that finishes 4 ***months*** before the start of the ***regulatory year***.

24. A ***return on debt averaging period*** nominated in accordance with clause 23 a) must:

a) be over a period of 10 or more consecutive ***business days***, up to a maximum of 12 ***months***, and

b) start no earlier than 16 ***months*** prior to the commencement of a ***regulatory year***, and

c) finish no later than 4 ***months*** prior to the commencement of a ***regulatory year***, and

d) be specified for each ***regulatory year*** within the ***regulatory control period***, and

e) not overlap for each different ***regulatory year***, although the averaging period is not required to be identical for each ***regulatory year***, and

f) be nominated both:

i. prior to the start of the ***return on debt averaging period***, and

ii. no later than the lodgement date of the regulatory proposal for the regulatory control period, unless the service provider is specified in clause 25, in which case the ***return on debt averaging period*** must be nominated prior to the start of the ***return on debt averaging period***.

APA VTS nominates [marked confidential].

B.13.3 Placeholder averaging periods

13.3	For the purposes of assessing *VTSs'* proposal we require it to nominate 'placeholder' averaging periods which will be made public and have been used to calculate an indicative rate of return in *VTSs' access arrangement proposal*.

In calculating the placeholder risk free rate, APA VTS has applied an averaging period of the trading days from 1 September to 28 September 2021, sourced from the Reserve Bank of Australia, Table F2 Capital market yields – Government bonds, Series ID FCMYGBAG10D:

Date	Yields on Australian government bonds, 10 years maturity:
01-Sep-2021	1.205%
02-Sep-2021	1.165%
03-Sep-2021	1.180%
06-Sep-2021	1.215%
07-Sep-2021	1.220%
08-Sep-2021	1.260%
09-Sep-2021	1.230%
10-Sep-2021	1.185%
13-Sep-2021	1.235%
14-Sep-2021	1.215%
15-Sep-2021	1.170%
16-Sep-2021	1.220%
17-Sep-2021	1.265%
20-Sep-2021	1.260%
21-Sep-2021	1.230%
22-Sep-2021	1.215%
23-Sep-2021	1.220%
24-Sep-2021	1.360%
27-Sep-2021	1.365%
28-Sep-2021	1.435%
Average	**1.243%**

For this proposal PTRM , APA VTS has adopted the AER's 2.00% calculation of inflation per its April 2021 Final Decision PTRM for the Amadeus Gas Pipeline:

479	**Expected Inflation**						
480	**Year**		**2023**	**2024**	**2025**	**2026**	**2027**
481	Expected Inflation		1.50%	1.75%	2.00%	2.25%	2.50%
482	Interim Calculation		1.0150	1.0175	1.0200	1.0225	1.0250
483							
484	**Year**		**2023**				
485	Inflation Rate	f	2.00%				

B.14 Revenues and prices for reference services

B.14.1 Calculation of unsmoothed and smoothed revenues and prices

REVENUE AND PRICING

14. REVENUES AND PRICES FOR REFERENCES SERVICES

14.1 Provide in the materials submitted to the *AER VTSs'* calculation of the unsmoothed and smoothed revenues, and prices for the purposes of the *reference tariff variation mechanism* proposed by *VTS* for the *next access arrangement period* using the *AER's PTRM*.

APA VTS has applied the AER's PTRM to calculate the building block revenues and smoothed revenue path for the purposes of tariff calculation.

The VTS price regulation is undertaken through a revenue yield approach, in which tariffs are designed to recover, in present value terms, the present value of the smoothed and unsmoothed revenue requirement determined through the PTRM.

The tariff calculation is undertaken through a separate Tariff Model which APA VTS lodges with the AER, and a Price Control Model, which is updated each year as part of the annual tariff variation process.

A feature of the Price Control Model is that it is adjusted for actual and updated forecast volumes over the course of the access arrangement period. The X-factors developed through the Price Control Model are likely to differ from those determined through the revenue smoothing process undertaken in the PTRM.

For the purposes of calculating 2023 tariffs, APA VTS proposes to freeze all tariffs in real terms relative to the tariff approved by the AER for 2022. This is demonstrated in the document "VTS - 2023 Proposed Tariff Schedule - Dec 2021 – Public".

B.14.2 Changes in underlying methods

14.2 If *VTS* proposes to change the underlying methods in its *access arrangement proposal PTRM* compared with the *current access arrangement AER* final decision *PTRM* for the calculations referred to paragraph 14.1 describe in the materials submitted to the *AER* the reasons for the changes.

Save for the effect of changes to the AER's PTRM for gas transmission businesses, APA VTS does not propose to change the underlying methods in its access arrangement proposal relative to the current access arrangement final decision PTRM.

B.15 Tariffs

B.15.1 Total revenue allocation

15. TARIFFS

Total revenue allocation

15.1 Provide in the materials submitted to the *AER*:

(a) an explanation, including any relevant calculations, of the methods or principles used to allocate relevant cost pools between the *reference services* and *other services provided as a covered pipeline* ; and

(b) for *rebateable services*, provide:

(i) the reasons why the service should be treated as a *rebateable service*; and

(ii) a description of the mechanism that *VTS* will use to apply an appropriate portion of the revenue generated from the sale of *rebateable services* to price rebates (or refunds) to *users* of *reference services* (see r. 93 of the *NGR*).

Consistent with the nature of the market carriage model and the VTS reference service, all costs are allocated to the reference services. There are no costs allocated to other services provided as a covered pipeline.

There are no rebateable services.

B.15.2 Tariffs – transmission pipelines

Tariffs – transmission pipelines (see r. 95 of the NGR)
15.2 For each *tariff* proposed by *VTS* for the next *access arrangement* period, in the materials submitted to the *AER* explain how it has been designed to: (a) to generate from the provision of each *reference service* the portion of total *revenue* referable to that *reference service*; and (b) as far as is practicable consistently with paragraph 15.2(a), to generate from the *user* (or class of *users*), to which the *reference service* is provided, the portion of total *revenue* referable to providing the *reference service* to the particular *user* (or class of *users*).

This is discussed in the attached document, VTS – B.15.2 Tariff derivation – December 2021 – Public lodged with this submission package.

B.15.3 Prudent discounts

Prudent discounts (see r. 96 of the NGR)
15.3 Identify in the materials submitted to the *AER* all prudent discounts that *VTS* proposes for the *next access arrangement period* and the *users* to whom they will apply and explain: (a) how each prudent discount is necessary to respond to competition or maintain efficient use of the *pipeline*; and (b) whether, including relevant calculations, *reference tariffs* would be higher without the prudent discount than they would be with the prudent discount.

This is discussed in the attached document, VTS – B.15.2 Tariff derivation – December 2021 – Public lodged with this submission package.

B.16 Reference tariff variation

B.16.1 Reference tariff variation mechanism

Reference tariff variation mechanism
16.1 Provide in the materials submitted to the *AER* an explanation of:
(a) the proposed *reference tariff variation mechanism* for the *next access arrangement period* and the basis for any parameters used in the mechanism; and
(b) the administrative arrangements for periodic reviews of tariffs including the timing of notifications to the *AER*.

This is discussed in the attached document, VTS – B.15.2 Tariff derivation – December 2021 – Public lodged with this submission package.

The proposed tariff variation mechanism is largely unchanged from the current mechanism. This mechanism features updated volumetric forecasts as the AA period progresses, and an annual cap on individual tariff movements of (CPI-X)(1+2%).

APA VTS has reinstated a feature from the 2008 AA tariff variation mechanism that limits the exposure to volume fluctuations relative to forecast. To limit the incentive to under-forecast volumes as a strategy to increase tariffs, this mechanism passes the benefit of any volumetric outperformance above 5.5% to customers through the tariff variation mechanism. APA VTS is exposed to the impact of the first 5.5% of any volume decline.

APA VTS proposes to include, in the tariff variation mechanism, an adjustment for the difference between the forecast and actual costs of carbon offsets.

Given the difficulties experienced with obtaining relevant inputs to the tariff variation proposal from the AER (notably the PTRM reflecting the updated cost of debt), APA VTS has proposed to notify the AER of a proposed tariff variation 30 business days before the revised tariffs are to come into effect.

B.16.2 Effects on administrative costs

16.2 Identify in the materials submitted to the *AER*: (a) the possible effects of the proposed *reference tariff variation mechanism* on *VTSs'* administrative costs and, if known, the administrative costs of *users* or potential *users*; and (b) all relevant regulatory arrangements *VTS* considers applicable to the relevant *reference services* before the commencement of the proposed *reference tariff variation mechanism*.

The 30 day notification period will eliminate double-handling of the tariff update process.

The current 50 day deadline requires APA VTS to lodge a draft tariff update prior to receiving volumetric information from AEMO, which must then be updated once the volumetric information has been received. Also, the time frame in which the AER has advised APA VTS of the revised X factors resulting from the annual cost of debt updating process has caused the tariff update process to be undertaken with a quick turnaround, which has resulted in clerical errors.

APA VTS anticipates that moving to a 30 day notification would result in a reduction in administrative costs relative to the current reference tariff variation mechanism.

B.16.3 Cost pass through mechanism

Cost pass through mechanism
16.3 For each cost pass through event in *VTSs' access arrangement proposal*, provide in the materials submitted to the *AER*: (a) a definition and description of the cost pass through event; (b) an explanation of how the cost pass through event is uncontrollable; (c) an explanation of whether the costs of the cost pass through event are already provided for through the *operating expenditure* or *capital expenditure* forecasts, the WACC (events which affect the market generally and not just the provider are systemic risk events and are already compensated through the WACC), or any other mechanism or allowance; and (d) an explanation of the administrative arrangements for the cost pass through event and their relationship to other periodic reviews for other *tariff* variation mechanisms including the timing of notifications to the *AER*.

This is discussed in the attached document, VTS – B.15.2 Tariff derivation – December 2021 – Public lodged with this submission package.

APA VTS proposes to add one additional category of cost pass through to the access arrangement.

A feature of this access arrangement proposal is a need to bring additional longer-term supplies in to Victoria. There are a number of potential projects to accomplish this, none of which having reached Final Investment Decision at the time of lodgement of this proposal.

Some of these projects require investment outside the VTS, and can proceed on commercial grounds. However, there are three projects mooted for investment in Victoria, which will need to be accommodated through the VTS access arrangement in order to proceed.

For those projects requiring investment in the VTS, APA VTS proposes to lodge an application under Rule 80 requesting that the AER make an advance determination that the capital proposed to enable supply from these projects, if it proceeds, will be considered to be conforming capital expenditure at the commencement of the next access arrangement period.

As discussed in the 2021 GSOO and VGPR, and in section B.11 above, the supply/demand balance in Victoria remains tight. It may be necessary to bring a project into service quickly in order to maintain adequate levels of supply.

APA VTS acknowledges that the Victorian gas supply situation is sufficiently uncertain that one or more of these projects may indeed be required during the upcoming access arrangement period. The proposed pass through provision will give some comfort to these project proponents that, if market conditions change such that one or more of these projects reaches FID, then APA VTS will be in a position to provide the infrastructure to allow them to get their gas into the pipeline.

APA VTS seeks a way to allow capital expenditure, pre-approved as conforming capital expenditure under Rule 80, to earn a return between the time it comes into service and the commencement of the next AA period (when it will be included in the capital base).

While there are clear contingent project provisions in the National Electricity Rules, there are no parallel provisions in the National Gas Rules. There appears to be no explicit provisions either encouraging nor prohibiting the creation of a new pass through event, as proposed below.

APA VTS proposes a new pass through event as follows:

Pre-approved capex event

A pre-approved capex event occurs when:

(a) the service provider has applied to the AER under Rule 80 for a determination to the effect that, if capital expenditure is made in accordance with proposals made by the service provider and specified in the determination, the expenditure will meet the new capital expenditure criteria;

(b) the AER has made a determination under Rule 80 to the effect that, if capital expenditure is made in accordance with proposals made by the service provider and specified in the determination, the expenditure will meet the new capital expenditure criteria;

(c) capital expenditure has been made in accordance with proposals made by the service provider and specified in the determination;

(d) the assets the subject of the capital expenditure have been brought into service in the provision of pipeline services.

The notification and materiality provisions associated with this new pass through event are the same as those applicable to other pass through events.

B.16.4 Materiality threshold

16.4 Identify in the materials submitted to the *AER*: (a) the materiality threshold *VTS* proposes for cost pass through events; (b) the possible effects of the proposed cost pass through mechanism on *VTSs'* administrative costs and, if known, the administrative costs of *users* or potential *users*; and (c) all relevant regulatory arrangements *VTS* considers applicable to the relevant *reference services* prior to the commencement of the proposed cost pass through mechanism.

The materiality threshold for cost pass through evens is included in section 4.6.4 of the proposed access arrangement. It is unchanged from the current access arrangement, at one per cent of the smoothed forecast revenue, approved by the AER in its final decision on the Access Arrangement, in the year of the Access Arrangement Period that the costs are incurred.

The defined Cost Pass-through Events with this materiality threshold are: Insurance Cap Event; insurer credit risk event; natural disaster event; pre-approved capex event; regulatory change event; service standard event; tax change event; and terrorism event.

B.17 Non-tariff components

B.17.1 Non-tariff terms and conditions

17. NON-TARIFF COMPONENTS **Non-tariff terms and conditions** 17.1 Provide in the materials submitted to the *AER*: (a) details of any amendments to the non-tariff terms and conditions of the *access arrangement* that *VTS* proposes for the *next access arrangement period*; and (b) for each amendment identified in paragraph 17.1(a), explain the reasons for the proposed amendment.

There are no amendments to the non-tariff terms and conditions in the proposed access arrangement relative to the current approved access arrangement.

B.17.2 Queuing requirements

Queuing requirements	
17.2	Provide in the materials submitted to the *AER* details of the process or mechanism for determining the order of priority for spare or developable capacity, for example, whether it is to be as a first-come-first-served basis or by auction.

The proposed AA includes no queuing requirements.

The order of priority between prospective Users of spare or developable capacity is determined on a daily basis in accordance with Part 19 of the National Gas Rules.

B.17.3 Capacity trading requirements

Capacity trading requirements	
17.3	Identify in the materials submitted to the *AER* the rules or procedures *VTS* must accord with under r. 105 of the *NGR*.

APA VTS is registered as a participant in the Victorian Declared Wholesale Gas Market. As such, under Rule 105, any transfer of capacity must be undertaken in accordance with rules or procedures governing the Victorian Declared Wholesale Gas Market.

As there is no scope to reserve capacity under the market carriage model, there are no applicable capacity trading requirements for the purposes of Rules 48(1)(f) or 105 of the NGR.

B.17.4 Extension and expansion requirements

Extension and expansion requirements (see r. 104 of the NGR)
17.4 Provide in the materials submitted to the *AER*: (a) details of any *extension and expansion requirements* where that *extension and expansion requirement* states that the *access arrangement* will apply to incremental services to be provided as a result of the extension or expansion; and (b) details of the effect of those *extension or expansion requirements* identified in paragraph 17.4(a) on *tariffs*.

Extension and expansion requirements remain unchanged from the current approved access arrangement.

B.17.5 Change of receipt or delivery point by user

Change of receipt or delivery point by user
17.5 Explain in the materials submitted to the *AER*: (a) how *users* may obtain consent, including identifying any relevant conditions, to change receipt or delivery points as contemplated under r. 106 of the *NGR*; and (b) where relevant, the technical or commercial considerations and other relevant conditions in the event *VTS* intends to withhold consent to a change in a *receipt or delivery point*.

Under the market carriage model, the change of a User's receipt or delivery point is governed by Part 19 of the National Gas Rules and the Gas Scheduling Procedures. Under these rules and procedures, APA VTS' consent is not required for a User to change its receipt or delivery point.

B.18 Miscellaneous reporting

B.18.1 Related party transactions

MISCELLANEOUS REPORTING

18. RELATED PARTY TRANSACTIONS

18.1 Identify and describe in the materials submitted to the *AER* all entities which:

(a) are a *related party* to *VTS* and contribute to the provision of *pipeline services*; or

(b) have the capacity to determine the outcome of decisions about *VTSs'* financial and operating policies.

The minimum threshold for these entities are for transactions greater than $1,000,000 in a *regulatory year*.

VTS has used the definition of 'related party' as being consistent with that in the Australian Corporations Law.

APA Group applies an internal operations model to its portfolio of businesses. That is, APA Group personnel operate APA Group assets, including the VTS. Whilst APA Group uses specialist contractors for defined tasks, APA Group does not contract the general operation of its assets to external or related party entities. This internal operation model allows APA Group to share costs among the operating businesses and achieve synergies which results in lower costs to customers.

Many of these shared functions, such as procurement and capital raising, are performed centrally through a corporate entity. Virtually all other functions, including specialist engineering functions, are conducted through specialist teams, which work across a number of assets in the APA Group portfolio. The costs associated with these functions are allocated among the relevant APA Group operating businesses, including APA VTS Australia (Operations) Pty Limited, the VTS service provider. No margins, management fees or incentive payments are applied to costs allocated within the group.

Through discussions with the AER to clarify the requirements of the Annual RIN process, VTS has agreed with the AER that costs incurred by APA Group entities and allocated to APA VTS Australia (Operations) Pty Limited will not be considered to be related party transactions.

B.18.2 Organisational structure

18.2	Provide in the materials submitted to the *AER* a diagram of the organisational structure depicting the relationships between all the entities identified in the response to paragraph 18.1.

An APA Group organisation structure was provided to the AER in the context of the Annual ring fencing compliance RIO reporting process, lodged on 31 October 2021.

B.18.3 Related party contracts

18.3	Identify: (a) all arrangements or *contracts* between *VTS* and any of the other entities identified in the response to paragraph 18.1 currently in place or expected to be in place during the period 2023 to 2027 which relate directly or indirectly to the provision of *pipeline services*; and (b) the service or services that are the subject of each arrangement or contract.

There are no arrangement or contracts between VTS any other APA Group entities currently in place or expected to be in place during the period 2023 to 2027 which relates directly or indirectly to the provision of pipeline services.

B.18.4 Outsourcing

18.4 For each service identified in the response to paragraph 18.3(b): (a) Provide in the materials submitted to the *AER*: (i) a description of the process used to procure the service; and (ii) supporting documentation including, but not limited to, requests for tender, tender submissions, internal committee papers evaluating the tenders, *contracts* between *VTS* and the relevant provider. (b) explain in the materials submitted to the *AER*: (i) why that service is the subject of an arrangement or *contract* (i.e. why it is outsourced) instead of being undertaken by *VTS* itself; (ii) whether the services procured were provided under a standalone *contract* or provided as part of a broader operational agreement (or similar); (iii) whether the services were procured on a genuinely competitive basis and if not, why; and (iv) whether the service (or any component thereof) was further outsourced to another provider.

APA VTS operates an internal operation model – that is, operations are undertaken by APA as owner/operator. While some specialist services (for example aerial right of way surveys) are subject to contracting arrangements, the operation of the system is undertaken through a insource model.

B.18.5 Contract costs

18.5	For each arrangement or contract identified in the response to paragraph 18.3 provide in the materials submitted to the *AER*:
	(a) a copy of the arrangement or contract which sets out the obligations of both the other entity and *VTS*;
	(b) a breakdown of all services provided as part of that arrangement or contract;
	(c) a breakdown of costs for each service provided as part of the arrangement or contract, including separately identifying overheads, any profit margin or management fee and incentive payments;
	(d) a breakdown of all costs included in the contract price; and
	(e) any methodologies, including consultant's reports, or assumptions used to determine components of those costs included in the contract price.

Not applicable

B.19 Other information

B.19.1 Costs associated with merits review

OTHER INFORMATION

19. COMPLIANCE WITH SECTION 269A OF THE *NGL*

19.1 *VTS* must provide a statement attesting that:

(a) where any expenditure or cost has been incurred or is forecast to be incurred by *VTS*, as a result of or incidental to a review under Part 5 – *Merits review and other non-judicial review* – of the *NGL*, that;

(i) *VTS* has not included any of that expenditure or cost, or any part of that expenditure or cost, in its capital or *operating expenditures* for a *access arrangement* decision; and

(ii) *VTS* has not recovered any of that expenditure or cost, or any part of that expenditure or cost, from end users; and

(iii) *VTS* has not sought to pass through any of that expenditure or cost, or any part of that expenditure or cost, to end users; or

(b) where no expenditure or cost has been incurred or is forecast to be incurred by *VTS*, as a result of or incidental to a review under Part 5 – *Merits review and other non-judicial review* – of the *NGL*, that;

(i) no such expenditure or cost has been incurred or is forecast to be incurred.

APA VTS has not included, recovered, or sought to pass through any expenditure or cost associated with merits review, nor does it forecast to incur any such costs.

B.20 Capex and opex related to merits review

20. IDENTIFICATION OF CERTAIN COSTS IN ACTUAL CAPEX AND OPEX
20.1 For any actual *capital expenditure* or *operating expenditure* reported in response to this *notice*, identify any part of that expenditure which can be attributed to any expenditure or cost that *VTS* has incurred as a result of, or incidental to, a review under Part 5 – *Merits review and other non-judicial review* – of the *NGL*.

No part of the APA VTS capital or operating expenditure can be attributed to any expenditure or cost that APA VTS has incurred as a result of, or incidental to, merits review.

Appendix C Schedule 3 – Historical Information

SCHEDULE 3 – HISTORICAL INFORMATION

REGULATORY INFORMATION NOTICE UNDER DIVISION 4 OF PART 1 OF CHAPTER 2 OF THE NATIONAL GAS (VICTORIA) LAW ISSUED TO

APA VTS AUSTRALIA (OPERATIONS) PTY LIMITED (ABN 65 083 009 278)

Note: (a) **All information and answers to be provided relate to the *current access arrangement period* unless otherwise stated.**

The RIN response and Basis of Preparation for Schedule 3 are provided as separate documents:

VTS - RRIN Response Schedule 3 -1 December 2021 - Public; and
VTS - RRIN Basis of Preparation workbook 2 -1 December 2021 - Public.