FINAL DECISION
APA VTS Australia
Gas access arrangement
2018 to 2022

Attachment 6 – Capital expenditure

November 2017

AUSTRALIAN ENERGY REGULATOR

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capex	Capital expenditure
CCP11	Consumer Challenge Panel, Sub-panel 11
NGL	National Gas Law
NGR	National Gas Rules
PSP	Precinct Structure Plan
SWP	South West Pipeline
UGS	Underground storage
VNI/VNIE	Victorian Northern Interconnector / Victorian Northern Interconnector Expansion
VTS	Victorian Transmission System
WORM	Western Outer Ring Main

6 Capital expenditure

Capital expenditure (capex) refers to the capital costs and expenditure incurred in the provision of pipeline services.[1] This investment mostly relates to assets with long lives. APA recovers the costs of these assets through the return on capital and depreciation building blocks that form part of its total revenue. In this way APA recovers the financing cost and depreciation associated with these assets over their expected life.

This attachment sets out our final decision on APA's proposed conforming capex for 2013–17 and forecast capex for the 2018–22 access arrangement period. In making our final decision on forecast capex for the 2018-22 access arrangement period, we have had specific regard to APA's forecast capital expenditure on the Western Outer Ring Main (WORM). Our draft decision expressly sought stakeholder feedback on APA's amended proposal (21 April 2017) to construct the WORM. This capex was proposed to address the tightening supply/demand balance in the VTS forecast by AEMO in March 2015.[2]

In our analysis of APA's revised proposal, we took into consideration additional information APA provided on issues we raised in our draft decision. We also examined matters raised in stakeholder submissions, and sought technical advice on parts of APA's revised proposal from Sleeman Consulting.

Our final decision considers this updated information together with the other capex items included in APA's January proposal.

6.1 Final decision

6.1.1 Conforming capex for 2013–17

We approve APA VTS revised total capex of $388.5 million ($2017) for the 2013–17 access arrangement period as conforming capex.[3] This is shown by capex category in Table 6.1.

1 NGR, r. 69.

2 AEMO, *Victorian Gas Planning Report: Declared Transmission System Planning for Victoria,* March 2017, p. 55, AEMO, *Gas Statement of Opportunities: For Eastern and South-Eastern Australia*, March 2017.

3 NGR, r. 79(1).

Table 6.1 AER approved capex, 2013 to 2017 ($million, 2017)

Category	2013	2014	2015	2016	2017(f)	Total (2013–17)
Augmentation	12.1	112.3	74.5	75.2	48.1	**322.2**
Replacement & Upgrade	1.7	7.7	14.3	9.3	7.2	**40.2**
Non-System	1.7	4.2	5.7	7.2	7.1	**26.1**
TOTAL CAPEX	**15.6**	**124.2**	**94.5**	**91.7**	**62.5**	**388.5**

Source: AER analysis. Totals may not add due to rounding.

6.1.2 Conforming capex for the 2018–22 access arrangement period

We approve APA's revised proposed total capex of $239.0 million ($2017) for the 2018–22 access arrangement period as conforming capex.[4] This is shown by capex category in Table 6.2.

Table 6.2 AER approved capex, 2018–22 ($million, 2017)

Category	2018	2019	2020	2021	2022	Total
Augmentation	45.0	58.1	58.1	-	-	**161.2**
Replacement and Upgrade	12.9	12.0	9.4	12.7	14.0	**61.1**
Non-System	4.2	3.5	3.2	3.5	2.3	**16.7**
TOTAL CAPEX	**62.1**	**73.7**	**70.7**	**16.3**	**16.3**	**239.0**

Source: AER analysis. Totals may not add due to rounding.

6.2 APA's revised proposal

6.2.1 Capex over the 2013–17 access arrangement period

APA's revised total past capex of $388.5 million ($2017) during the 2013–17 access arrangement period is $13.8 million or 3.4 per cent below the amount approved in our draft decision.

Our draft decision is presented below in Table 6.3 for comparison.

[4] NGR, r. 79(1).

Table 6.3 AER draft decision capex 2013–17 ($million, 2017)

Category	2013	2014	2015	2016	2017(f)	Total
Augmentation	12.3	112.4	74.6	92.1	52.3	**343.8**
Refurbishment and Upgrade	1.6	7.5	14.2	10.5	2.1	**35.9**
Non-system	1.7	4.2	5.7	2.3	8.6	**22.6**
TOTAL CAPEX	**15.6**	**124.2**	**94.5**	**105.0**	**63.0**	**402.3**

Source: AER Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure.
Totals may not add due to rounding.

The main cause for the change between the final decision and draft decision relate to:

- changes arising from a delay in commencement of construction of the South West Pipeline (SWP) to Anglesea Pipeline from 2017 to 2018
- adjustment to the proposed expenditure on the inline inspection program in 2017[5]
- revised downward expenditure on Victorian Northern Interconnector (VNI) in 2016 and 2017
- a change in the timing of expenditures on the reconfiguration of the Brooklyn compressor and conversion of Winchelsea compressor to be bi-directional bringing forward costs from 2018 to 2017
- a change in the timing of the Dandenong relocation, bringing forward costs from 2017 to 2016.[6]

The reasons and analysis for our final decision on the capex APA incurred during the 2013–17 access arrangement period is set out at section 6.4.1 below.

6.2.2 Proposed capex for the 2018–22 access arrangement period

APA proposed revised conforming capex of $239.0 million ($2017) for the 2018-22 access arrangement period, an increase of $24.0 million or 11 per cent from our draft decision of $215 million. While APA adopted most elements of our draft decision on forecast capex, it provided additional material to support the expenditure needed to complete the Warragul lateral expansion ($7.6 million), and it provided information in support of its positon that turbine overhauls are replacement capex and not maintenance opex. APA also reconsidered its proposed program of Safety Management High Consequences Areas (slabbing) and the inline inspection (pig trap installation component) projects, and responded with more modest proposals for these

5 APA, *APA VTS Access Arrangement Revision Proposal Submission 2018-2022*, 3 January 2017. pp.26-30.
6 APA, *Response to information request AER APA VTS 013*, 10 October 2017, p3

programs. The reasons and analysis for our final decision on APA's forecast capex for the 2018-22 access arrangement period is set out at section 6.4.2 below.

Our draft decision for 2018-22 is presented below in Table 6.4 for comparison.

Table 6.4 AER's draft decision on capex, 2018–22 ($million, 2017)

Category	2018	2019	2020	2021	2022	Total
Augmentation	44.4	46.8	59.8	-	-	**151.0**
Refurbishment and Upgrade	12.5	6.5	9.3	10.2	8.6	**47.1**
Non-system	4.2	3.6	3.3	3.6	2.3	**16.9**
TOTAL CAPEX	**61.1**	**56.9**	**72.3**	**13.7**	**10.9**	**215.0**

Source: AER Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure. Totals may not add due to rounding.

6.3 Assessment approach

We have not changed our assessment approach for capex from our draft decision. Section 6.3 of our draft decision details that approach.

6.4 Reasons for final decision

6.4.1 Capex over the 2013–17 access arrangement period

In this final decision, we approve APA's revised proposed capex of $388.5 million ($2017) for the 2013–17 access arrangement period to be included into the opening capital base (see Table 6.1). We consider the capex proposed by APA for the 2013-2017 access arrangement period is conforming capex in accordance with rule 79 of the NGR.

Detail of the differences between the amount approved in our draft decision and the final decision are detailed below.

South West Pipeline to Anglesea Pipeline

APA has identified a change in the timing of the SWP to Anglesea pipeline since its January 2017 proposal. The delay is due to AusNet Services undertaking measures which allow the capital expenditure to be deferred by 12 months. This is a temporary deferral. APA states that the work is urgent and must be completed by winter of 2019.[7]

The deferral has not led to a change in the total cost of the project. It has simply moved construction of the pipeline from 2017-18 to 2018-19. The total cost of the project remains at $25.9 million. The expenditure approved for this project in our draft decision

[7] APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public, p. 29.

was $9.3 million in 2017 and $16.6 million in 2018. This will now be expended as $13.6 in 2018 and $12.3 million in 2019.[8]

We confirm the position in our draft decision that we are satisfied the capex for this project is such as would be incurred by a prudent service provider acting efficiently and in accordance with accepted good industry practice.[9] We also maintain that this extension will improve the security of supply to customers in Geelong, the Surf Coast and Queenscliff by supplying a second source of supply. Therefore it is justified on the grounds of maintaining the integrity of services.[10]

We determine that the $25.9 million for the South West Pipeline to Anglesea Pipeline to be incurred in 2018 and 2019 is conforming capex.

Inline Inspection Program

We did not accept APA's forecast expenditure for part of its inline inspection program to be undertaken in 2017. Our assessment was that the forecast expenditure on these works in 2017 had not been arrived at on a reasonable basis, therefore did not meet the requirements under rule 74 of the NGR.[11]

In its revised proposal APA amended its pig trap installation program to reflect actual expenditure in 2017. APA has completed the pig trap installation works and the actual cost of undertaking the pigging on the Dandenong to Princess Highway pipeline (PL129), at a total cost of $1.68 million ($1.4 million installation and undertaking pigging $0.3 million).[12] This is lower than the forecast expenditure of $1.9 million included in the initial proposal. While $300,000 had already been spent on preparatory works in 2015-16, the actual additional cost of this work in 2017 of $1.4 is moderately lower than the forecast budget in the initial proposal of $1.5 million.

APA has identified a broader strategy to not pursue inline inspection on pipelines that do not operate above 30 per cent minimum specified yield strength. Using this criteria, APA decided to not go ahead with the proposed pig trap installation on the Somerton to Somerton pipeline (PL238) it had planned to undertake in 2017 at a cost of $1.5 million. APA will also no longer proceed with pig trap installation on the Laverton North (PL162), Pakenham (PL68) and Princess Highway to Regent St (PL36) pipelines.[13]

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8 APA VTS - *B3 - Revised proposal capital expenditure model* - 5.0 Calc | Forecast Projects - updated 24 October 2017

9 NGR, r.79(1)

10 NGR, rr. 79(1)(b), 79(2)(c)(ii), APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public, p. 68; AER, Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure, July 2017 p.14..

11 NGR, r. 74(2)

12 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public, p. 27 and APA VTS follow up to AER Information request 10 October 2017.

13 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public, pp. 27-28.

In our draft decision, we did not accept APA's forecast cost for pigging of the Dandenong-Morwell (T1) pipeline.[14] In its revised proposal, APA has reduced the forecast for this work to $2 million[15] and delayed this work to 2018-19. Further detail on this project is provided in the pipeline integrity management activities discussion for the forecast period in section 6.4.2.

We maintain the position from our draft decision that $5.6 million of the amount APA had already incurred for the inline inspection program is conforming capex.[16] We also accept APA's actual expenditure of $1.68 million for pig trap installation works and pigging on the Dandenong to Princess Highway pipeline (PL129), to be reasonable and as would be incurred by a prudent service provider acting efficiently.[17]

Our final decision is that APA's revised projections of actual expenditure on the inline inspection program of $2.2 million in 2017 and $6.7 million in total for the 2013-17 access arrangement period is conforming capex.[18]

Victorian Northern Interconnector Expansion

APA submitted that following completion of the construction of the VNIE, it is now able to more accurately determine where the capital expenditure has been incurred. It has identified that capital expenditure on the VNIE in 2016 was $17.2 million less than in its initial proposal.

A legal dispute between APA and one of its contractors has also delayed accounting of capital expenditure from 2016 until 2017 (the dispute is ongoing at the time of writing).[19]

Overall, capex on the VNIE was revised down $15.1 million from $339.2 million to $324.1 million.

Based on the analysis set out in our draft decision, we maintain that APA's expenditure on the VNIE during the 2013-17 access arrangement period is conforming capex, and we accept the lower level of expenditure of $324.1 million incurred by APA.

Brooklyn and Winchelsea Compressor Stations

In our draft decision, we approved capex of $3.5 million in 2018 to reconfigure the Brooklyn compressor station and convert the Winchelsea compressor station to be bi-directional. This work was proposed to address the threat to system security on the

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14 AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017, p.16.

15 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public p. 28

16 AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017, p.16.

17 NGR, r.79(1)

18 We note that total expenditure on the inline inspection program of $6.7 million is less than the sum of the previously approved amount of $5.6 million and the additional approved expenditure of $1.4 million in 2017 for pig trap installation on PL129. This is the due to actual expenditure on some projects carried out in 2016 to 2017 being lower than initial estimates provided in APA's initial proposal.

19 APA VTS response to AER information request, 10 October 2017 (IRO13)

South West Pipeline in 2019 identified by AEMO[20] while the WORM was being constructed (construction of the WORM is not expected to be completed until 2020).

While the total expenditure has not changed, APA fast-tracked commencement of this project, bringing forward the timing and cost ($3.2 million) for most of the work to 2017, with the remainder ($0.5 million) in 2018.

Our final decision is that the capital expenditure remains conforming capex, noting that $3.2 million forms conforming capex for 2013-17 and $0.5 million forms conforming capex for 2018-22.

Other Capital Expenditure

Our final decision maintains the position on the remainder of APA's actual capex in the 2013-17 presented in our draft decision.[21]

6.4.2 Capex over the 2018–22 access arrangement period

We approve conforming capex of $239.0 million ($2017) for the 2018-22 access arrangement period, summarised in Table 6.2.

This is a net $24.0 million increase on the $215.0 million we approved as conforming capital expenditure in our draft decision.

The main differences between the amount approved in our draft decision and the revised proposal relate to increased expenditures of:

- $9.6 million on the SWP to Anglesea Pipeline (deferred capex detailed above)
- $4.2 million on the Warragul Lateral
- $2.7 million on pig trap installation
- $2.0 million on pigging of the Dandenong-Morwell (T1) pipeline
- $5.7 million for the safety management high consequence areas (slabbing) program
- $4.8 million on the turbine overhauls

less

- $3.2 million brought forward to 2017 for work at the Brooklyn and Winchelsea Compressor Stations
- $1.8 million in other savings

Each of these projects is discussed below.

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[20] AEMO, *Notice of Threat to System Security - Seeking Market Response*, 10 March 2017 < https://www.aemo.com.au/-/media/Files/Gas/DWGM/2017/Threat-to-System-Security-Notice---SWP-to-Port-Campbell-constraint.pdf>

[21] AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017.

Warragul Lateral Expansion

In its initial proposal, APA proposed $7.6 million of forecast capex to expand the Warragul lateral pipeline to accommodate increasing demand on the grounds of maintaining the safety and integrity of service. This followed a breach in the minimum delivery requirement on the Warrigal lateral pipeline in 2014.[22] Subsequent to APA's initial submission AEMO issued a Notice of Threat to System Security on the Warragul lateral pipeline.[23]

In our draft decision, we agreed that expansion of the Warragul lateral pipeline was necessary to maintain the safety and integrity of service.[24] However, we considered that the proposed expenditure of $7.4 million exceeded that which would be incurred by a prudent operator. We approved an alternative capex amount of $3.5 million, considered more prudent and in accordance with good industry practice.

APA responded to our draft decision providing greater detail on the costs associated with each element of the project. APA argued that following detailed project design it has been able to accurately identify project management and commissioning costs of $1.96 million.[25] This was supported by a listing of staff and breakdown of their time allocated to the project. APA identified constraints around the existing easements that were only between six and seven metres wide and restrictions on locating the pipeline in road reserves, which required APA to obtain additional easements at a cost of $1.6 million.[26] APA further based the construction costs for the project on quotes from a number of pipeline contractors, with $3.2 million the median budget quote from the pipeline contractors.[27]

Sleeman Consulting agreed the proposed cost of the Warragul lateral expansion is 'fair and reasonable', based on the additional information provided by APA on project management costs, easement purchase and construction costs.[28] Sleeman Consulting advised the personnel input requirements for project management and commissioning support the proposed costs of project management. Also, Sleeman Consulting indicated the narrow easements on the existing Warragul lateral pipeline are unsuitable for looping, therefore the purchase of additional easements would be necessary. In addition, taking into account the fixed costs of mobilising equipment for a short section of pipeline and the directional drilling requirement under the Princess Highway, Sleeman Consulting considered the cost of construction, based on independent contractor quotations, appear reasonable.

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22 AEMO, *Victorian Gas Planning Report: Declared Transmission System Planning for Victoria,* March 2017, p. 58,

23 AEMO, *Notice of a Threat to System Security – Seeking a Market Response*, 10 March 2017.

24 NGR, rr. 79(2)(c)(ii) and 79(2)(c)(iv); AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017, p.19..

25 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , pp. 33-36

26 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 37

27 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 39

28 Sleeman Consulting, *VTS Access arrangement 2018-22 - Further Advice Regarding Forecast Capex for Selected Projects*, 20 October 2017. p.3.

Based on the additional information APA provided on project management, easement and construction costs and the advice from Sleeman Consulting, we accept APA's capex estimate for expansion of the Warragul Lateral pipeline to be prudent and in accordance with good industry practice.[29]

Our position in this final decision is that the proposed total cost of $7.6 million for the Warragul Lateral expansion is conforming capex.

Pipeline Integrity Management Activities

In our draft decision we approved $16 million ($2017) of forecast capex for pipeline integrity management activities, as compared with APA proposed $22.2 million ($2017). APA's proposal comprised $14.2 million to undertake an inline inspection schedule for 950 kilometres of pipelines, $6.2 million to modify pipelines at James Street, Tyres to Maryvale and Truganina to Plumpton to enable inline inspection, $1.1 million for repair of the Morwell-Dandenong pipeline following pigging and $0.6 million for the direct assessment of seven sections of pipeline.[30]

In our draft decision, we agreed that the proposed inline inspection schedule, repair of the Morwell-Dandenong pipeline and direct assessments was justified on the grounds that it will maintain and improve the safety and integrity of services.[31] We considered this expenditure to be prudent, in accordance with good industry practice and achieved the lowest sustainable cost of providing services.[32]

However, we questioned why APA had not undertaken a cost benefit analysis to support its proposal to modify the pipelines at James Street, Tyres to Maryvale and Truganina to Plumpton to enable inline inspection. Given the high cost of installing pig traps relative to the cost of regular direct inspection on these short sections of pipeline, we did not consider that APA had sufficiently made the case to justify this expenditure as prudent and efficient. [33]

APA revised its proposal on the pipeline modifications in response to our draft decision.

- For the Truganina to Plumpton pipeline, APA decided not to proceed with pig trap installation.[34] Given this pipeline will connect directly to the WORM at Plumpton and the WORM will be constructed with a pig traps, APA determined that a pig trap receiver at Plumpton is no longer required.
- For Tyres to Maryvale, APA argued that this is an old pipeline, operating at high pressure (above 30 per cent specified minimum yield strength), connected to a high

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29 NGR, r. 79(1)(a).

30 APA, *Pipeline Integrity Business Case Number 257, 258 and 259*; APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , pp. 98-100.

31 NGR, rr. 79(1)(b), 79(2)(c)(i) and 79(2)(c)(ii).

32 NGR, r. 79(1)(a).

33 NGR, r. 79(1)(a).

34 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 41

value customer (Australian Paper - the largest consumer of gas in Victoria) and past maintenance practices have left it vulnerable to severe corrosion.[35] APA presented advice from consultant Bruce Ackland and Associates, suggesting inline inspection to be the most effective technique to detect defects on this pipeline.

- For the James St pipeline, APA identified that it traverses a high consequence area and was vulnerable to severe corrosion due to its proximity to a gas power generator and transmission lines.[36] Despite its short length, given the risk and consequence of failure, APA argued that inline inspection is preferential, as it improves the ability to detect faults before they become severe.

We accept APA's argument that the Tyres to Maryvale and James St pipelines are susceptible to corrosion, and the risk and economic consequence of failure is greater than standard pipelines. We also recognise that pigging provides greater detail of pipeline integrity and is superior to direct inspection on pipelines such as these, with heat shrink sleeve and coal tar enamel coatings applied to them.

Sleeman Consulting provided specific advice on the James Street and Tyres to Maryvale pipelines.[37] Sleeman Consulting took into account the additional information APA provided for each pipeline and assessed that the capex was reasonable.

Having regard to APA's revised proposal and the advice from Sleeman Consulting, we accept that that the capex for pig trap installation on the Tyres to Maryvale and James St pipelines is justified on the grounds that it will maintain and improve the safety and integrity of services.[38] We are satisfied that the proposed expenditure is prudent and in accordance with good industry practice.[39]

In addition to the pigging works proposed for the forecast period, APA has delayed pigging works on the Dandenong-Morwell (T1) pipeline, as noted above. This work was initially proposed for 2017, but will now occur in 2018-19. APA has also reduced the forecast for this work to $2 million and provided greater detail on the inspection technique in its revised proposal.

Sleeman Consulting advised the inspection technique, using an electromagnetic acoustic transducer (EMAT) equipped inspection tool, is the preferred means of inline inspection on older, larger diameter pipeline, such as T1.[40] EMAT inline inspection provides a comprehensive assessment of the condition of the pipeline, identifying any defects and/or cracking on the pipeline. Sleeman Consulting also noted that this pipeline was last inspected 10 years ago, therefore this work is consistent with APA's

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35 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 42

36 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 43

37 Sleeman Consulting*, VTS Access arrangement 2018-22 - Further Advice Regarding Forecast Capex for Selected Projects*, 20 October 2017. p.6.

38 NGR, rr. 79(1)(b), 79(2)(c)(i) and 79(2)(c)(ii).

39 NGR, r.79(1)

40 Sleeman Consulting, *VTS Access arrangement 2018-22 - Further Advice Regarding Forecast Capex for Selected Projects*, 20 October 2017. p.8.

Group Technical Policy for inline inspection of transmission pressure pipelines and in keeping with good industry practice.

Taking this advice into account, we are satisfied that the $2 million proposed for the pigging of the Dandenong to Princess Highway (T1) pipeline is prudent, in accordance with good industry practice and achieves the lowest cost of providing services.[41]

The Consumer Challenge Panel (CCP11) has again expressed the view that pigging is better classified as operational expenditure for regulatory purposes.[42] However, they were reassured by the explanation in our draft decision that the difference between treating pigging as opex or capex is not likely to be material. As all expenditure in the building block model is treated symmetrically, the overall difference between treating expenditure as capex or opex should be NPV neutral.[43]

Our final decision is to approve $20.0 million for the complete inline inspection program as conforming capex. This is composed of $2.8 million for pig trap installation (Tyres to Maryvale and James Street), $1.1 million for repair of the Morwell-Dandenong pipeline, and $16.2 for its pigging program.

Safety Management - High Consequence Areas (Slabbing) Program

In our draft decision, we did not accept that it was prudent or consistent with good industry practices to proceed with the slabbing program APA proposed for 2018 and 2019 ($24.4 million ($2017)).[44]

While we recognised that some slabbing is necessary in the 2018-22 access arrangement period, we considered deferring slabbing activities along sections of the pipeline where land development was not imminent is likely to yield significant efficiencies. In our draft decision, we invited APA to respond with an alternative program more consistent with the rate of urban development along the three pipelines it had identified for slabbing over the next 20 years.

APA responded in their revised proposal with a slabbing program more closely aligned with land development activity expected to occur along the three pipelines over the next five years.

APA is no longer proposing to slab the Brooklyn-Corio pipeline, instead opting for pressure reduction.[45] This can be implemented with zero capital expenditure, but will incur operational expenditure of approximately $30,000. APA submitted in its revised proposal that AEMO has agreed to amend the Service Envelope Agreement, allowing

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41 NGR, r.79(1)

42 Consumer Challenge Panel Sub-Panel CCP11, *Response to AER's draft decision and revised proposal from APA VTS for a revenue reset/access arrangement for the period 2018 to 2022*, *12 September* 2017, p. 13 .

43 AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017, p. 25

44 AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017, p.27; APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 104..

45 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 45.

APA to legally implement a permanent pressure reduction to 5,100 kPa on this pipeline.

In reassessing the timing of urban development along the Wollert-Wodonga pipeline, based on the Victorian Planning Authority's schedule for the Precinct Structure Plans (PSPs) and Safety Management Studies, APA identified that only two kilometres of slabbing was required during the 2018-22 access arrangement period.[46] This involves a section of the T74 pipeline traversing Shenstone Park PSP (PSP 69), which is expected to be finalised and ready for development in 2018 ($1.2 million). APA concluded that no urbanisation is expected on the Northern Freight section of the pipeline (PSP 1063) before 2022, enabling it to defer the slabbing works on this section. Further, APA determined that on the Donnybrook and Woodstock (PSP 67 & 96) sections, there will be a suitable easement and physical protection that will negate the need for any further work.

On the Brooklyn-Lara pipeline APA identified that only one of the seven PSPs (Tarneit Plains - PSP 1085) is expected to be completed in 2017. Therefore, APA has budgeted $2.5 million in 2019 for slabbing of the four kilometre section of the pipeline crossing this PSP.[47] The other six PSPs crossed by the Brooklyn-Lara pipeline are scheduled for completion in 2020. APA indicated that there is a high likelihood that construction will begin on at least one of these six PSPs by 2022, so have budgeted $1.9 million for three kilometre of slabbing in 2022, although the section to which this applies was not specified.

We consider it likely that development may begin soon after the finalisation of the Shenstone Park PSP in 2018, which supports APA's proposal to slab the two kilometres of the T74 pipeline that traverses this PSP in 2018. Similarly, completion of the Tarneit Plains PSP in 2017 supports APA's decision to slab a four kilometre section of the Brooklyn-Lara pipeline that traverses this PSP in 2019. We deem credible APA's assessment that following the scheduled completion of the other six PSPs crossed by the Brooklyn-Lara pipeline in 2020, there is a high likelihood that development will begin on at least one of the PSP by 2022. While it is too early to predict which PSP will be developed first, we consider APA's proposal to slab a three kilometre section of pipeline in 2022 to be reasonable and have included $1.9 million in the approved capex allowance.

Sleeman Consulting examined APA's revised slabbing program and provided specific observations in relation to each of the affected pipelines.[48] Sleeman Consulting concluded that APA's proposal to slab short sections of two pipelines (Wollert-Wodonga and Brooklyn-Lara) was consistent with the requirements of the NGR.[49]

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[46] APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 46

[47] APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , p. 47

[48] Sleeman Consulting, *VTS Access arrangement 2018-22 - Further Advice Regarding Forecast Capex for Selected Projects*, 20 October 2017. p.4.

[49] NGR, r.79(1)

Therefore we approve APA's proposed expenditure of $5.6 million for its slabbing program in the 2018-22 access arrangement as prudent and efficient and consistent will good industry practice. [50]

Our position in this final decision is that the $5.6 million for the Safety Management High Consequence Areas (slabbing) program to be incurred in the 2018-22 access arrangement period is conforming capex.

Turbine Overhauls

In its initial proposal, APA proposed $4.8 million ($2017) to overhaul units 4 and 5 at the Wollert compressor station and the turbines of unit 3 at the Gooding compressor station.[51] APA submitted this is a routine maintenance activity to avoid turbine failure.

In our draft decision, we determined that, because these overhauls are characterised as routine maintenance activity and a recurrent expenditure (albeit once every 8-10 years), they are opex and not capex.[52] Therefore, we concluded that it was not conforming capex.

APA responded in the revised proposal that the term 'overhaul' is a misnomer. The turbine overhauls involve complete removal and replacement of a compressor's engine.[53] As this work extends the life of the compressor, the project is one of replacement capex, not maintenance opex.

In the light of this clarification and a better understanding of the actual works associated with this project, we accept that the turbine overhauls are better classified as replacement capex. Given that the works extend the life of the turbine, effectively resetting the run time for the compressor to zero, we accept that this expenditure is prudent, in accordance with good industry practice and achieves the lowest sustainable cost of providing services. [54]

Our position in this final decision is that the proposed $4.8 million for turbine overhauls at the Wollert and Gooding compressor stations is conforming capex.

Other Capital Expenditure

We maintain our position on the remainder of APA's actual capex in the 2018-22 presented in our draft decision.[55]

This includes:

- The Westbound Expansion of the South West Pipeline - $3.5 million

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50 NGR, r.79(1)

51 APA VTS - *VTS Revision Proposal submission* - 20170103 – Public, p.109.

52 AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017, p. 28.

53 APA VTS - *Access Arrangement revision proposal submission* - 20170814 – Public , pp. 48-49.

54 NGR, r.79(1)

55 AER, *Draft Decision on APA VTS Australia Gas Access Arrangement, Attachment 6 - Capital Expenditure*, July 2017.

- Brooklyn Compressor Station Upgrade - $7.1 million
- Business and technology projects - $7.3 million
- Storage sheds at Dandenong, Wollert and Springhurst - $1.9 million
- Physical security - $1.7 million

6.5 Stakeholder Comments

Submissions on our draft decision and APA's revised proposal were received from the CCP11,[56] Lochard Energy[57] and the Consortium of Victorian Transmission System Users (the Consortium)[58]. In addition, we also met with APA, Lochard, the Consortium and AEMO in September 2017. We separately held teleconferences with CCP11 on two occasions in September and October 2017, to discuss issues raised in their submissions.

- Lochard and the Consortium expressed strong support for APA's proposed expenditure on SWP capacity and WORM, and our approval. CCP11 accepted construction of the WORM is required and consistent with the NGR. [59]
- Lochard and the Consortium stated the opinion that Victoria's market carriage model can place investment in new production or storage capacity at risk. While we acknowledge that market carriage raises questions about investment incentives, the issue is outside the scope of this access arrangement assessment.
- Lochard and the Consortium raised concerns about APA's ability to complete projects in the specified time frames, particularly the WORM in the next three years, suggesting that delays would have repercussion for investment in additional underground storage (UGS) capacity. As noted in our draft decision, we have limited discretion in deciding whether capex conforms with the new capex criteria.
- Lochard and the Consortium noted that users of the UGS facility faced seasonal shortfalls and have recently asked Lochard Energy to provide them with further UGS capacity.[60] In its submission AEMO noted that a further increase in the SWP transportation capacity towards Melbourne is achievable through the addition of a compressor at Lara, but specified that investment in compression should not proceed without the WORM being constructed first.[61] We agree with AEMO, and

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[56] Consumer Challenge Panel Sub-Panel CCP11, *Response to AER's draft decision and revised proposal from APA VTS for a revenue reset/access arrangement for the period 2018 to 2022*, *12 September* 2017, pp. 12-17.

[57] Lochard Energy, *Submission to the Australian Energy Regulator re AER Draft Decision and APA's Revised VTS Access Arrangement 2018-22,* 20 September 2017.

[58] Consortium of Victorian Transmission System Users *Submission to the Australian Energy Regulator re AER Draft Decision and APA's Revised VTS Access Arrangement 2018-22,* 20 September 2017.

[59] Consumer Challenge Panel Sub-Panel CCP11, *Response to AER's draft decision and revised proposal from APA VTS for a revenue reset/access arrangement for the period 2018 to 2022*, *12 September* 2017, pp. 13.

[60] Lochard Energy, *Submission to the Australian Energy Regulator re AER Draft Decision and APA's Revised VTS Access Arrangement 2018-22,* 20 September 2017 (section 1.3)

[61] AEMO, *APA VTS Access Arrangement 2018–2022 - WORM supplementary submission*, 16 May 2017, p. 1.

support Lochard's intention to follow up on with APA and AEMO on expansion options.

- CCP11 expressed again its concern as to who will pay for significant capital expansions (WORM, VNI and SWP) over the life of the assets. They support the principal of beneficiary pays and express the view that there is a risk that Victorian gas consumers may come to be the parties who pay for a large part of these investments if the reasons for the original expansion and the basis of current tariffs are lost or forgotten. In response to this concern we note that in assessing APA's proposal we have limited discretion under the NGR and can only base our decision on conditions affecting the VTS over the five years of the access arrangement period.