APA Group

APA GasNet Australia (Operations) Pty Limited (APA GasNet)

Access Arrangement Revised Proposal Submission

Effective 1 January 2013 – 31 December 2017

November 2012
20121109 VTS Access Arrangement Revised Proposal Submission PUBLIC.docx

Contents

1 Introduction

On 11 September 2012, the AER issued its draft decision on the proposed revisions to the Access Arrangement (AA) for the Victorian Transmission System (VTS), as filed by APA GasNet Australia (Operations) Pty Limited (APA GasNet) on 2 April 2012.

The AER did not accept the proposed revisions to the AA, requiring a number of revisions to the proposed AA, as outlined below.

This submission addresses the AER's required revisions.

APA GasNet is not able to provide a revised Access Arrangement that meets all of the AER's required Revisions. The Draft Decision contained a number of required Revisions that depended on information that would not be available until after the draft decision date. For example, the agreed averaging period for measuring the risk free rate and cost of debt for calculating the Weighted Average Cost of Capital. Changes to these parameters will invariably affect the total revenue calculation, which then cascades into changes in tariffs. There are also a number of non-controversial mechanical and consequential changes arising from other amendments.

So despite its best efforts, APA GasNet is not able to produce an Access Arrangement that is fully compliant with the AER's draft decision. In this revised proposal, APA GasNet has "otherwise addressed"[1] some of the AER's required Revisions, and provided further information to address the AER's concerns, as discussed in this submission. A revised proposal accompanies this submission.

This submission and the proposed amendments to the Access Arrangements are subject to a further round of submissions from industry participants. APA GasNet reserves the right to make further submissions on this matter.

1.1 Revisions index

AER required revision	Reference
Revision 1.1: Remove section 2.2 from the access arrangement and replace with the following: The Service Provider will provide two pipeline services under this Access Arrangement: (1) the Reference Service comprising the Tariffed Transmission Service; and (2) the AMDQ CC service.	***Section 2***
Revision 1.2: Insert the following definition to Schedule B of the proposed access arrangement: Authorised maximum daily quantity credit certificate (AMDQ CC) has the meaning given to it in the NGR.	***Section2***

1 *National Gas Rules*, Rule 60.

AER required revision	Reference
Revision 2.1: Make all necessary amendments to reflect the AER’s draft decision on the roll forward of the capital base for the 2008–12 access arrangement period, as set out in Table 2.1.	***Section 3***
Revision 2.2: Make all necessary amendments to reflect the AER’s draft decision on the projected opening capital base for the 2013–17 access arrangement period, as set out in table 2.2.	***Section 3***
Revision 2.3: Make all necessary amendments to reflect the AER’s draft decision on net capex by asset class during the 2008–12 access arrangement period, as set out in table 2.7	***Section 3***
Revision 2.4: Make all necessary amendments to reflect the AER’s draft decision on the removal of capitalised interest from the capex forecasts for the 2013–17 access arrangement period, as set out in section 2.4.5.	***Section 3***
Revision 3.1: Make all necessary amendments to reflect the AER’s draft decision on conforming capital expenditure for the 2013–17 access arrangement period, as set out in Table 3.2	***Section 4***
Revision 3.2: Amend section 3.2 of the access arrangement to reflect the AER's draft decision on the operation of the speculative capital expenditure account to ensure that: Consistent with r. 84 of the NGR, in order for capex to be added to the speculative capital expenditure account, after the capex is made, APA GasNet must inform the AER that the capex is: 1. not to be recovered through a surcharge or a capital contribution 2. otherwise conforming but for the type or volume of the service associated with the capex.	***Section 4.2.3***
Revision 4.1: Make all necessary amendments to reflect the AER's draft decision on the rate of return on capital for the access arrangement period, as set out in Table 4.1 of this attachment.	***Section 5***
Revision 5.1: Make all necessary amendments to reflect the AER’s draft decision on the proposed forecast regulatory depreciation allowance for the 2013–17 access arrangement period, as set out in Table 5.1.	***Section 6***
Revision 5.2: Make all necessary amendments to reflect the AER’s draft decision on the proposed method for modelling the return of capital (and return on capital) for the 2013–17 access arrangement period, as set out in section 5.4.1.	***Section 6***

AER required revision	Reference
Revision 5.3: Make all necessary amendments to reflect the AER's draft decision on the remaining economic lives as at 1 January 2013, as set out in table 5.3	***Section 6***
Revision 6.1: Make all necessary amendments to reflect the AER's draft decision on the proposed opex allowances for the 2013–17 access arrangement period, as set out in table 6.1 and table 6.10.	***Section 8***
Revision 7.1: Delete and replace s8.2(c) of the access arrangement proposal to state: The efficiency gain for 2013 is to be calculated in accordance with the following formula: $E_{2013} = (F_{2013} – A_{2013}) – (F_{2012} – A_{2012}) + (F_{2011} – A_{2011})$ where: F_{2013} is the forecast operating costs for 2013 as specified in clause 8.2(f) A_{2013} is the actual operating costs for 2013 as specified in clause 8.2(e) F_{2012} is the forecast operating costs for 2012 as specified in clause 8.2(f) A_{2012} is the actual operating costs for 2012 as specified in clause 8.2(e) F_{2011} is the forecast operating costs for 2011 as specified in clause 8.2(f) A_{2011} is the actual operating costs for 2011 as specified in clause 8.2(e).	***Section 7***
Revision 7.2: Amend s8.2(e) to state: in each case, At, At-1, A2011, A2012 and A2013 must be determined	***Section 7***
Revision 7.3: Delete and replace s8.2(f)(i) of the access arrangement proposal to state: the forecast operating costs for that year as shown in table 11.1 of the Service Provider's Access Arrangement Information; plus	***Section 7***

AER required revision	Reference
Revision 7.4: Delete and replace s8.2(h) of the access arrangement proposal to state: In calculating the allowable revenue for operations and maintenance expenditure for the Fifth Access Arrangement Period, the Regulator must: (i) determine the base operations and maintenance expenditure for 2017 to be equal to the actual operating costs in 2016 plus the difference between forecast operating costs in 2016 and 2017 as specified in clause 8.2(f) and, to avoid doubt, not take into account the efficiency gain (loss) made in 2017; and (ii) take into account forecast changes from the 2017 base opex in: (A) maintenance costs due to network expansion (scale changes) (B) real labour and materials costs (real cost escalation) (C) other efficient costs not reflected in the 2017 base opex (step changes); and (D) capitalisation policy changes.	***Section 7***
Revision 7.5: Delete and replace table 11.1 in the proposed Access arrangement information with table 7.4.	***Section 7***
Revision 8.1: Make all necessary amendments to reflect the AER's draft decision on the proposed corporate income tax allowance for the 2013–17 access arrangement period, as set out in table 8.1.	***Section 9***
Revision 8.2: Make all necessary amendments to reflect the AER's draft decision on the opening tax asset base as at 1 January 2013, as set out in table 8.3.	***Section 9***
Revision 8.3: Make all necessary amendments to reflect the AER's draft decision on the remaining tax asset lives for the 2013–17 access arrangement period, as set out in table 8.4.	***Section 9***
Revision 9.1: Make all necessary amendments to reflect the AER's draft decision on the proposed capacity utilisation forecasts for the 2013–17 access arrangement period, as set out in Table 9.6, Table 9.7 and Table 9.8.	***Section 10***
Revision 10.1: Allocate the direct (conforming) costs of the Warragul lateral to the Lurgi asset group and the Lurgi tariff zone.	***Section 11***
Revision 10.2: Allocate the direct (conforming) costs of the Anglesea pipeline extension to the Geelong tariff zone.	***Section 11***

AER required revision	Reference
Revision 10.3: Allocate the direct (conforming) costs of the Kalkallo lateral to the Metro tariff zone irrespective of the connection point of the lateral.	***Section 11***
Revision 10.4: Provide the direct costs of the existing South West pipeline and Murray Valley assets on a stand-alone basis consistent with the treatment in the 2008–2012 access arrangement.	***Section 11***
Revision 10.5: Provide the (conforming) costs of the Wollert to Wodonga expansion and the Stonehaven compressor on a stand-alone basis consistent with the treatment of the South West pipeline and the Murray Valley pipeline in the 2008–2012 access arrangement.	***Section 11***
Revision 10.6: Allocate the direct costs on the Wollert to Wodonga pipeline using the standard physical path cost allocation procedure provided that the costs allocated to the Culcairn export tariff exceed the incremental (conforming) direct costs of the Wollert to Wodonga expansion. To the extent this is not achieved, allocate the additional incremental costs to the Culcairn export tariff.	***Section11***
Revision 10.7: Allocate the approved tax liabilities to asset group costs in the same way that the return on assets is allocated to asset group costs.	***Section 11***
Revision 10.8: Remove the 'rolled-out' costs associated with the Interconnect assets, the South West pipeline and the Brooklyn Lara pipeline from the indirect costs allocated to tariff-V and tariff-D users in the Western zone.	***Section 11***
Revision 10.9: Allocate indirect costs (including 'rolled-out' costs) to each of the Northern zones and the Culcairn export point on a variable basis between 0% and 100% to make the real tariff deviations from the 2008–12 access arrangement period, to the extent possible, commensurate with the forecast change in average revenue across the system.	***Section 11***
Revision 10.10: Calculate the shares of the direct costs of the South West pipeline (including the Stonehaven compressor) which are allocated as 'rolled-out' costs in such a way that the Port Campbell tariff is equal to the Longford injection tariff. However, the 'rolled-out' costs of the South West pipeline cannot be allowed to exceed 50% of the total direct costs of the pipeline.	***Section 11***

AER required revision	Reference
Revision 10.11: Calculate the shares of the direct costs of the Interconnect assets which are allocated as 'rolled-out' costs in such a way that the initial 2013 Culcairn injection tariff is equal to the real approved 2012 tariff from the 2008–12 access arrangement, adjusted for the average revenue change from 2012 to 2013, but no greater than the Longford injection tariff.	***Section 11***
Revision 10.12: Amend the tariff model to correct miscellaneous numerical, forecasting and coding errors which are noted in this draft decision.	***Section 11***
Revision 10.13: Insert the following paragraph to section 4.2 of the proposed access arrangement: (c) the AMDQ CC Tariff, being the tariffs for AMDQ CC services	***Section 11***
Revision 11.1. Delete the definition of Actual EDD and VW in Schedule D5 of the proposed access arrangement and replace it with the following: Actual EDD is the actual measured EDDs for a Regulatory Year, as reported in the AEMO APR or otherwise made available by AEMO VW is the actual withdrawal from the VTS excluding: (i) any tariff refills at WUGS or the LNG Storage Facility; and (ii) forecast volumes for the incremental Murray Valley tariff.	***Section 12***
Revision 11.2: Delete the following text under section 4.7.5 of the proposed access arrangement If Service Provider proposes adjustments to the Reference Tariffs (other than as a result of a Cost Pass-through Event) and those adjustments have not been approved by the next 1 January, then the Reference Tariffs will be adjusted with effect from that following 1 January in accordance with the notice, until such time as adjustments to Reference Tariffs are approved by the AER. and replace it with the following: If Service Provider proposes adjustments to the Reference Tariffs (other than as a result of a Cost Pass-through Event) and those adjustments have not been approved by the next 1 January, then the existing Reference Tariffs will apply until such time varied Reference Tariffs consistent with the access arrangement are approved by the AER.	***Section 12***

AER required revision	Reference
Revision 11.3: Replace the first paragraph under heading 4.7.2 of APA GasNet's proposed access arrangement with: Subject to the approval of the AER under the National Gas Rules, Reference Tariffs may be adjusted after one or more Cost Pass-through Event/s occurs in which each individual event materially increases or materially decreases, or is reasonably expected to materially increase or decrease, the cost of providing the Reference Service. If a carbon cost event occurs, Service Provider must apply to the AER for a cost pass through if the carbon cost event materially decreases the cost of providing the Reference Service. Any such adjustment will take effect from the next 1 January.	***Section 12***

AER required revision	Reference
Revision 11.4: Replace the carbon cost pass through event in APA GasNet's proposed revised access arrangement with: Carbon cost event–means: An event that occurs if, for a given Regulatory Year of the Access Arrangement Period, the Service Provider incurs a carbon cost (part of which may be an estimate) in complying with the carbon pricing mechanism established under the Clean Energy Act 2011 (Cth) and associated legislation relating to the management of greenhouse gas for that Regulatory Year. The carbon cost event is taken to have occurred at the time that it is possible for Service Provider to calculate the carbon costs it has incurred for a Regulatory Year without use of estimation.	***Section 12***
Revision 11.5: Delete the definition of insurance cap event in section 4.7.2 of APA GasNet's proposed access arrangement and replace it with the following definition An Insurance Cap Event means an event whereby: (a) APA GasNet makes a claim on a relevant insurance policy; (b) APA GasNet incurs costs beyond the relevant policy limit; and (c) The costs beyond the relevant policy limit materially increase the costs to APA GasNet of providing reference services. For the purposes of this Insurance Cap Event: (d) The relevant policy limit is the greater of APA GasNet's actual policy limit at the time of the event that gives rise to the claim and its policy limit at the time the AER made its Final Decision on APA GasNet's access arrangement proposal for the period 2013-17, with reference to the forecast operating expenditure allowance approved in the AER's Final Decision and the reasons for that decision; and (e) A relevant insurance policy is an insurance policy held during the 2013-17 Access Arrangement Period[or a previous period in which access to the pipeline services was regulated.][2]	***Section 12***

[2] This phrase is in the version of the revision in the body of the text (p 326) but not in the version in the table at the end of the chapter.

AER required revision	Reference
Revision 11.6: Delete sections 4.7.2 and 4.7.3 of APA GasNet's proposed access arrangement and insert the following at section 4.7.2: Procedure for a Relevant Pass Through Event Variation in Reference Tariffs APA GasNet will notify the AER of Relevant Pass Through Events within 90 business days of the relevant pass through event occurring, whether the costs would lead to an increase or decrease in Reference Tariffs. When the costs of the Cost Pass Through Event incurred are known (or able to be estimated to a reasonable extent), then those costs shall be notified to the AER. When making a notification to the AER, APA GasNet will provide the AER with a statement, signed by an authorised officer of SP APA GasNet verifying that the costs of any pass through events are net of any payments made by an insurer or third party which partially or wholly offsets the financial impact of that event (including self insurance). The AER must notify APA GasNet of its decision to approve or reject the proposed variations within 90 Business Days of receiving the notification. This period will be extended for the time taken by the Regulator to obtain information from APA GasNet, obtain expert advice or consult about the notification. However, if the AER determines the difficulty of assessing or quantifying the effect of the Relevant Pass Through Event requires further consideration, the AER may require an extension of a specified duration. The AER will notify APA GasNet of the extension, and its duration, within 90 business days of receiving a notification from APA GasNet. Subject to the approval of the AER under the NGR, Reference Tariffs may be varied after one or more Relevant Pass Through Event/s occurs, in which each individual event materially increases or materially decreases the cost of providing the reference services. Any such variation will take effect from the next 1 January. In making its decision on whether to approve the proposed Relevant Pass Through Event variation, the AER must take into account the following: (a) the costs to be passed through are for the delivery of pipeline services (b) the costs are incremental to costs already allowed for in reference tariffs (c) the total costs to be passed through are building block components of total revenue (d) the costs to be passed through meet the relevant National Gas Rules criteria for determining the building block for total revenue in determining reference services (e) the efficiency of APA GasNet's decisions and actions in relation to the risk of the Relevant Pass Through Event occurring, including whether APA GasNet has failed to take any action that could reasonably be taken to reduce the magnitude of the costs incurred as a result of the Relevant Pass Through Event and whether APA GasNet has taken or omitted to take any action where such action or omission has increased the magnitude of the costs; and (f) any other factors the AER considers relevant and consistent with the NGR and NGL.	***Section 12***

AER required revision	Reference
Revision 11.7: Under section 4.7.3 of APA GasNet's proposed access arrangement, delete the words 'Access Arrangement Information' insert the following: 'specified in the AER's final decision on APA GasNet's access arrangement proposal'.	***Section 12***
Revision 11.8: Replace the first paragraph under heading 4.6 of APA GasNet's proposed access arrangement with: The initial Reference Tariffs (excluding GST) to apply from 1 July 2013 to 31 December 2013 are set out in Schedule A.	***Section 12***
Revision 11.9: APA GasNet is required to amend its proposed access arrangement: (1) to make clear the Reference tariffs which applied in 2012 will continue to be apply in nominal terms until 1 July 2013. (2) to make clear that 2013 Reference tariffs will only apply for the period 1 July 2013 to 31 December 2013 (3) to make changes to the process under section 4 of the access arrangement to reflect that 2013 Reference tariffs will commence on 1 July 2013 rather than on the start of the calendar year (1 January).	***Section 12***
Revision 11.10: Delete section A2 and A3 in Schedule A of the proposed access arrangement and replace it with the following: (Table of tariffs)	***Section 12***
Revision 12.1 Amend the final two paragraphs of this clause as follows: *Following the word "interest" in each paragraph, insert:* Calculated at the Commonwealth Bank corporate overdraft reference rate plus two percentage points.*:*	***Section 13***
Revision 12.2: Amend clause F8 of APA GasNet's Transmission Payment Deed, in appendix F of its access arrangement as follows: Insert a new paragraph between the first and second paragraph as follows: This clause does not apply to a failure to pay an amount where Service Provider has included that amount in an invoice issued under F2 and the user has disputed that amount, until such time as it is determined that the disputed amount is required to be paid.	***Section 13***
Revision 12.3: Amend clause 5.1 of the proposed access arrangement to include the following: There are no applicable capacity trading requirements for the purposes of rules 48(1)(f) or 105 of the NGR.	***Section 13***

AER required revision	Reference
Revision C.1: Opex and capex forecasts should be amended to reflect the labour cost forecasts set out in table c.1.	***Section 8.3.2***

2 Pipeline Services

The Draft Decision requires two revisions in relation to pipeline services. APA GasNet in the following sections provides a detailed response that clearly establishes that the Revision 1.1 is not required and as a consequence Revision 1.2 is similarly not required.

APA GasNet further submits that on the basis that Revision 1.1 is not required; neither is Revision 10.13 which aims to implement tariffs for AMDQ CC services.

Revision 1.1: Remove section 2.2 from the access arrangement and replace with the following: The Service Provider will provide two pipeline services under this Access Arrangement: (1) the Reference Service comprising the Tariffed Transmission Service; and (2) the AMDQ CC service.
Revision 1.2: Insert the following definition to Schedule B of the proposed access arrangement: Authorised maximum daily quantity credit certificate (AMDQ CC) has the meaning given to it in the NGR.

2.1 Classification of AMDQ CC

2.1.1 Introduction

In the Draft Decision the AER concluded that the AMDQ CC product:

- is a pipeline service; [3] and
- as it is a service likely to be sought by a significant part of the market, at least for the 2013-17 access arrangement period, it is a reference service; [4] alternatively
- it is a service ancillary to the haulage transmission service. [5]

For the reasons set out below, APA GasNet submits that each of the AER's conclusions set out above are incorrect.

The AER also concluded that the AMDQ CC product is not capable of being classified as a rebateable service.[6] APA GasNet agrees with this conclusion, although not for the same primary reason given by the AER.

[3] AER, Draft Decision, Part 2 Section 1.1
[4] AER, Draft Decision, Part 2 Section 1.2
[5] AER, Draft Decision, Part 2 Section 1.4.5
[6] AER, Draft Decision, Part 2 Section1.4.5

2.1.2 AMDQ CC is not a pipeline service

For the reasons set out in the submission accompanying APA GasNet's access arrangement revision proposal, [7] APA GasNet submits that the AMDQ CC product is not properly characterised as a pipeline service. As the AER notes in the Draft Decision, the circumstances of the network mean that APA GasNet cannot provide any pipeline services other than the Tariffed Transmission Service.[8]

AMDQ relating to the VTS at market start is dealt with by AEMO in accordance with the declared wholesale gas market rules.[9] AMDQ CC relating to extensions or expansions of the VTS are dealt with by APA GasNet, also in accordance with the declared wholesale gas market rules.[10] The effect of a shipper holding AMDQ CCs is defined by the Rules in terms of the priority of bids in the scheduling process[11] and liability for uplift payments.[12] Shippers purchase AMDQ CC in effect as an insurance product to hedge against high pool prices in times of system constraint and also to minimise potential exposure to uplift payments.

Seen in the above light, the AMDQ CC is akin to a financial product and it would be incorrect to characterise it as a service provided by means of a pipeline. It is not a service provided by "means of a pipeline" and clearly does not share any of the characteristics of the examples of a "pipeline service" given in the Law, being: (i) a haulage service; or (ii) a service providing for, or facilitating, the interconnection of pipelines.[13]

2.1.3 AMDQ CC is not an ancillary service

APA GasNet also submits that it would be incorrect to characterise the AMDQ CC product as a service "ancillary" to the provision of a service provided by means of a pipeline. This was also addressed in the submission accompanying APA GasNet's access arrangement revision proposal.[14]

An ancillary service is one which is necessary in order to properly utilise a pipeline service and which is subsidiary to the primary service being provided. The Macquarie Dictionary defines the term ancillary as: (1) accessory; auxiliary; (2) an accessory, subsidiary or helping thing or person.

As properly determined by the AER, the reference service on the VTS is the Tariffed Transmission Service. It is not necessary to hold the AMDQ CC product in order to properly access the Tariffed Transmission Service, nor does holding the AMDQ CC

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7 APA GasNet, *Access Arrangement Submission 1 January 2013 to 31 December 2017*, March 2012, pp 18-20.

8 AER Draft Decision, Part 3 Appendix 1

9 Rules 328, 330 and 331.

10 Rule 329.

11 Rule 214.

12 Rules 239 and 240.

13 National Gas Law, section 2.

14 APA GasNet, *Access Arrangement Submission 1 January 2013 to 31 December 2017*, March 2012, p 17.

product facilitate access to the Tariffed Transmission Service. It is in fact not necessary to hold the AMDQ CC product at all in order to properly access the Tariffed Transmission Service. Therefore, it is incorrect to classify the AMDQ CC product as an ancillary service.

2.1.4 AMDQ CC is not a rebateable service

The AER concludes in the Draft Decision that the AMDQ CC product is not a rebateable service.[15] APA GasNet agrees with this conclusion although not for the same primary reason as the AER. APA GasNet submits that the AMDQ CC product is not a rebateable service including because, as set out above, the AMDQ CC product is not a pipeline service.

APA GasNet has not sought for the AMDQ CC product to be classified as a rebateable service in its access arrangement revision proposal. APA GasNet has not sought for any costs associated with the AMDQ CC product to be allocated to reference services. Including for these reasons also, the AMDQ CC product cannot be treated as a rebateable service.

2.1.5 AEMC reference service rule change

The AEMC published its final rule determination of the AER's proposed rule change to the reference service and rebateable service definitions on 1 November 2012. The AEMC decided to amend rule 101 so that a full access arrangement is no longer required to specify all reference services, but must specify as a reference service:

- at least one pipeline service that is likely to be sought by a significant part of the market; and
- any other pipeline service that is likely to be sought by a significant part of the market and which the AER considers should be specified as a reference service.

The amended rule does not commence operation until 2 May 2013, and the AEMC decision document is clear that the amended rule should not apply to the APA GasNet distribution access arrangement.

In light of the above, APA GasNet does not make any comment in this submission on the AEMC's final rule determination.

15 AER, Draft Decision, Part 2 Section 1.4.5

3 Capital Base

Revision 2.1: Make all necessary amendments to reflect the AER's draft decision on the roll forward of the capital base for the 2008–12 access arrangement period, as set out in Table 2.1.
Revision 2.2: Make all necessary amendments to reflect the AER's draft decision on the projected opening capital base for the 2013–17 access arrangement period, as set out in table 2.2.
Revision 2.3: Make all necessary amendments to reflect the AER's draft decision on net capex by asset class during the 2008–12 access arrangement period, as set out in table 2.7
Revision 2.4: Make all necessary amendments to reflect the AER's draft decision on the removal of capitalised interest from the capex forecasts for the 2013–17 access arrangement period, as set out in section 2.4.5.

3.1 Opening capital base 2008-12 access arrangement period

3.1.1 Adjustment to 2007 inflation to the capital base

APA accepts the AER's decision in utilising the 2007 actual inflation for the September to September period for the 2003-2007 access arrangement period.

3.1.2 Adjustment for 2007 capex

The AER has accepted APA GasNet's proposal to reduce the opening capital base for the difference between estimated and actual capex in 2007. However, the AER has removed $13.2m ($nominal) which is the effect of the rate of return on this amount over the 2008-2012 access arrangement period. The AER considers that allowing this amount to remain in APA GasNet's capital base would create in incentive for overestimation of capital expenditure in the last year of the access arrangement period.[16]

In its revised access arrangement proposal, APA GasNet has not made a further adjustment to its opening capital base to remove the return on the difference between estimated and actual capital expenditure in 2007. APA GasNet has taken this position for two reasons:

- APA GasNet does not agree that making this further adjustment is necessary to avoid incentives for over-estimation of capital expenditure and in fact considers that the adjustment leads to the removal of any incentive to seek out capital expenditure efficiencies in the last year of an access arrangement period; and

[16] AER, Draft Decision, Part 2 Section 2.4.2

- In any event, there is no provision of the NGR which permits this further adjustment to be made.

Each of these reasons is explained below.

Incentives for over-estimation

APA GasNet submits that incentives for over- or under-estimation of capital expenditure are not relevant in this context. This includes because businesses are required under the NGR to ensure that all forecasts and estimates be arrived at on a reasonable basis and represent “the best forecast or estimate possible in the circumstances”.[17]

Further, when forecasts or estimates of capital expenditure are provided to the AER, their reasonableness and accuracy is carefully checked and this often needs to be verified by way of statutory declaration from a company officer.[18] For example, with respect to the access arrangement proposal for 2013-2017, APA GasNet provided with its proposal a statutory declaration signed by the Chief Executive of Strategy and Development which included a statement that the information required to be provided to the AER in response to the AER’s regulatory information notice is true and accurate and in all material respects can be relied upon by the AER to review APA GasNet’s proposal. This information includes estimated capital expenditure amounts.

In the above context, there is no scope (and therefore no incentive created) to artificially inflate estimates of capital expenditure simply to increase returns. Rather, all estimates must represent the best possible estimate in the circumstances.

The relevant incentives in this context are the incentives for APA GasNet to improve the efficiency of its capital expenditure after a forecast or estimate has been made – in this case, the incentive to spend less than the estimate of capital expenditure in the final year of the access arrangement period. In this regard, the AER’s proposed removal of the return on the difference between estimated and actual capital expenditure provides no incentive for efficiency, since any benefit associated with capital expenditure reduction is confiscated. On the other hand, allowing APA GasNet to keep the benefit associated with capex reduction does provide an incentive to seek out efficiencies in the last year of the access arrangement period.

In light of:

- the requirement that estimates in an access arrangement proposal must represent the best estimate possible in the circumstances;
- the ability of the AER to require a statutory declaration to be given in respect of estimate (and other) amounts; and

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17 NGR, Rule 74(2).

18 For example where information is provided in response to a regulatory information notice, the AER may require that it be verified by way of statutory declaration from a company officer (NGL, s 55(d)).

- the incentive that is created in respect of seeking out capital expenditure efficiencies in the last year of the access arrangement period.

APA GasNet considers, as set out further below, that it is unsurprising that the NGR do not provide for the removal of the return on the difference between estimated and actual capital expenditure and that it is not open to the AER to seek to read this power into the NGR.

Requirements of the NGR

APA GasNet notes that the Draft Decision does not identify any basis in the NGR for its further adjustment to the opening capital base. Rather the AER simply states a concern that not making this adjustment could create incentives for overestimation of capital expenditure.

APA GasNet acknowledges that Rule 77(2)(a) requires an adjustment to the opening capital base for “any difference between estimated and actual capital expenditure included in that opening capital base” – it is for this reason that APA GasNet has reduced the opening capital base for the difference between estimated and actual capital expenditure in 2007. However nothing in Rule 77 (or any other provision of the NGR) allows for the further adjustment made by the AER in the Draft Decision for the return on this amount.

APA GasNet further acknowledges that Rule 77 is a “full discretion” rule, meaning that the AER may withhold its approval to an element of an access arrangement if, in its opinion, a preferable alternative exists that complies with the applicable requirements of the Law. However “full discretion” does not allow the AER to substitute an alternative approach where that alternative does not comply with the Law (which includes the NGR).

The words of Rule 77(2)(a) are clear in setting out the adjustments which may be made to the capital base. Those words do not require or permit further adjustments, beyond those that are specified. If further adjustments had been intended, then the rule could easily have been drafted, or supplemented by a further rule, to make that clear, but neither course was taken.

Moreover, a further adjustment would distort the enquiry to which the language in Rule 77(2)(a) is directed, namely an assessment of “the opening capital base as at the commencement of the earlier access arrangement period”. If a further adjustment to remove the effects of the rate of return were made, the resulting figure would in no sense represent the opening capital base as at the commencement of the earlier access arrangement period. Rather, it would represent the opening capital base as at the commencement of the earlier access arrangement period less whatever the effects of the rate of return (on any difference between estimated and actual capital expenditure) over the subsequent term of that period.

Rule 77(2)(a) can be contrasted with clauses S6.2.1(e) (electricity distribution) and S6A.2.1(f) (electricity transmission) of the National Electricity Rules (NER). Clauses S6.2.1(e) and S6A.2.1(f) also provide for adjustments to the value of the opening capital base for a previous regulatory control period for any difference between estimated and actual capital expenditure included in that value. However, clauses S6.2.1(e)(3) and S6A.2.1(f)(3) state that when making such an adjustment:

> This adjustment must also remove any benefit or penalty associated with the any difference between the estimated and actual capital expenditure.

The fact that there is no equivalent provision for the removal of "benefits or penalties" in the NGR suggests that the NGR and NER were intended to operate differently in this regard. If the two sets of rules had been intended to operate identically, then identical language to clauses S6.2.1(e)(3) and S6A.2.1(f)(3) of the NER would have been used in the NGR. It is possible that this difference in drafting between the NER and NGR reflects an intention that the roll-forward mechanism for gas businesses should provide stronger incentives for capex reduction.

It is clear that the drafting of the relevant electricity clauses which explicitly provide for an adjustment to remove any benefit or penalty associated with any difference between estimated and actual capital expenditure were in existence at the time the NGR were drafted. The NRG were made by the South Australian Minister for Energy (then The Hon. Patrick Conlon MP) on 1 July 2008.[19] The versions of the NER which provided for the adjustment to remove any benefit or penalty associated with any difference between the estimated and actual capital expenditure commenced operation on 16 November 2006 (transmission) and 1 January 2008 (distribution). In relation to the electricity distribution rules, these were also made by The Hon. Patrick Conlon MP.[20] Clearly, if it were intended that the AER have a power to remove any benefit or penalty associated with the difference between estimated and actual capital expenditure, this would have been drafted into the NGR.

In the Draft Decision the AER refers to the decision of the Tribunal in the Jemena Gas Networks (NSW) case.[21] The AER is not bound by the Tribunal's decision, although it may be expected that the AER would have regard to relevant decisions of the Tribunal when making its determinations. APA GasNet notes that the Tribunal in effect recognised it its decision that a different view could be taken as to its interpretation of the relevant rule in the NGR. The Tribunal stated:

> ...we would say that for the sake of clarity and in case we are wrong, it would be desirable for the rules to be amended to expressly provide for this adjustment.[22]

APA GasNet submits that the Tribunal was incorrect in seeking to read in a power for the AER to make an adjustment to remove any benefit or penalty associated with the difference between estimated and actual capital expenditure into rule 77(2)(a). If the Minister had intended when he made the NGR to include such a power, he

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[19] The Hon. Patrick Conlon made the National Gas Rules 2008 under section 294(1) of the National Gas Law.

[20] The Hon. Patrick Conlon made the National Electricity (Economic Regulation of Distribution Services) Amendment Rules 2007 under section 90A(1) of the National Electricity Law on 16 December 2007.

[21] AER, Draft Decision, Part 2 Section 2.4.2

[22] *Application of Jemena Gas Networks (NSW) Ltd (No 3)* [2011] ACompT 6 (25 February 2011), [56].

would have simply replicated the terms of the rules that he made in respect of electricity distribution some six months before. Further, no party, including the AER, has taken up the Tribunal's invitation as it were to seek an amendment to the NGR to provide for an adjustment to be made for the difference between estimated and actual capital expenditure, which would permit the policy reasons for and against to be tested.

Finally, APA GasNet notes that the NGL requires the AER to exercise its functions and powers in a manner that will or is likely to contribute to the achievement of the national gas objective.[23] APA GasNet submits that as well as being contrary to the requirements of the NGR, the AER's proposed removal of benefits resulting from spending less than estimated capital expenditure is likely to weaken incentives for efficient investment in and efficient operation and use of natural gas services. For that reason, the AER's proposed further adjustment would not be consistent with the national gas objective.

3.1.3 Conforming capital expenditure 2008-12 access arrangement period

The AER largely approved the proposed capex for the 2008-2012 period, however the AER acknowledged that APA GasNet did not have the values for 2011 and 2012 actual capex and that the updated values will be provided in the revised access arrangement. The forecast 2012 capital expenditure has increased by $5.4m. The increased forecast 2012 capital expenditure can be attributed to the following:

Brooklyn Lara Pipeline (Corio Loop)

The final expenditure for the 2012 year was forecast as at $0.6m, the new forecast is $1.3m – an increase of $0.7m. This incorporates the final land owner easement issues and final expected settlement claim from the construction contractor. Total costs now reflect a total spend of $71.1m ($2012) for this project.

Northern Augmentation

The Northern Augmentation projects incorporate the finalisation in 2012 of the Wollert CS and Euroa CS and total costs have increased from $66.8m ($2012) to $68.4m ($2012). The Euroa Compressor Station was commissioned in September 2012 and final costs are now forecast to be $24.3m – an increase of $1.5m from the submission value. Wollert CS includes some final costs leading to an increase by $0.1m.

Sunbury Loop

The Sunbury Loop was commissioned in August 2012 for a final forecast cost of $14.8m – an increase of $1.3m from the submission value.

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[23] NGL, Section 28.

Other Capex

The value increase is for a value of $2.1m above the submission value. The major items where cost increase have changed include: Wandong Heater $0.6m, Maintenance Capex at Brooklyn (BBP/8 & 9 Coolers) for $0.7m, Gooding CS controls of $0.4m and other SIB of $0.2m

3.1.4 Depreciation in 2008-12 access arrangement period

The AER has accepted the proposal to roll-forward the capital base to 1 January 2013 using straight-line forecast depreciation as approved in the previous access arrangement period. APA GasNet has therefore used the same forecast depreciation method in its revisions to the access arrangement.

Table 3.1: Outturn depreciation and indexation over the earlier access arrangement period

$m (nominal)	2008	2009	2010	2011	2012
Depreciation	-27.0	-30.7	-33.4	-34.3	-35.5
Indexation	20.6	12.5	15.5	17.9	15.3
Net RegulatoryDepreciation	**-6.4**	**-18.2**	**-17.9**	**-16.5**	**-20.2**

3.1.5 Capitalised interest

APA accepts the AER’s decision to remove the inclusion of capitalised interest in the capital expenditure forecasts. APA has adopted the partially as incurred approach for recognising capex during the 2013-17 access arrangement period.

3.2 2008-12 capital base

The items discussed above, taken together, result in an opening capital base as at 01 January 2013 of $630.8m:

Table 3.2: 2008-12 capital base roll forward

$m (nominal)	2008	2009	2010	2011	2012
Opening capital base	559.6	591.1	583.2	575.9	613.0
Plus capex	37.8	10.2	10.6	53.6	58.0
Plus speculative capex					
Plus reused redundant assets					
Less depreciation	-27.0	-30.7	-33.4	-34.3	-35.5
Plus indexation	20.6	12.5	15.5	17.9	15.3
Less redundant assets					
Less disposals					
Closing capital base	**591.1**	**583.2**	**575.9**	**613.0**	**650.8**
Less: Difference between 2007 forecast and actual capex					-20.0
Opening capital base at 1 January 2013					**630.8**

3.3 Projected capital base 2013-17 access arrangement period

The AER has reduced the projected capital base as at 31 December 2017 by $134.4m to $722.7m ($nominal). This reduction has been applied as a result of the following:

- Reduction of the opening capital base as at 1 January 2013 to $612.1m;
- Rejection of the proposed no indexation to the capital base;
- Reduction of the proposed forecast capex;
- Reduction of the forecast depreciation; and
- Application of an updated forecast inflation of 2.5%.

As a result of the AER changes and the further changes incorporated by APA GasNet detailed below in Chapter 4 the projected capital base as at 31 December 2017 is $684.9m ($nominal).

Table 3.3: Projected capital base

$m (nominal)	2013	2014	2015	2016	2017
Opening capital base	630.8	639.4	719.8	717.3	702.5
Plus capex	33.3	105.9	26.3	14.9	10.0
Plus speculative capex					
Plus reused redundant assets					
Less depreciation	-24.7	-25.5	-28.8	-29.6	-27.6
Less redundant assets					
Less disposals					
Closing capital base	**639.4**	**719.8**	**717.3**	**702.5**	**684.9**

4 Capital expenditure

The AER's draft decision requires the following Revisions:

Revision 3.1: Make all necessary amendments to reflect the AER's draft decision on conforming capital expenditure for the 2013–17 access arrangement period, as set out in Table 3.2
Revision 3.2: Amend section 3.2 of the access arrangement to reflect the AER's draft decision on the operation of the speculative capital expenditure account to ensure that: Consistent with r. 84 of the NGR, in order for capex to be added to the speculative capital expenditure account, after the capex is made, APA GasNet must inform the AER that the capex is: 1. not to be recovered through a surcharge or a capital contribution 2. otherwise conforming but for the type or volume of the service associated with the capex.

APA GasNet's capital expenditure forecast was compiled from a program of works proposed to be undertaken. In order to assess the AER's required Revision, aspects of the program of works are revisited below. Revision 3.2 is addressed in section 4.2.3.

In updating project costs, updated labour cost escalators, as discussed in section 7.4 have been applied.

4.1 2008-12 access arrangement period

The AER has approved the proposed $160.4m ($2012) total capex for the 2008-2012 access arrangement period.

APA GasNet has incorporated this amount into its revised access arrangement proposal.

4.2 2013-17 access arrangement period

The AER did not approve the proposed forecast capex for the 2013-2017 access arrangement period.

4.2.1 Augmentation capital expenditure

APA GasNet had submitted five capital projects relating to growth and security of supply for the AA4 period. Upon review of the AER Draft Decision, APA GasNet submits a revised capital expenditure for augmentations as detailed below:

Capital Projects:

- Gas to Culcairn Project which was originally for an additional 45 TJ/day gas exports through Culcairn and 52 TJ/day from Iona through the South West Pipeline. APA GasNet had submitted augmentation capital expenditure for the Northern Zone and South West Pipeline of $157.5m ($2012).

  The AER Draft Decision reduced the scope of this project [information redacted] and allowed a capital expenditure of $68.6m ($2012). Approved was 27.2 km of looping of the Wollert – Barnawartha pipeline.

  APA GasNet, upon review of the gas volume forecast and augmentation requirements, has found that the capital expenditure of $68.6m is insufficient. APA GasNet submits a capital expenditure of $83.2m ($2012), that is, an additional $14.6m which would be required to cover the revised scope of works for the project (refer to section 4.2.1.1 below).

- The proposed Western Outer Ring Main Project was predominantly for security of supply of the VTS and reducing the dependence on the ageing Brooklyn compressor site.

  The AER Draft Decision did not approve this project on the basis of security of supply, nor approve the alternative project of upgrading the ageing assets at the Brooklyn compressor station. APA GasNet accepts the AER decision for AA4 and will not proceed with the WORM Project. APA GasNet notes that AEMO and the AER's technical advisor both confirm that completion of the outer ring main around Melbourne has merit from a technical perspective.24

  However, APA GasNet submits that there is a resulting requirement to upgrade the Brooklyn compressor site for safe and reliable supply (refer to capital expenditure in SIB section 4.2.2).

- Kalkallo Mains extension Project, which was to provide a transmission main to a custody transfer station in the Kalkallo area for a new distribution network.

  The AER Draft Decision did not approve this project. APA GasNet accepts the AER decision.

- Warragul Looping Project which was a 4.8 km looping of the Warragul lateral to cater for a load increase in the distribution network. The AER Draft Decision has approved this project for $2.5m ($2012).

- Anglesea Mains Extension Project, which was to provide a 15km lateral from the South West Pipeline to Anglesea to provide a second supply point to SP AusNet's Geelong network. The AER Draft Decision has approved this project for $12.8m ($2012).

[24] AER, Draft Decision, Part 2 Section 3.4.2

General Comments on AER Capital Augmentation Analyses

The AER had used steady state analyses to analyse the performance of the VTS to verify APA GasNet's analyses and to confirm decisions to be made on the augmentation requirements. Whilst APA GasNet believes the outcomes of the AER analyses are reasonable, the use of steady state analyses to define the capacity of a highly transient and seasonal natural of a system such as the VTS, should only be used for high level comparative or indicative purposes only.

For the VTS, transient analyses and consideration to current operating practices and constraints must be considered to achieve the right capacity values. The values published by APA GasNet in business cases are derived using annually calibrated model with inputs and assumptions agreed between AEMO and APA GasNet.

4.2.1.1 Gas to Culcairn

APA GasNet had submitted a business case detailing the augmentation for an additional load demand of 53 TJ/day from Iona to Melbourne through the South West Pipeline, of which 45 TJ/day would be exported through Culcairn via the Wollert to Barnawartha Pipeline. The augmentations required were 104 km of 18 inch looping on the Wollert to Barnawartha pipeline and the installation of a 5.5 MW compressor at Stonehaven on the South West Pipeline. APA GasNet submitted a capital expenditure of $157.5m ($2012) for the project.

The Draft Decision allowed a reduced gas volume forecast requiring an augmentation of 27.2 km of 18 inch looping of the Wollert to Wandong pipeline and a 4.5 MW compressor at Winchelsea (or between Winchelsea and Iona) instead of Stonehaven. Accounting for the amended project scope, the AER's estimate of conforming capital expenditure for the Gas to Culcairn project is $68.6m ($2012) of the $157.5m ($2012) submitted by APA GasNet.

APA GasNet has reviewed the analyses and augmentation allowed by the AER in their Draft Decision. APA GasNet has also included two new shipper requests for creation of new AMDQ Credits on the South West Pipeline. APA had submitted these requests to the AER in August 2012 and understands the AER had not considered these submissions in the Draft Decision.

APA GasNet's revised forecast for additional gas volumes are summarised in the Table below.

Table 4.1: Forecast gas volumes

Receipt Point TJ/d	Delivery Point TJ/d		Year
Iona	Culcairn	Melbourne	Commencing
49	**30**	**19**	1 Jan 15

These injection and withdrawal volumes are incremental to current injections and withdrawals at Iona and Culcairn, with the exception of the 19 TJ/day expected to be delivered into Melbourne.

The total exports through Culcairn, including the existing exports of 38 TJ/day, would be 68 TJ/day.

APA GasNet has used the APA-AEMO transient agreed Common Model with the latest inputs and assumptions to perform the analyses. APA GasNet notes that the current capacity of the Northern Zone is 42 TJ/day (after the Euroa compressor installation) rather than 48 TJ/day, as quoted in APA GasNet's previous submission.

The change in capacity is due to the updated parameters in the model such as regulator set points, compressor capability and VTS load profiles from winter 2012, as advised by AEMO. The current exports through Culcairn has also increased from 36 TJ/day to 38 TJ/day with an additional 2 TJ/day contracted in NSW since the previous submission.

In the Draft Decision, the AER has only approved 27.2 km of looping from Wollert to Wandong. APA GasNet has found that the AER Draft Decision of 27.2 km of looping from Wollert to Wandong is insufficient for additional 30 TJ/day exports through Culcairn.

APA GasNet's capital proposal for the revised Gas to Culcairn project [25] is as follows:

- Installation of a Centaur 50 4.5 MW compressor station at Winchelsea on the South West Pipeline.
- APA GasNet accepts the AER Draft Decision proposal for a compressor at Winchelsea instead of Stonehaven. As there is no longer a constraint in timing to provide a compressor on the South West Pipeline, APA GasNet considers the Winchelsea location an acceptable location.
- Pipeline looping and MAOP upgrade of the Wollert to Barnawartha pipeline, comprising:

  Wollert to Clonbinane loop (35.4km x 450 mm Class 600 MAOP 10200 kPa) MAOP upgrade from 7400 kPa to 8800 kPa from Euroa to Springhurst Pipeline requiring:

  (a) Construction of a new pressure regulating station on the Echuca offtake ("Echuca PRS") to avoid replacement of the CTMs and city gate stations (x6) along that lateral;

  (b) Relocation of the Euroa PRS regulating station to Springhurst to achieve the required class break at Springhurst;

  (c) A short mains lay of 20m from the Euroa CTM and city gate to the downstream of the new Echuca PRS regulator station to avoid replacement of this CTM and city gate station; and

  (d) Replacement of piping, regulators and heaters (city gates) (and CTMs if applicable) at Benalla, Monsbent, Wangaratta and Wangaratta East.

  Also included would be in-line inspection and documentation reviews.

[25] Refer to Business Case BC 175, Rev 1

The AER Draft Decision estimated the capital expenditure for the Gas to Culcairn project to be $68.6m ($2012) for 27.2 km looping from Wollert to Wandong and a Centaur 50 compressor at Winchelsea (or between Winchelsea and Iona). APA GasNet submits an additional 8.2km of looping (Wollert to Clonbinane) and MAOP upgrade of the Euroa to Springhurst pipeline, requiring an additional capital expenditure of $14.6m ($2012). The total project capital expenditure including the Winchelsea compressor is $83.2m ($2012).

APA is of the opinion that the above presented capital project meets the criteria of Rule 79(2)b, that is, the project has achieved a positive net present value.

If the additional 30 TJ/day gas exports to Culcairn is not approved, it is still recommended that the Centaur 50 compressor on the South West Pipeline proceed as the most efficient and prudent investment to augment the capacity of the South West Pipeline based on its security of supply and stay-in-business benefits to the VTS, particularly considering that the WORM project has not been approved.

4.2.1.2 Western Outer Ring Main

APA GasNet had proposed the Western Outer Ring Main (WORM) Project as a viable long term solution to the VTS with many benefits, in particular security of supply to the VTS, and plan to downgrade of the ageing and congested Brooklyn compressor station site.

The AER did not approve the WORM Project on the grounds that APA could not demonstrate sufficient prudency of the project to satisfy the NGR criteria for investment during Access Arrangement Period 4 (AA4).

The AER has stated in their engineering report that the WORM Project had little benefit in providing security of supply considering that compression (Stonehaven or Winchelsea) on the South West Pipeline (SWP) would delivery most of the gas from Iona to Brooklyn. APA GasNet believes that the WORM has a greater contribution to security of supply than what the AER had concluded. While gas can be moved from Iona to Brooklyn and through the lower pressure inner ring mains of the metro section, there are minimum pressures within the inner ring mains that have to be maintained. With no gas from Longford and assuming a maximum of 2760 kPa at Brooklyn (i.e. MAOP of the inner ring mains), the high flow rates through the metro section would result in pressures well below 2650 kPa required at Dandenong, hence affecting reliable operation of the delivery stations to south and eastern metro distribution networks. The WORM Project would reduce the pressure drop in the inner ring main by sending gas around to the Wollert and Dandenong city gates, hence allowing pressures in the inner ring mains to be maintained above the required minimum levels. The WORM Project and the SWP compressor are both integral in the security of supply of the VTS.

APA GasNet maintains that the WORM Project is an efficient augmentation of the VTS from an asset management point of view. The WORM Project sets up the VTS for optimal future investments over a longer term, that is, beyond the AA4 period. For example, the placement of a compressor at Wollert rather than Brooklyn not only provides a means of downgrading the ageing and urban encroached Brooklyn site, but provides the correct location for compression on the VTS where it would be more effective moving gas east-west and northbound. The other benefits of the WORM Project, such enabling better linepack management of the system, contribute to the day-to-day reliability of the VTS.

APA GasNet notes that AEMO and the AER's technical advisor both confirm that completion of the outer ring main around Melbourne has merit from a technical perspective.[26]

APA GasNet has accepted the AER Draft Decision on the WORM Project As a consequence APA GasNet needs to maintain the Brooklyn compressor site through the AA4 period. The AER did not approve the alternative capital to the WORM Project, which was required to maintain the integrity of the ageing Brooklyn site. This will be discussed in Section 4.2.2.1.

4.2.1.3 Kalkallo Lateral

APA GasNet had submitted a lateral from the WORM (or alternatively a longer lateral from the Wollert to Barnawartha pipeline) to supply a new Custody Transfer Station for a proposed distribution network in the Kalkallo area. We understand Envestra had also submitted in its Access Arrangement capital requirements for the development of that network. Both APA GasNet and Envestra's submissions were not approved by the AER in the Draft Decision.

APA GasNet has received advice from Envestra on 7th November 2012 that they will be resubmitting to the AER the capital expenditure for both gas lateral and gate station to Merrifield/Kalkallo. Therefore, APA GasNet accepts the AER Draft Decision and is not submitting any revised capital requirements for the Kalkallo lateral.

4.2.2 Stay in Business

4.2.2.1 Brooklyn Compressor Station

APA GasNet submits that the available compression capability at Brooklyn Compressor Station continues to be required in absence of the WORM and associated compression augmentation at Wollert. The justification from a technical, operational and business perspective together with the proposed capital works to sustain the capability over the coming access period are presented in BC 180 "Brooklyn Compressor Station – BCS 10&11 Coolers, Station Isolation Valves Replacement and DEA". The aim of the project is to maintain station safety and operational reliability of two Centaur dry-seal compressors (BCS12 and BCS11) with backup from the wet-seal Centaur compressor package (BCS10) and wet-seal Saturn compressor packages (BCS8&9).

Asset life extension is 5-years with the intention of re-evaluating alternative options such as the WORM or additional compression at Brooklyn prior to the next Reset.

Total project cost is $5.49M to be delivered by 2014.

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[26] AER, Draft Decision, Part 2 Section 3.4.2

The incremental cost of this project over the works already approved in the AER Draft Decision is 2.65M.

4.2.3 Speculative Capital Investment Account

Consistent with the structure of the AER's draft decision, this section discusses the operation of the speculative capital expenditure account, rather than the rate of return to apply to it. In particular, this section addresses Revision 3.2:

> ***Revision 3.2:***
>
> Amend section 3.2 of the access arrangement to reflect the AER's draft decision on the operation of the speculative capital expenditure account to ensure that:
>
> Consistent with r. 84 of the NGR, in order for capex to be added to the speculative capital expenditure account, after the capex is made, APA GasNet must inform the AER that the capex is:
>
> 1. not to be recovered through a surcharge or a capital contribution
> 2. otherwise conforming but for the type or volume of the service associated with the capex.

APA GasNet considers that, in requiring the changes in Revision 3.2, the AER has erred in its interpretation of the Rules and is beyond its powers under the Rules.

In examining this matter APA GasNet has identified what appears to be a flaw in the Rules which arguably needs correction.

Rule 84 provides:

84 Speculative capital expenditure account

> A full access arrangement may provide that the amount of non-conforming capital expenditure, to the extent that it is not to be recovered through a surcharge on users or a capital contribution, is to be added to a notional fund (the **speculative capital expenditure account**).
>
> The balance of the speculative capital expenditure account increases annually at a rate, determined at the AER's discretion, which may, but need not, be the rate of return implicit in a reference tariff.
>
> If at any time the type or volume of services changes so that capital expenditure that did not, when made, comply with the new capital expenditure criteria becomes compliant, the relevant portion of the speculative capital expenditure account (including the return referable to that portion of the account) is to be withdrawn from the account and rolled into the capital base as at the commencement of the next *access arrangement period*.

In summary, the structure of this Rule is that

- Rule 84(1) governs amounts that may be added to the speculative capital expenditure account;
- Rule 84(2) provides that the balance in the speculative expenditure account may be increased by a rate of return; and
- Rule 84(3) addresses the process for amounts to be moved from the speculative investment account and rolled into the capital base.

Revision 3.2 requires that "Consistent with r. 84 of the NGR, in order for capex to be added to the speculative capital expenditure account, after the capex is made, APA GasNet must inform the AER…"

Firstly, APA GasNet notes that Rule 84 contains no requirement for the service provider to inform the AER that it has undertaken non-conforming capital expenditure.

This is completely consistent with the structure of the Rules, in that the determination as to whether capital expenditure is conforming or non-conforming is made in the context of the ex-post review conducted in the course of the determination of the opening capital base at the next AA review under Rule 77(2)(b). That is, at the time of undertaking the capital expenditure, the service provider will not be certain whether the capital expenditure is conforming or not.[27] It would therefore not be possible to so inform the AER in accordance with Revision 3.2.

APA GasNet notes that the service provider may apply to the AER for a pre-determination as to whether proposed capital expenditure would meet the new capital expenditure criteria under Rule 80. However, this Rule applies to capital expenditure that has yet to be undertaken.

In summary, APA GasNet submits that it is neither reasonable nor practicable, nor in accordance with Rule 84(1), for the AER to require the service provide to advise the AER when the service provider has undertaken speculative capital expenditure.

Secondly, Revision 3.2 provides that the only capex that can be added to the speculative capital expenditure account is that capex that would be "otherwise conforming but for the type or volume of the service associated with the capex".

APA GasNet submits that this requirement is not in accordance with Rule 84(1). This Rule provides that the capital expenditure in question is "non-conforming"; that is, that it does not meet the new capital expenditure criteria in Rule 79. It does not provide that the capital expenditure in question must be non-conforming by virtue of it having failed the tests in sub-Rules 79(2)(a) or 79(2)(b).

Importantly, Rule 84(1) does not provide that capital expenditure found to be non-conforming by virtue of it having failed the tests in sub-Rules 79(2)(c) are not eligible for inclusion in the speculative capital expenditure account. It is in this regard that APA GasNet submits that the AER's required Revision exceeds it power under the Rules.

For example, if the service provider were to undertake capital expenditure[28] to maintain the safety or integrity of services during an AA period, and if at the next AA review the AER did not agree with the service provider's safety and risk assessment, then the AER would find that the capital expenditure was non-conforming as it did not meet the requirements of Rule 79(2)(c)(i) or (ii). The second

[27] Moreover, in a capital-constrained world, a service provider is unlikely to undertake capital expenditure knowing it to be non-conforming and therefore unable to earn a return.

[28] Assuming the "prudent and efficient" hurdle in Rule 79(1)(a) was met.

leg of the AER's Revision 3.2 would deny its inclusion as speculative capex, and thereby deny its inclusion in the capital base for evermore.

This is a live issue, particularly in the case of the VTS. Elsewhere in this submission we have discussed the impact of urban encroachment on the safety and risks associated with the operation of the pipeline. It would be easy to see that the service provider may undertake safety-related capital expenditure in light of these urban encroachment risks. Were the AER to disagree with the safety assessment and find the capital expenditure to be non-compliant at the time the expenditure was made, there would be no mechanism to include the investment into the capital base at a later date. This would act as a disincentive for the service provider to undertake prudent safety and integrity capital investment.

This identifies the flaw in the Rules. Where an amount is added to the speculative capital expenditure account under Rule 84(1) as correctly interpreted above, the current drafting of Rule 84(3) would only allow its future inclusion in the capital base if "the type or volume of services changes" to make the expenditure compliant.. As is generally the case with safety and security related investment (and particularly for investment required to comply with a regulatory or legislative obligation), the level of throughput or demand is not a driving factor. Under the current Rules, there would be no avenue for non-compliant safety, security or compliance expenditure to be rolled into the capital base in the future.

Having identified an inconsistency in the Rules, the next question is whether it would be preferable to correct Rule 84(1) or 84(3). Taking the urban encroachment issue as an example, to the extent the AER has discretion to find safety and integrity capital investment as being non-compliant, APA GasNet considers that the current drafting of Rule 84(3) could provide a disincentive to undertake security, integrity or compliance capital expenditure. APA GasNet suggests that a Rule change proposal should be advanced to the AEMC to change the Rule 84(3) phrase "If at any time the type or volume of services changes" to "If at any time circumstances change".

In the interim, APA GasNet submits that its proposed wording is both in accordance with Rule 84 and preferable from a policy perspective. It therefore rejects the AER's required revision.

APA GasNet has, however, amended section 3.2 of the access arrangement such that inclusion of non-conforming capital expenditure in the speculative capital expenditure account is not automatic. This change is consistent with the extensions and expansions policy accepted by the AER in the draft decision whereby non-conforming capital expenditure can be excluded from coverage under the access arrangement.

4.2.4 Equity Raising Costs

The AER has stated in its Draft Decision that the dividend calculation is based on the after-tax cash flows. However, in its calculations contained in the AER's PTRM, the AER has calculated the dividend based on the taxable income as opposed to after-tax cash flows. Taxable income is not equivalent to after tax cash flows, therefore APA GasNet submits that AER's current approach to calculating the dividends is inconsistent with the AER's statement of determining the dividend "based on the after-tax cash flows".

APA GasNet agrees with the AER assessment that the after tax cash flows should be utilised. A review of the dividend distribution policies of listed gas infrastructure companies indicate that they set their distribution policy based on the operating cash flows and not on accounting profit measures. The table below summarises the distribution payout ratio of various listed gas and electricity infrastructure entities based on accounting profit or earnings measures.

Table 4.2: Comparison distribution payout ratio

(in cents)	Envestra	APA Group	SP AusNet	Spark Infrastructure
Dividend per Share	5.8	35.0	8.0	10.0
Earnings per Share	4.9	20.4	1.4	6.22
Dividend payout ratio	118%	172%	571%	161%

**Sourced from the latest available annual reports – Envestra 2012, APA 2012, SP AusNet 2012 and Spark Infrastructure 2012*

Based on reviewing the dividend policy of the listed gas infrastructure companies in their latest annual reports in Table 4.2, it is readily observed that the listed entities pay in excess of their earnings which is an accounting based metric. Hence, the dividend policy cannot be derived from earnings as listed entities typically pay more dividends than its accounting profit. The alternative in setting the dividend policy is to apply the dividend payout ratio to the entity's its operating cash flows. In APA Group's 2012 annual report, APA Group has set "distributions at a level that APA believes to be sustainable and well-funded from operating cash flows"[29]. Another listed company, Spark Infrastructure, "only pays out distributions which are fully supported by operating cash flows"[30]. These statements support the AER's position that dividends should be set based on the "after-tax cash flows"[31].

APA GasNet has reviewed AER's dividend calculation in their PTRM and notes the calculations do not use after tax cashflows but incorrectly use Taxable Income. The AER's calculations are reproduced below:

AER's dividend calculation

Dividend = (Tax payable/Tax rate) x (1 – Tax rate) x Dividend Payout Ratio

The AER's dividend calculation can be re-constructed as follows:

Dividend = Taxable Income x (1 – Tax Rate) x Dividend Payout Ratio

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29 APA Annual Report 2012, Chairman's Report, page 4

30 Spark Infrastructure Annual Report 2012, Director's Report, Page 16

31 APA GasNet Draft Decision Part 2, September 2012, Page 88

APA GasNet notes that the after tax cash flow is not equivalent to after-tax taxable income. AER's calculation of after-tax taxable income can be derived by deducting the tax depreciation allowance and efficiency benefit sharing scheme costs from internal cash flows as defined in the AER's PTRM (worksheet labelled "Equity Raising Costs-Capex"). Tax depreciation allowance is not a cash item and is applied to determine the assessable tax.

The AER's approach of utilising the taxable income has effectively included a non-cash item in calculating the dividend and this inclusion effectively understates GasNet's after tax cash flows

Elsewhere in the AER's PTRM at worksheet labelled "Equity Raising Costs-Capex" the AER derivesa calculation of the after tax internal cash flows APA agrees with the AER's derivation of the after tax internal cash flows in this worksheet.

APA submits that the AER has erred in utilising the Taxable Income (less tax payable) as a proxy for after-tax cash flows. The AER should utilise the after-tax internal cash flows derived on worksheet "Equity Raising Costs-Capex". Based on the AER's Draft Decision assumptions, the difference between the dividend payable amounts under the incorrect taxable income and the correct after tax cash flows can be seen in the table below.

Table 4.3: Difference between the amounts – taxable income and after tax cash flows

AER's Draft Decision	2013	2014	2015	2016	2017
Taxable Income	13.9	15.2	14.2	14.6	11.8
Tax	4.2	4.6	4.3	4.4	3.5
Retained Taxable Income	**9.8**	**10.6**	**9.9**	**10.2**	**8.3**
Dividends based on 70% payout of taxable income	**6.8**	**7.5**	**6.9**	**7.1**	**5.8**
AER's Calculation of after-tax cash flow	**2013**	**2014**	**2015**	**2016**	**2017**
Revenue (smoothed)	88.1	90.3	92.6	94.9	97.3
Opex	28.2	29.2	30.9	32.7	33.5
Interest Payment	24.8	25.5	28.6	29.1	29.2
Tax Payable	4.2	4.6	4.3	4.4	3.5
After Tax Cash Flow	**30.9**	**31.0**	**28.8**	**28.7**	**31.0**
Dividend Payment based on 70% payout of tax cash flow	***21.7***	**21.7**	**20.2**	**20.1**	**21.7**

APA GasNet submits its approach is consistent with the AER's Draft Decision statement of calculating the dividend based on the after tax cash flows and rectifies the AER's error.

APA GasNet has applied the corrected calculation in the revised submission. The corrected equity raising costs is $1.1m.

5 Rate of Return

Revision 4.1:
Make all necessary amendments to reflect the AER's draft decision on the rate of return on capital for the access arrangement period, as set out in Table 4.1 of this attachment.

5.1 Introduction

In this chapter, APA GasNet sets out the amendments to its access arrangement revision proposal that it has incorporated to address matters raised in the Draft Decision with respect to the rate of return to apply to the VTS in the access arrangement period.

APA GasNet has made limited amendments to the approach to the rate of return set out in its access arrangement revision proposal. This is because the AER's Draft Decision indicated that the AER is prepared to approve many components of the rate of return in the access arrangement revision proposal. The AER's Draft Decision indicated only one significant area of disagreement with APA GasNet's proposal, being the estimate of the premium over the risk free rate expected on the market portfolio (ie, the market risk premium). APA GasNet has incorporated a minor amendment with respect to the measurement of the debt risk premium (DRP) in response to the Draft Decision.

Table 5.1 sets out the proposed rate of return to be earned from APA GasNet's regulated assets over the access arrangement period as compared to rate of return in the AER's Draft Decision, APA GasNet's original proposal, and the rate of return that applies in the current access arrangement.

Table 5.1: Comparison of the rate of return proposed for APA GasNet

	Previous ACCC decision	APA GasNet March 2012 proposal[a]	AER Draft Decision (updated)[b]	APA GasNet Revised proposal[c]
Nominal risk free rate	6.29%	3.99%	2.98%	3.22%
Market risk premium	6.00%	8.50%	6.00%	8.72%
Expected market return	12.29%	12.49%	8.98%	11.94%
Equity beta	1.0	0.8	0.8	0.8
Debt risk premium	3.09%	3.92%	3.76%	3.46%
Gearing level	60%	60%	60%	60%
Inflation forecast	2.69%	2.50%	2.50%	2.50%
Gamma	0.5	0.25	0.25	0.25
Nominal cost of equity	12.29%	10.79%	7.78%	10.20%
Nominal cost of debt	9.38%	7.91%	6.74%	6.68%
Nominal vanilla WACC	**10.55%**	**9.06%**	**7.16%**	**8.09%**

a Indicative rate only using market data from 21 November 2011 and ending 16 December 2011.

b Indicative rate only using market data from July-August 2012.

c Using the agreed averaging period from 13 September 2012 and ending 26 September 2012.

APA GasNet does not accept that in the current circumstances a MRP of 6.00 per cent, combined with a risk free rate of 3.22 per cent results in a return on capital that is *commensurate with prevailing conditions in the market for funds* as required by Rule 87 (1). Specifically, the AER's decision to adopt a fixed MRP of 6.00 per cent in the Draft Decision:

- ignores the advice provided by the Reserve Bank of Australia in July 2012 of a general increase in in risk premia on other assets;[32]
- is inconsistent with the observation of an increased risk premia demanded on less risky assets such as debt;[33]

32 Guy Debelle Assistant Governor of the RBA, Letter to Mr Dimasi entitled *The Commonwealth Government Securities Market*, dated 16 July 2012.

- results in an expected nominal return on the market of 9.22 per cent, is out of step with current estimates of market return made by market practitioners;
- results in an expected real return on the market of 6.56 per cent, which is materially below the real long term average return on the market of 8.9 per cent;
- is at odds to responses by jurisdictional regulators to setting the cost of capital for regulated entities; and
- goes against all of the evidence on forward looking measures of the MRP which provide universal support for a premium over 6.00 per cent.

It is widely accepted that the recent fall in CGS yields has corresponded to an increase in risk premia for risky assets such as equity.[34] Furthermore, a rise in the equity risk premium is corroborated by all forward looking estimates of the risk premium available at, or around, the time of APA GasNet's agreed averaging period.

Consequently, the assumption that investors' expectations are currently being set by reference to historical excess returns is simply untenable.

The APA GasNet proposal is premised on the estimation of the CAPM over the agreed averaging period (ie, 13-26 September 2012).

APA GasNet notes that the CAPM could also be specified using a long term average risk free rate and MRP. Specifying the CAPM using historical long term averages of both the risk free rate and MRP parameters would also be internally consistent, and would provide for a cost of equity which reflects prevailing conditions in the market for funds provided that the market cost of equity is relatively stable over time (meaning that the prevailing cost of equity will reflect its long term average). We note that the use of long term averages results in a comparable estimated cost of equity as that proposed by APA GasNet. In our view, the use of long term averages results in a reasonable alternative estimate of the cost of equity and may be a practicable solution where there are concerns with using a forward estimate of the MRP.

5.1.1 The AER's draft decision in light of the context of the NGL and NGR

At the highest level, APA GasNet submits that the AER's findings related to the cost of capital under Rule 87, and its findings on the cost of equity in particular, do not satisfy the requirements of the National Gas Objective and the Revenue and Pricing Principles.

The National Gas Objective is the subject of section 23 of the National Gas Law; the Revenue and Pricing Principles are under section 24:

23—National gas objective

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[33] See CEG, *Internal consistency of the risk free rate and MRP in the CAPM*, November 2012, pp. 11-12. Attachment 5.1

[34] CEG, *Internal consistency of risk free rate and MRP in the CAPM,* November 2012

The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

24—Revenue and pricing principles

(1) The revenue and pricing principles are the principles set out in subsections (2) to (7).

(2) A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in—

(a) providing reference services; and

(b) complying with a regulatory obligation or requirement or making a regulatory payment.

(3) A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes—

(a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and

(b) the efficient provision of pipeline services; and

(c) the efficient use of the pipeline.

(4) Regard should be had to the capital base with respect to a pipeline adopted—

(a) in any previous—

(i) full access arrangement decision; or

(ii) decision of a relevant Regulator under section 2 of the Gas Code;

(b) in the Rules.

(5) A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.

(6) Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.

(7) Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services.

APA GasNet sought the expert advice of expert economist Jeff Balchin of PwC to provide a detailed examination of the meaning and intended purpose of the NGO and RPP.[35] As part of his independent expert report, Mr Balchin included analysis on the likely consequences for customers if the cost of capital is set too low:

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35 Attachment 5.2, PwC, *Economic meaning of gas legal instruments,* Expert report prepared for the Vic Gas Businesses, November 2012.

> In my view, the guidance from the NGO for this task is that the regulated rate of return should be set with reference to an estimate of the “true” cost of capital, but with a consideration as to whether there may be a net benefit from varying from this starting point in view of the imprecision of the estimate and the potential losses from erring on the upside compared to the downside. I consider that the efficiency and consumer components of the [National Gas Objective] provide materially the same guidance on this matter. I note the following in particular:
>
> If the regulatory rate of return is set below the true cost of capital, then the incentive and capacity for service provision over the long term would be imperilled. This would amount to an allocative inefficiency as the provision of natural gas services would be withdrawn even though they are valued by consumers by more than other goods and services in the economy. Equally, it would be detrimental to the long term interests of consumers given that they value service provision in excess of the cost.”

Mr Balchin’s report includes an analysis of a number of example of the significant negative economic impacts of a number of key withdrawals of infrastructure service.

Having regard to this report, APA GasNet submits that the AER’s draft cost of capital, and in particular its draft findings on the cost of equity, would not promote the National Gas Objective and are not compliant with the Revenue and Pricing Principles.

The remainder of this chapter is structured as follows:

- section 5.2 outlines the areas of agreement on cost of capital issues and sets out our understanding of the reasoning underlying the AER decision on the MRP.
- section 5.4 sets out why, after reviewing and considering the AER’s Draft Decision and supporting materials, APA GasNet has not amended its access arrangement revision proposal insofar at the measurement of the MRP is concerned;
- section 5.5 outlines the evidence supporting APA GasNet’s proposed MRP; and
- section 5.6.1 discusses estimates of the cost of equity where the CAPM is specified with long term average values for both the risk free rate and the MRP.

5.2 AER’s draft decision

Table 5.2 sets out the WACC that results from the application of the AER’s rate of return methodology in the Draft Decision to the agreed averaging period, and that proposed by APA GasNet in this revised proposal, also measured over the agreed averaging period.

For the most part, the AER and APA GasNet agree on the relevant WACC parameters to be applied:

Table 5.2: Rate of return in the Draft Decision and APA GasNet's revised proposal over the agreed averaging period

		AER Draft Decision (updated)[a]	APA GasNet Revised proposal[b]
Nominal risk free rate	R_f	3.22%	3.22%
Market risk premium	R_m-R_f	6.00%	8.72%
Expected market return	R_m	9.22%	12.94%
Equity beta	β	0.8	0.8
Debt risk premium	DRP	3.46%	3.46%
Gearing level	D/V	60%	60%
Inflation forecast		2.50%	2.50%
Gamma	γ	0.25	0.25
Nominal cost of equity	R_e	8.02%	10.20%
Nominal cost of debt	R_d	6.68%	6.68%
Nominal vanilla WACC		**7.22%**	**8.09%**

a The draft decision WACC parameters with the risk free rate and DRP updated for the agreed averaging period from 13 September 2012 and ending 26 September 2012.

b Using the agreed averaging period from 13 September 2012 and ending 26 September 2012.

Cost of debt

We note that the AER accepted APA GasNet's proposed benchmark and method for determining the DRP. However, the AER questioned the inclusion of the Telstra paired bonds in PwC's extrapolation sample. APA GasNet accepts the removal of the Telstra bond pair from the extrapolation sample and the DRP of 3.46% has been calculated on the following basis:[36]

- a DRP benchmark based on Australian corporate fixed rate bond issuance with a term to maturity of 10-years and a BBB+ credit rating; and
- extrapolating the 7-year Bloomberg fair value curve to 10-years using a sample of paired bonds with a credit rating of 'BBB', 'BBB+' or 'A-' by Standard and Poor's.

36 AER, Draft Decision, Attachments, s4.3.6.

This methodology is identical to that applied by the AER in its draft decision.

There is substantial agreement on virtually all components of the WACC. The only parameter that is in error in the draft decision is the AER's estimate of the MRP that prevailed during the agreed averaging period, ie, 13 September 2012 to 26 September 2012.

5.2.1 Market Risk Premium

The one WACC parameter where there is significant disagreement between APA GasNet and the AER and in respect of which APA GasNet has not amended its approach in light of the Draft Decision is the proposed market risk premium of 6.00 per cent.

The AER in its Draft Decision appears to accept that the CAPM is to be applied on a forward-looking basis, and also appears to seek to estimate a forward-looking MRP (that is, the difference between the expected return on the market portfolio and the expected return on a risk-free investment). The AER considers that its MRP estimate of 6.00 per cent is commensurate with prevailing conditions in the market for funds.[37]

In seeking to estimate an MRP that is commensurate with prevailing conditions in the market for funds, the AER states that it has relied on various different sources of information. However, the AER ultimately places primary weight on historic measures of the MRP – that is measures of the historic excess returns on the market portfolio and the risk free rate.

The AER considers a MRP of 6.00 per cent is commensurate with the prevailing conditions in the market for funds because:[38]

- historical excess returns provided a range of 4.9–6.1 per cent if calculated on an arithmetic average basis and a range of 3.0–4.7 per cent if calculated on a geometric average basis
- Professor McKenzie and Associate Professor Partington advised a 6 per cent MRP is appropriate
- the MRP is an economy wide measure and other economic regulators in Australia have consistently adopted a 6 per cent MRP under the same CAPM framework.
- in the Envestra, ATCO and DBNGP matters, the Tribunal found no error in the AER's and the Economic Regulatory Authority of Western Australia's 6 per cent MRP. The Tribunal found it was open for both regulators to adopt 6 per cent on the available evidence.

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37 AER, Draft Decision s 7.2.1.

38 AER, Draft Decision, s7.2.1.

- surveys of market practitioners consistently supported 6 per cent as the most commonly adopted value for the MRP. They also indicated the average MRP adopted by market practitioners was approximately 6 per cent.

Furthermore, the AER placed limited emphasis on estimates of the MRP derived from dividend growth models (DGMs), regime switching models, implied volatility and other financial market indicators.[39]

It should be clear that none of the evidence referred to by the AER in the dot points above provides support for the proposition that the respective values of the MRP derived from any of these sources is a good estimate, forecast or proxy for a MRP value that, when combined with the other WACC parameters, will provide a rate of return that is commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services.

The fact that the AER's estimate of 6.00 for the MRP is not likely to be commensurate with prevailing conditions in the market is highlighted by facts such as that the AER's estimate of the difference between the expected return on the market portfolio and the risk free rate (the MRP) has not changed over the past [18 months], a period in which the risk free rate of return has fallen by around 260 basis points.[40] The AER's decision therefore implies that the expected return on the market portfolio has fallen by around 260 basis points over this period.

The AER's Draft Decision appears to be premised on several important presumptions, including:

- The current prevailing MRP is likely to be reflective of average historic excess returns on the market portfolio over the risk-free rate, meaning that historic data can be relied upon to determine the forward-looking MRP;
- The expected return on the market portfolio has fallen in step with reductions in the risk free rate, such that the MRP may be expected to remain relatively constant over time;
- The MRP has remained relatively constant in recent years, meaning that:
  - It is appropriate to adopt a value for the prevailing MRP that is consistent with the value determined in previous regulatory determinations; and
  - It is appropriate to have regard to surveys of market practitioners that are not contemporaneous with the Draft Decision or the start of the access arrangement period;
- Forward-looking measures of the MRP are unreliable such that they cannot be given any material weight in determining the MRP; and

[39] AER, Draft Decision – Attachments, s 4.2.3.

[40] The Annualised 10-year CGS yield on 9 February 2011 was 5.83 per cent compared to the risk free rate of 3.22 per cent that prevailing over the agreed averaging period.

- The advice of Professor McKenzie and Associate Professor Partington is an appropriate basis for adopting a value for the prevailing MRP of 6.00 per cent.

For the reasons below, APA GasNet considers that there is no basis for any of the above findings. In fact, the evidence presented in support of APA GasNet's access arrangement proposal points to a contrary view on each of the above issues.

APA GasNet also notes that the AER suggests that a MRP of 6.00 per cent is reasonable as:[41]

> The AER has developed its understanding since the WACC review. Now, rather than increasing the MRP due to any short term effects, it considers it is reasonable to determine a long term (10 year) forward looking MRP.

APA GasNet submits that the AER has erred in determining a long term MRP, specifically:

- this results in an internally inconsistent CAPM (as noted by Grey, Zenner and Damodaran, below);
- the AER's version of the CAPM is inconsistent with the theoretical construction that the parameters of CAPM should be estimated *as at the date at which it is to be applied (or, as close as practicable to that date)*; and
- the use of a MRP that does not vary in the short term from its long term average means that the AER is applying an unconditional form of the CAPM, that its own advisor has stated has no empirical support. [42]

The following section outlines the errors in the AER's MRP which results in a specification of the CAPM that is internally inconsistent.

5.3 Specification of the CAPM

The AER and APA GasNet have agreed that the cost of equity will be estimated using the Sharpe-Lintner capital asset pricing model (CAPM). The Sharpe-Lintner CAPM is expressed by the formula:

$$\mathrm{E}(R_j) = R_f + \beta_j[\mathrm{E}(R_m) - R_f],$$

where:

$E(R_j)$ = is the expected return on asset *j*;

R_f = is the risk-free rate;

β_j = measures the contribution of asset *j* to the risk, measured by standard deviation of return, of the market portfolio; and

[41] AER, Draft Decision, Appendix B, s B.2.9.

[42] Davis, *Cost of Equity Issues: A Report for the AER*, 16 January 2011, p. 4.

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$E(R_m)$ =is the expected return to the market portfolio of risky assets.

The founding premise of the CAPM is that investors at the beginning of the period hold some combination of:

- a risk free investment; and
- an optimal portfolio of all risky market assets.

Therefore, the return required by an investor on an asset with an equity beta of 0.5 would be equal to the expected return of holding an equal weight of the risk free investment and the market portfolio.[43]

Figure 5.1: Illustration of the CAPM

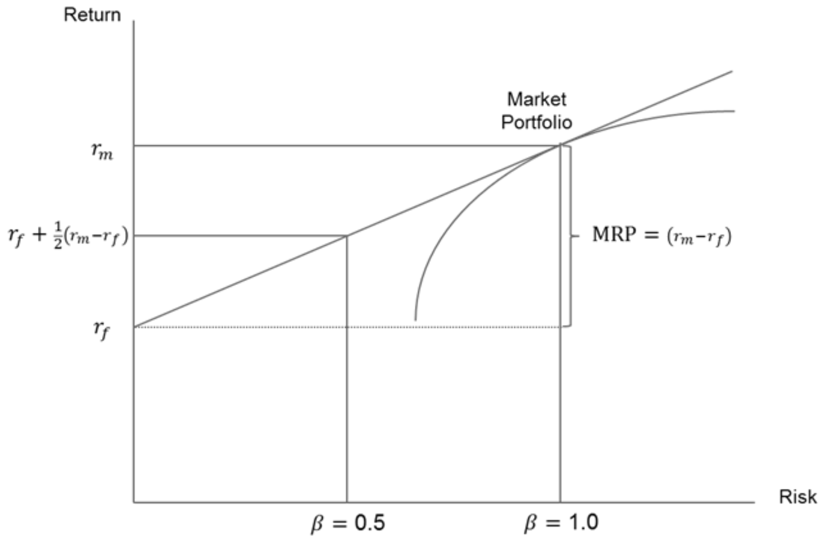

Figure 5.1 illustrates a number of important elements of the CAPM, namely:

- the CAPM is a model of *expected returns* and so, as a matter of principle, the objective of the estimation process is to obtain the *best estimate of the forward looking cost of equity* as at the date at which it is to be applied (or, as close as practicable to that date);[44]
- as Gregory points out:[45]

  > The term in parentheses is often abbreviated to the "equity risk premium" or "market risk premium", but writing the equation out in its original form serves as a reminder that the precise definition of MRP is the expected return on the market (E[RM]) minus

[43] Note that $\frac{r_f + r_m}{2} = r_f + \frac{1}{2}(r_m - r_f)$.

[44] In the current context we would apply the CAPM as close as possible to the time of reaching a final regulatory determination. See NERA Economic Consulting, *Estimating the Cost of Equity under the CAPM*, Expert report of Gregory Houston, November 2012. Attachment 5.3

[45] Gregory A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, October 2012, p4. Attachment 5.4

> the risk free rate, RF. As Jenkinson (1993) points out, the important point is that there is only one RF term on the right hand side of the CAPM, not two.

and

- the “MRP” is not a parameter of the CAPM *per se*; rather, it is a “shorthand” term used to describe the premium above the risk free rate which an investor would expect to earn on an optimal portfolio of all risky assets (ie $r_m - r_f$).

Therefore, changes in the MRP will occur as it fluctuates with movements in either the expected return on the market and/or the risk free rate. Given the construct of the CAPM, it would be unreasonable to expect that the MRP would be fixed at a particular level.

5.3.1 Internal consistency in the CAPM

The implications of applying the Sharpe-Lintner CAPM in a regulatory context were highlighted by Mr Houston as:[46]

> - first, the CAPM is a model of expected returns and so, as a matter of principle, the objective of the estimation process is to obtain the best estimate of the forward looking cost of equity as at the date at which it is to be applied (or, as close as practicable to that date); and
> - second, to the extent that one or more particular component parameters are estimated by reference to historical data, it is critical to ensure that such estimates are incorporated into the cost of equity estimation process in a way that is both internally consistent and which has regard to the potential for changes in the relationship between different, market-based parameters over time.

APA GasNet strongly supports these conclusions. We also draw the AER’s attention to the approaches adopted by market practitioners referred to in supporting reports. For example, Stephen Gray notes the following:[47]

> [An approach] that pairs:
>
> (a) an historical average risk-free rate with an historical average MRP; or
>
> (b) a contemporaneous risk-free rate with a contemporaneous estimate of MRP,
>
> is also one that is used in commercial practice.
>
> For example, Dr Marc Zenner (Head of Corporate Advisory for JP Morgan) summarises the approach that he currently uses as follows:
>
> With my clients I show either:
>
> - Using long term averages for everything (i.e., MRP, beta and risk free rate); or
> - Using today’s low rates but with today’s relatively high MRP.
>
> Interestingly the estimates are not that different.

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46 Houston, *Estimating the Cost of Equity under the CAPM*, November 2012, p. 5.

47 SFG, *The required rate of return on equity: Response to AER Victorian Gas Draft Decisions*, November 2012, p. 62. Attachment 5.5

> If however they mix and match (i.e. today's low rates but long term average MRP) then indeed we have an unrealistically low cost of capital.

The approach to specifying the CAPM adopted by the AER in the Draft Decision has been described by Aswarth Damodaran as:[48]

> The Dysfunctional valuation: you leave risk free rates at today's low levels, while your risk premiums and growth rates come from happier, more stable times.

Damodaran concluded that using the dysfunctional asset valuation methodology results in an internally inconsistent model and estimates asset values that are too high (by adopting a discount factor that is too low).

Historical measures of the MRP have been used by the AER and other Australian jurisdictional regulators to specify the CAPM on the assumption that "investors' experience informs their expectations of the forward looking MRP."[49] The AER's decision to set fix the MRP at 6.00 per cent in the Draft Decision, clearly continues this practice of relying on historical measures.

5.3.2 The CAPM in prevailing conditions in the market

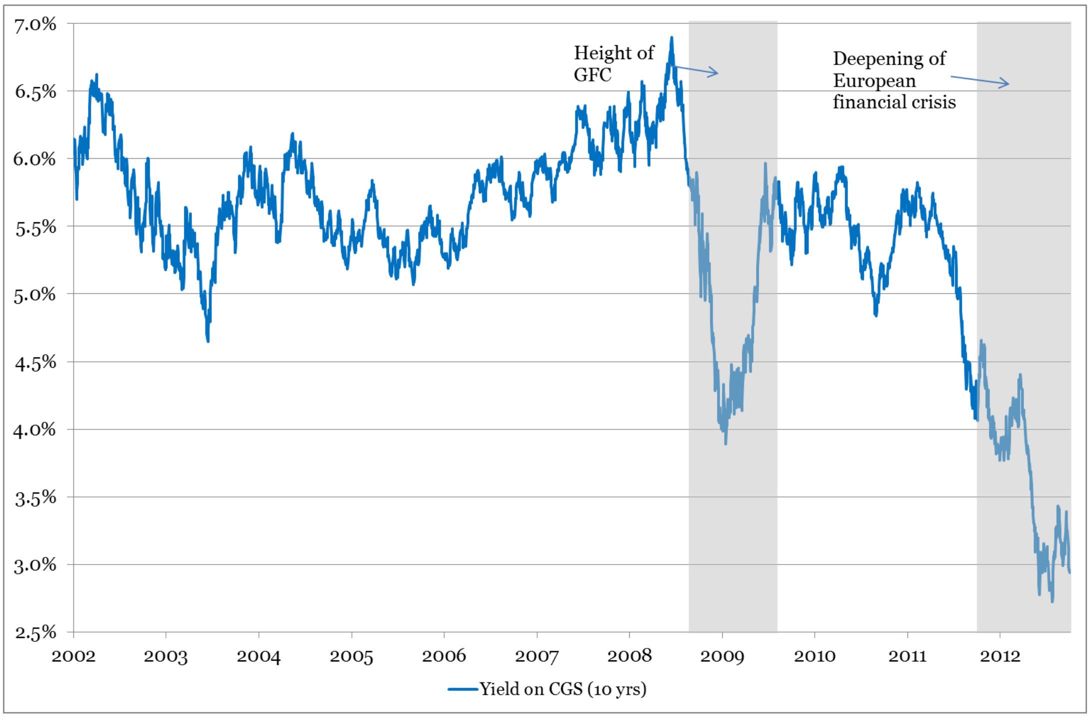
As discussed above, the integral interrelationship within the CAPM is between the risk free rate and the premium above *that* risk free rate which an investor would expect to earn on a well diversified portfolio of risky assets (ie, the MRP).

Figure 5.2 shows the change in the annualised 10-year GCS yield over the last 10 years.

[48] Damodaran, A., *Musing on Markets: Risk Free rates and value: Dealing with historically low risk free rates*, September 2011.

[49] AER, Draft Decision, page 70.

Figure 5.2: Time series for yields on ten year CGS



Source: RBA Statistics, APA GasNet

As shown in Figure 5.2, the risk free rate has fallen substantially since mid-2011. The implication this variability in the risk free rate to the CAPM as applied by the AER is that the expected return on the market was:

- 11.53 per cent in March 2011 when it estimated the CAPM for the Amadeus gas pipeline;[50] and
- 11.40 per cent in May 2011 when it estimated the CAPM for the Envestra's Queensland and SA gas networks;[51] and
- 9.22 per cent in September 2012 if the AER were to adopt a MRP of 6.00 per cent for APA GasNet.

In other words, the Draft Decision to adopt a MRP of 6.00 per cent implies that the expected return on the market portfolio has perfectly matched the 231 basis points fall in the risk free rate over the period 19 month period between the Amadeus decision and that for APA GasNet.

APA GasNet submits that the AER has erred in its Draft Decision by adopting a MRP of 6.00 per cent, because:

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[50] AER, Final decision – NT Gas: Access arrangement proposal for the Amadeus gas pipeline – 1 July 2011 - 30 June 2016, June 2011, pp. 59, 80.

[51] AER, Final decision – APT Allgas: Access arrangement proposal for the Qld gas network – 1 August 2011 - 30 June 2016, June 2011, pp. 39, 41

- the analysis relied on by the AER exclusively assessed historical data which it has not been demonstrated is a good (let alone the best) forecast or estimate of a forward-looking MRP;
- the historical data is incapable of supporting the AER's assertion that that the expected return on the market portfolio has perfectly matched the 231 basis points fall in the risk free rate over the period 19 month period between the Amadeus decision and that for APA GasNet
- the AER incorrectly placed little or no weight on all forward looking measures of the MRP which:
    - show that prevailing premia on risky assets has recently increased as the Commonwealth Government Securities (CGS) yield has fallen; and
    - ubiquitously support a prevailing MRP over the agreed averaging period of greater than 6.00 per cent.

The remainder of this section is structured as follows:

- section 5.4 reviews the analysis relied on by the AER in setting a MRP of 6.00, and shows that the analysis exclusively relies on historical estimates of the equity premia; and
- section 5.5 outlines the evidence that during the agreed averaging period (ie, 13-26 September 2012) that the underlying riskiness of equity has changed materially from its historical average.

5.4 The AER's specification of the CAPM

As discussed above, the Sharpe-Lintner capital asset pricing model (CAPM) is expressed by the formula:

$$\mathrm{E}(R_j) = R_f + \beta_j[\mathrm{E}(R_m) - R_f],$$

where:

$E(R_j)$ = is the expected return on asset j;

R_f = is the risk-free rate;

β_j = measures the contribution of asset j to the risk, measured by standard deviation of return, of the market portfolio; and

$E(R_m)$ =is the expected return to the market portfolio of risky assets.

The specification of the CAPM adopted by the AER in the Draft Decision is to combine a current estimate of the risk free rate with an estimate of the average historical MRP. Expressing the CAPM in its original form highlights the error in the AER specification of the Sharpe-Lintner CAPM, i.e.:

$$k_e = RF_{current} + \beta_i(RM_{historic} - RF_{historic})$$

The error in the AER's specification of the CAPM was highlighted in the two expert reports provided by Professors Alan Gregory[52] and Stephen Wright[53]. Wright concluded that:[54]

> Both the real market cost of equity and the MRP are inherently unobservable. But of necessity regulators have to commit themselves to a particular set of assumptions about these unobservable magnitudes. My view, in line with the UK regulators, is that regulators should work on the assumption that the real market cost of equity is constant. This approach is supported by quote strong evidence.
>
> …
>
> the combination of this methodology for the risk-free rate and the assumption of a constant risk-premium does cause major problems, by introducing instability into the assumed figure for the real cost of equity

While Gregory highlights:[55]

> A very common error, which has been discussed in recent UK regulatory appeals, is to implicitly assume the two RF terms are different. An example would be where a current estimate of the risk free rate (say the yield on a government bond) is combined with an historically derived estimate of the MRP.
>
> This simply illustrates Jenkinson's point that two different RF terms have been employed, and there is no theoretical validity in such a model.

In other words, the use of a historical MRP is only appropriate when, together with the current risk free rate, it provides a reasonable estimate of the prevailing expected return on the market. Section **Error! Reference source not found.** of this ubmission demonstrates that this is not a reasonable presumption in the context of setting APA GasNet rate of return for the 2013-2017 access period.

APA GasNet also contends that the AER's incorrectly interpreted the operation of Rule 87 of the NGR. In section 4.2.1 of Attachment 4 to the Draft Decision, the AER states:

> The AER understands the rule operates as follows:
>
> - Rule 87(1) describes the objective in determining the WACC but not how to achieve the objective.

52 Gregory A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, October 2012.

53 Wright, S., *Review of the Risk Free Rate and Cost of Equity Estimates: A Comparison of UK Approaches and the AER*, October 2012. Attachment 5.6

54 Wright, S., *Review of the Risk Free Rate and Cost of Equity Estimates: A Comparison of UK Approaches and the AER*, October 2012, paragraphs *i-vii*.

55 Gregory A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, October 2012, paragraphs 13-14.

- Rule 87(2) describes how to achieve the objective, including through a well accepted approach (such as the WACC) and through a well accepted financial model (such as the CAPM).
- Rule 87(1) informs the selection of input parameters for the well accepted approach and well accepted financial model. Those input parameters must reflect prevailing conditions in the market for funds and the risk involved in providing reference services.

This interpretation is consistent with the Australian Competition Tribunal's (Tribunal) position in two recent decisions: the ATCO (formerly WA Gas Networks) matter and the DBNGP matter. It is also consistent with the AER's approach in previous decisions. The AER thus applied this approach in making its draft decision on APA GasNet's rate of return.

While APA GasNet does not dispute the AER's interpretation of the first two dot points, the AER's depiction of the third dot point is incorrect and inconsistent with the Tribunal's interpretation of Rule 87. Specifically, the Tribunal found in both the ATCO and DBNGP matters:

- the inputs into the model are critical and rule 87(1), importantly, informs the appropriateness of the inputs;[56] and
- the selection of the appropriate input parameters is a critical step to ensuring that the well accepted approach using a well accepted financial model produces an outcome which accords with the objective expressed in rule 87(1).[57]

APA GasNet has been unable to find any reference in either decision that Rule 87(1) requires that *input parameters* must reflect prevailing conditions in the market for funds and risks involved in providing reference services. Instead the Tribunal directs that input parameters in combination must produce *a result* which meets the objective contained in Rule 87(1).

This misinterpretation of the requirements of Rule 87 result in the AER estimating each of the WACC and CAPM parameters in isolation. As a consequence of the AER approach, the Draft Decision determined an overall rate of return that is demonstrably inconsistent with the Rule 87(1) objective because:

- the AER mis-specified the CAPM and estimated the MRP, rather than estimating the margin between the expected return on the market and the risk free rate; and so
- had no regard to the recent falls in the risk free rate and whether this has also resulted in an equal fall in the expected return on the market (a necessary condition for the historical MRP to remain valid estimate of investor's current expectations)

The remainder of this section demonstrates this error in the Draft Decision.

56 Application by WA Gas Networks Pty Ltd (No 3) [2012] ACompT 12 (8 June 2012), paragraph 65.

57 Application by WA Gas Networks Pty Ltd (No 3) [2012] ACompT 12 (8 June 2012), paragraph 65; and Application by DBNGP (WA) Transmission Pty Ltd (No 3) [2012] ACompT 14, paragraphs 82 and 87

5.4.1 AER has not estimated a MRP commensurate with prevailing conditions in the market for funds

APA GasNet acknowledges that historical data has been used to measure the MRP previously. The AER's stated rationale for using data on historical excess returns is that "investors' experience informs their expectations of the forward looking MRP."[58]

However, a second step is clearly necessary before a historical measure of the margin can be applied in the CAPM. This secondary step is that analysis of probative materials has been undertaken which permits a conclusion to be drawn that, in the context of the agreed averaging period, the historical measure is the best forecast or estimate of the MRP that is commensurate with prevailing conditions in the market for funds. It may be permissible to use a long term historical measure where the measure is crosschecked against forward looking estimates to ensure that the underlying riskiness of equity has not materially changed from its long term average. This cross-check is particularly important where there is evidence which indicates that the MRP is likely to have deviated significantly from its long-term average.

The AER has erred in concluding that, in respect of the APA GasNet averaging period, a historical long term measure of the MRP is appropriate for use in a calculation that is directed at producing the best estimate or forecast of a rate of return that is commensurate with prevailing conditions in the market for funds. Such a conclusion is incorrect in circumstances where it has not satisfied itself that the historical long term average is consistent with prevailing market conditions and in light of evidence that forward looking measures deviate significantly from the long term average. In the absence of any form of cross-check, the AER cannot reasonably be satisfied that measures of historical excess returns are likely to reflect the premium above the risk free rate which an investor would expect to earn by investing in the market portfolio as measured over the agreed averaging period (ie, 13-26 September 2012).

The factors that the AER considered in its determination that a MRP of 6.0 per cent is commensurate with the prevailing conditions in the market for funds include:[59]

- Historical excess returns provided a range of 4.9–6.1 per cent if calculated on an arithmetic average basis and a range of 3.0–4.7 per cent if calculated on a geometric average basis
- Professor McKenzie and Associate Professor Partington advised a 6 per cent MRP is appropriate
- The MRP is an economy wide measure and other economic regulators in Australia have consistently adopted a 6 per cent MRP under the same CAPM framework.
- In the Envestra, ATCO and DBNGP matters, the Tribunal found no error in the AER's and the Economic Regulatory Authority of Western Australia's 6 per cent

[58] AER, Draft Decision, page 70

[59] AER, Draft Decision, p. 38.

MRP. The Tribunal found it was open for both regulators to adopt 6 per cent on the available evidence

- Surveys of market practitioners consistently supported 6 per cent as the most commonly adopted value for the MRP. They also indicated the average MRP adopted by market practitioners was approximately 6 per cent.

We consider each of these sources in turn to determine whether it is capable of supporting a conclusion that the MRP over the period 13 September 2012 to 26 September 2012 was 6.00 per cent.

5.4.1.1 *Average historical excess returns*

Historical excess returns calculate the realised return that equity stocks have earned in excess of the 10 year government bond yield over the long term. The validity of the AER's approach to using historical excess returns to estimate the current MRP assumes:

- that investors' expectations of future excess returns are informed by past realised returns; and
- that historical excess returns are a stable and reliable predictor of the level of future expected excess returns.

The evidence on this assumption is clear. Market returns are relatively stable, but the risk free rate is volatile; that volatility translates directly into a volatile measure of excess returns. Historical excess returns are therefore not a stable and reliable predictor of the level of future expected excess returns

Professor Alan Gregory in his report entitled *The AER Approach to Establishing the Cost of Equity* (Attachment 5.4) highlights a Smithers & Co report to Ofgem, (2003) which:[60]

> is absolutely unequivocal on this point, … the return on equities is more stable than the MRP.

It follows that during periods of very low risk free rates, such as those experienced over the agreed averaging period, it would be more appropriate to assume that investors' expectations would be informed by past total returns on the market. In other words, as the risk free rate falls, investors expect the MRP to increase.

This is also the view of Guy Debelle, the Assistant Governor of the Reserve Bank of Australia (RBA). In July of this year, Debelle wrote a letter to the ACCC regarding the current state of the market for Commonwealth Government Securities (CGS). Debelle indicated a recent flight by investors to the safety of risk free assets, such as CGS. He noted that the effect of this flight has been to widen the spreads between CGS yields and other Australian debt securities, reflecting "a general increase in risk premia on other assets".[61]

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[60] Gregory, A., The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium, October 2012, paragraph 17.

[61] Letter from Guy Debelle to Mr. Dimasi of the ACCC, 16 July 2012.

The letter also states that market risk premia are likely to be unstable through time. Consequently, Debelle advocates that in making use of a risk free rate to estimate a cost of capital, "it is important to be mindful of how the resulting relativity between the cost of debt and that of equity can change over time".[62]

While historical excess returns are one source from which one can infer the current expectations of the MRP, it must be crosschecked with forward looking measures. Crosschecking historical excess returns is especially vital when the CAPM is being applied during aberrant market conditions and there are reasons to believe that the premia for risk has increased. Section 5.5 of this chapter sets out the reasons why a heightened premia for risk exists during the agreed averaging period.

Arithmetic vs geometric averages

APA GasNet also directs the AER to expert report from SFG Consulting (SFG)[63] which contains a detailed assessment on whether arithmetic or geometric historical averages should be relied on to set the forward looking MRP.

SFG is unequivocal in its conclusion that:[64]

> that geometric averages should be afforded no weight – the estimate of MRP should not depend in any way on any geometric average of historical excess returns.

5.4.1.2 Advice from McKenzie and Partington

Professor McKenzie and Associate Professor Partington advised in their report to the AER in December 2011 that:[65]

> On balance, our view is that there is little compelling evidence to deviate from the long standing regulatory consensus of an equity market risk premium of 6%.

This conclusion was repeated in their later supplemental report where they stated:[66]

> We find no basis in the material reviewed to change the conclusions of our main report regarding the use of 6% as the MRP, which we take to represent the unconditional MRP.

APA GasNet notes that McKenzie and Partington reach their conclusion on the MRP on the basis that they are meant to estimate an unconditional MRP. This reference to unconditional appears to show McKenzie and Partington's understanding that the AER is applying an unconditional CAPM. In other words, a specification of the CAPM where the parameters do not change over time and are instead estimated using long term averages.

However, in a recent report for the AER, Davis concludes that:[67]

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62 *Ibid*.

63 SFG, *The required return on equity: Response to the AER Victorian Gas Draft Decision*, November 2012, pp. 20-26.

64 *Ibid, p.* 20*.*

65 McKenzie and Partington, *Equity Market Risk Premium*, December 2011 p. 37.

66 McKenzie and Partington, *Supplementary Report on the Equity Market Risk Premium,* February 2012, p. 5.

> there is general agreement that the CAPM needs to be viewed in a conditional form – but that the precise determinants and size of that conditionality (and hence variations over time in beta, MRP etc) are not well agreed. The AER's approach of revisiting the CAPM parameters at each regulatory review is consistent with a conditional approach, although it does not involve any specific formulation of how such conditionality is reflected in current values or future changes in asset parameters. That approach could, perhaps, be referred to as an "implicit conditional CAPM"

The AER accepts this interpretation of the framework it uses to estimate the required return on equity:[68]

> As noted by Professor Davis, the AER is using an 'implicit conditional CAPM' approach

APA GasNet notes that the while the Davis report found empirical support for the use of the conditional CAPM he also found that:[69]

> Unless the influence of those other factors is allowed for (the conditional CAPM), empirical tests of the CAPM, assuming parameter constancy across multiple periods (the unconditional CAPM), may reject the CAPM, even if the conditional variant is valid.

McKenzie and Partington conclude that the *unconditional* (ie, long term average for use in a long term CAPM) MRP is 6.00 per cent. Furthermore, McKenzie and Partington's estimate of the MRP:

- is a long term estimate of the MRP that does not purport to reflect the MRP prevailing during the agreed averaging period; and
- estimates a parameter into a specification of the CAPM that the AER's own advisor (Davis) suggests has no empirical validity.

5.4.1.3 Recent regulatory determinations

The third source relied on by the AER is that decisions of other regulators in Australia have consistently adopted an MRP estimate of 6.00 per cent. However, the fact that a particular MRP value has been repeatedly adopted does not imply that its continued application is appropriate in the current environment, particularly where prevailing conditions in the market for funds have materially changed. That is, the previous adoption of a MRP estimate of 6.00 per cent by other regulators actually says nothing about the appropriateness of adopting that MRP value in respect of the APA GasNet agreed averaging period including because none of those previous decisions were made in respect of the APA GasNet agreed averaging period.

While recent regulatory decisions cited by the AER adopt MRP of 6 per cent they occurred when the prevailing (current) risk free rate was substantially greater than the 3.22 per cent prevailing during the APA GasNet's agreed averaging period. Figure 5.3, shows that the 10-year risk free rate has fallen dramatically since mid-2011.

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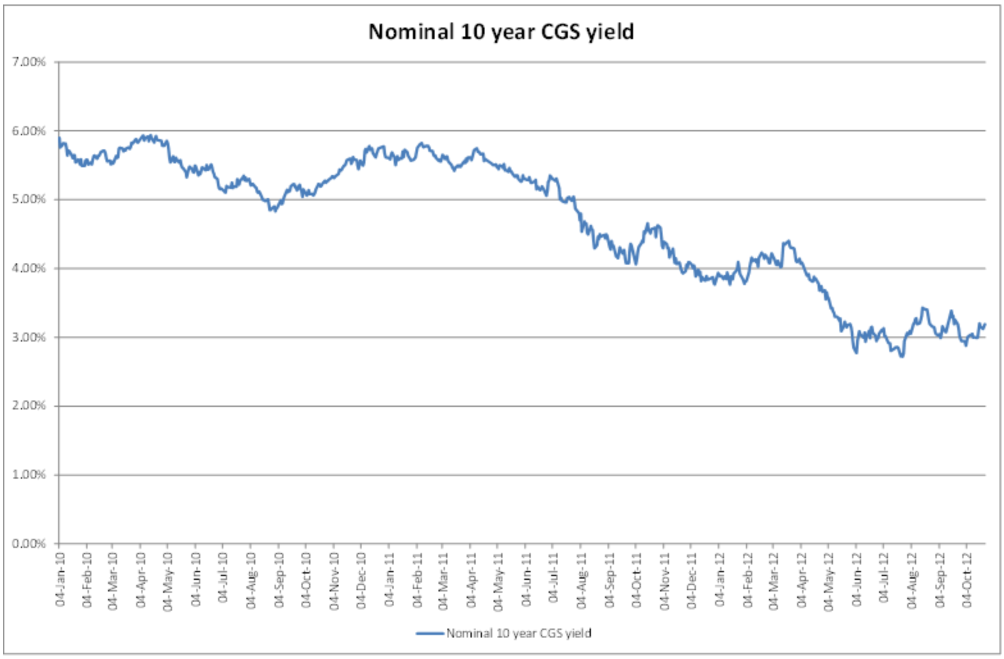
67 Davis, *Cost of Equity Issues: A Report for the AER*, 16 January 2011, p. 21.

68 AER, *Envestra Queensland Gas Network, Final Decision*, June 2011, Appendix B, p. 41.

69 Davis, *Cost of Equity Issues: A Report for the AER*, 16 January 2011, p. 4.

Figure 5.3: Recent 10-year Annualised CGS yields



Source: RBA statistics (table f16) and NERA Economic Consulting

Furthermore, the three decisions by IPART in June/July 2012 recognised the potential impact of the current low risk free rate by setting the point estimate of the WACC at the top of its plausible range. In its review of prices for the Sydney Water Corporation, IPART acknowledged that:[70]

> the approach to estimating the MRP should account for changes in market conditions [noting that such an approach] would result in an MRP in the range of 6.5% to 7.0%.

This is consistent with its decision in December 2011 for the Sydney Desalination Plant where IPART adjusted its WACC estimate 80 basis points upward in order to address:[71]

> We acknowledge the argument that there may be greater stability in the sum of the market risk premium and the risk free rate (ie, the expected market return) than in the individual components.
>
> …
>
> Therefore, to guide our decision-making on the point estimate for the WACC, we estimated the long term averages of the risk free rate, inflation rate and the market risk premium. We found that using these long term averages, the WACC range would be 5.9% to 7.8% with a midpoint of 6.7%...

70 IPART, Final report, *Review of prices for Sydney Water Corporation's water, sewerage, drainage and other services*, June 2012, page 210.

71 IPART, Final report, *Review of water prices for Sydney Desalination Plant Pty Limited*, December 2011, page 94.

In light of this, we consider it appropriate to use a WACC of 6.7% in setting prices for SDP for the next 5 years.

A thorough examination of recent determinations highlights that:

- for those decisions prior to mid-2011, the risk free rate was over 5 per cent and so the estimate of an expected return on the market was above 11 per cent; this compares with a rate of 9.22 per cent (which would apply to APA GasNet if the AER were to adopt a MRP of 6.00 per cent in its Final Decision); and
- while the four decisions by IPART since December 2011 adopted a MRP range of 5.5-6.5 per cent the Tribunal made an upward adjustment to the overall WACC in each of the decision that had the effect of substantially increasing the allowed return on equity;

Consequently, the AER is mistaken to characterise recent regulatory decisions as having "consistently adopted an MRP estimate of 6.00 per cent under the same CAPM framework."

5.4.1.4 Recent decision by the Australian Competition Tribunal (ACT)

The AER also points to the Envestra, ATCO and DBNGP matters which were appealed to the ACT. The ACT found that it was open for the regulators (ie, the AER and ERA) to adopt 6 per cent for the MRP in these decisions.

However, the Envestra, ATCO, and DBNGP decisions referred to by the AER derived a 6 per cent MRP using historical data with sampling periods that did not include the recent drop in the risk free rate. These decisions used data from the following sampling periods:

- in both the Queensland and South Australia Envestra decisions, the AER considered the historical excess rates of return for three periods: 1883 – 2010, 1937 – 2010, and 1958 – 2010.[72]
- in its final decision on the DBNGP case, the ERA utilised an estimate of the historical equity risk premium for the period from 1883 to 2010 conducted by professor Lally.[73]
- the ERA, in its final decision on WA Gas Networks (now ATCO Gas), used historic data on the equity risk premium to determine the MRP.[74] Although the sampling period is not given, it can be assumed that data post the decision's publishing date of 28 February 2011 was not included.

[72] AER, Final decision, *Access arrangement proposal for the SA gas network*, June 2011, page 50; and
AER, Final decision, *Access arrangement proposal for the Qld gas network*, June 2011, page 45.

[73] ERA, Final decision, *Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline*, 31 October 2011, page 129.

[74] ERA, Final decision, *WA Gas Network's proposed revised access arrangement*, 28 February 2011.

APA GasNet notes that while the ACT accepted an MRP of 6 per cent in each of these decisions it does not speak for the validity of a 6 per cent MRP going forward, for the same reason that previous regulatory decisions should not necessarily be followed. Previous decisions of the ACT will only be relevant insofar as they relate the determination of the MRP in the same or similar market conditions and on the basis of similar material and argument. The adoption by the ACT of a MRP value of 6.00 per cent says nothing about the appropriateness of adopting a value for the MRP of 6.00 per cent in respect of the APA GasNet agreed averaging period.

Importantly, two of these regulatory decisions occurred when the risk free rate was substantially higher than the 3.22 per cent prevailing during APA GasNet's agreed averaging period, specifically the:

- Envestra (Qld) and Envestra (SA) decisions both set a risk free rate of 5.56 per cent and so the ACT endorsed an expected return on the market of 11.56 per cent;[75] and
- ATCO decision estimated the risk free rate over the period from 23 November 2010 to 20 December 2010 and set a risk free rate of 5.61 per cent and so the ACT endorsed an expected return on the market of 11.61 per cent.[76]

We also note that the DBNGP decision estimated the risk free rate over the period from 5 September 2011 to 30 September 2011.[77] However, the ERA adopted a 5-year CGS yields as risk free rate which resulted in a rate of 3.80 per cent.

In any event, previous regulatory decisions or decisions of the Tribunal are not binding on the AER. Therefore these decisions should only be followed if the AER is satisfied that they are relevant to the present case and based on robust reasoning and evidence. To the extent that conditions have changed or new evidence has come to light, then it is incumbent upon the AER to consider these developments in making its decision. Previous decisions should not be followed without giving consideration to the relevance of those decisions to the present case.

5.4.1.5 *Surveys of the MRP*

The draft decision states that surveys of market practitioners have consistently supported a 6.00 per cent value for the MRP. The Draft Decision also states that surveys represent a forward looking estimate of the MRP. APA GasNet does not disagree with either of these statements.

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[75] AER, *Final Decision Envestra Ltd Access arrangement proposal for the Qld gas network 1 July 2011 – 30 June 2016*, June 2011, p. 54; and
AER, *Final Decision Envestra Ltd Access arrangement proposal for the SA gas network 1 July 2011 – 30 June 2016*, June 2011, p. 59.

[76] ERA, *Final decision on WA Gas Networks Pty Ltd proposed revised access arrangements for the Mid-West and South-West Gas Distribution Systems*, 28 February 2011, pp.56-57

[77] ERA, *Final decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline*, 31 October 2011, p. 129.

However, the surveys cited by the AER in its Draft Decision are not a reasonable basis for setting the MRP that prevailed during the agreed averaging period, ie, 13 September 2012 to 26 September 2012. The main reason the surveys relied on the by the AER cannot reflect the MRP for APA GasNet is because surveys can only reflect the expectations of the participants at the time they responded, and in each of the surveys cited by the AER the prevailing risk free rate was substantially higher than the 3.22 per cent observed during the agreed averaging period. The prevailing risk free rate for each of the surveys cited by the AER was:

- 5.81 per cent in the period from January 2000 to June 2005 which is the period that KPMG (2005) reviewed valuation reports;
- 5.42 per cent in the month that the Capital Research (2006) survey was published in March 2006;
- 6.70 per cent in the month that the Truong, Partington and Peat (2008) survey was published in June 2008;
- 5.72 per cent in the period from January 2003 to June 2008 which is the period that Bishop (2009) reviewed valuation reports;
- 4.26 per cent in the first quarter of 2009 which is the period that Fernandez (2009) surveyed university finance and economics professors;
- 5.87 per cent in April 2010 when Fernandez and Del Campo (2010) surveyed analysts;
- 5.63 per cent in April 2011 when Fernandez et al. (2010) surveyed analysts; and
- 5.41 per cent in May 2011 when Asher (2010) surveyed members of the Institute of Actuaries in Australia.

APA GasNet also shares the AER's concerns that surveys that "survey evidence needs to be treated with caution because the results may be subject to limitations".[78] These limitations include the term over which the MRP is estimated, the treatment of imputation credits, and other factors.

Investors' focus on market cost of equity

Regarding the use of surveys, we also draw the AER's attention to the attached report by Ernst & Young that reviewed independent experts' valuation reports right up to 10 October 2012.[79] This review differs significantly from a survey because 1) the experts did not know they were being "surveyed" when they prepared their reports; and 2) unlike surveys, these expert reports were conducted in the context of genuine market activity.

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[78] AER, Draft decision, *Access arrangement draft decision APA GasNet Australia Pty Ltd 2013-17*, September 2012, page 92.

[79] Ernst & Young, *Market Evidence on the cost of equity– Victorian Gas Access Arrangement Review 2013-2017*, November 2012. Attachment 5.9

EY found that the independent experts conducting business valuations in anticipation of merger activity focused primarily on the market cost of equity in reaching their conclusions rather than individual parameters. EY found that:[80]

> It is common for independent experts to modify the way they apply the CAPM in estimating the cost of equity, particularly when its mechanical application yields costs of equity and/or discount rates which are inconsistent with the rate of return the market expects from the relevant investment.

The clear message from this review is the independent experts focus on the cost of equity rather than individual CAPM parameters, and they adjust the CAPM to ensure that they arrive at their best estimate of the cost of equity.

As a consequence, surveys of a single parameter within the CAPM may result in a misleading understanding of the expectations of the respondents. APA GasNet believes the interrelationships within the CAPM mean that only surveys that report the respondents' simultaneous views on *all* the CAPM parameters, ie, the risk free rate, MRP, gamma and any additional risk adjustments can possibly assist a regulator's understanding of the cost of equity.

5.5 MRP in prevailing conditions in the market

There is a considerable body of evidence that the current MRP has climbed above its historical average since the observed collapse in the risk free rate since mid-2011 that has seen the annualised 10-year CGS yield falling from 5.35 per cent (1 July 2011) to a low of 2.76 per cent (25 July 2012).[81] Evidence of an elevated MRP during the agreed averaging period includes:

- the advice provided by the Reserve Bank of Australia in July 2012;
- the observation of increased risk premia demanded on less risky assets such as debt;
- evidence that the AER's approach to the CAPM is inconsistent with, and delivers results that are inconsistent with, the current estimates of market return made by expert market practitioners;
- evidence that applying the 6.0 per cent fixed MRP in the CAPM results in an expected real return on the market which is materially below the real long term average return on the market;
- responses by jurisdictional regulators to setting the cost of capital for regulated entities; and
- evidence that the AER's fixed MRP approach is rejected by forward looking measures of the MRP which ubiquitously support a premium over 6 per cent.

80 Ibid. Appendix D.

81 APA GasNet notes that since the low on 25 July 2012 the annualised 10-year risk free rate recovered slightly and remains around, or just over, 3.00 per cent.

APA GasNet submits that this evidence clearly shows that the Draft Decision adoption of a MRP of 6.00 per cent is untenable and results in a cost of equity that is below that required in the prevailing conditions in the market for funds.

Each of these sources are discussed in turn below.

5.5.1.1 Letter from the RBA

The Reserve Bank of Australia (RBA) is Australia's independent central bank. It conducts monetary policy, works to maintain a strong financial system and issues the nation's currency.

The RBA is arguably the most credible, and independent, commentator on the Australian financial markets. As such APA GasNet considers that the AER should place significant weight on the opinions of the RBA. A number of observations and opinions of the Australian financial markets was contained in the letter from Guy Debelle to Mr Joe Dimasi (a commissioner of the ACCC) dated 16 July 2012. This letter was a formal response by the RBA to a letter from the ACCC seeking the views of the RBA on aspects of the market for nominal CGS.

One observation contained in the letter from the RBA to the ACCC/AER is that in recent years investors' risk preferences and/or perceptions of risk have changed as a result of:

- demand for risk-free assets, such as CGS, has increased significantly; and
- the general increase in risk premia on other assets.

The RBA comments support the comments of other experts on the observed "flight of capital away from relatively risky assets to forms of safe assets such as CGS".[82] Given the proximity in the timing of these comments to the agreed averaging period for APA GasNet, it provides a *prima facie* case for questioning whether the MRP prevailing during the agreed averaging period is above its historical average.

Furthermore, the RBA also remarks, and we agree, that:

> market risk premia are unlikely to be stable through time. While it is a reasonably simple matter to infer changes in the debt risk premia from market prices, it is less straight forward to do so for equity premia. In making use of a risk free rate to estimate a cost of capital, it is important to be mindful of how the resulting relativity between the cost of debt and that of equity can change over time and whether that is reasonable.

The implication of this statement of the RBA is that when estimating the cost of capital one should examine the reasonableness of changes in the relative cost of debt to equity. Furthermore, in undertaking this assessment it is important to acknowledge that measures of the cost of debt are more reliable than measures of the cost of equity.

The following section examines recent risk premiums on debt securities.

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[82] CEG, *Internal consistency of risk free rate and MRP in the CAPM* -, March 2012, p iii

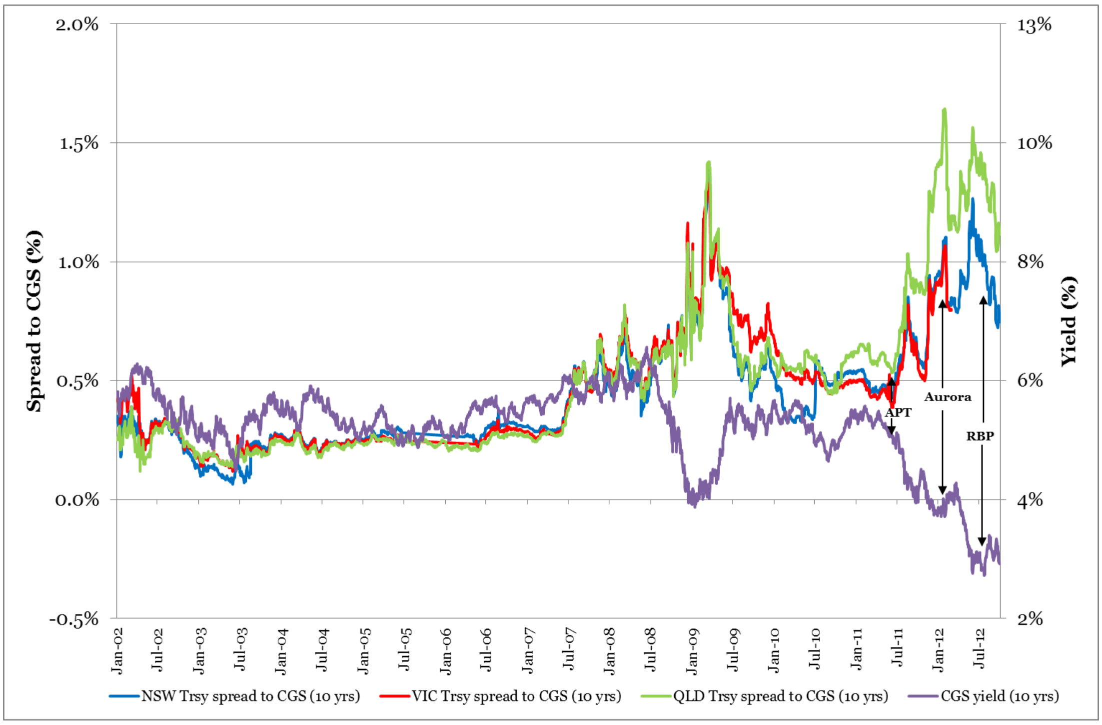
5.5.1.2 *Risk premiums on debt securities*

In March 2012, the Competition Economist Group (CEG) provided a report that was attached to the APA GasNet submission that examined, along with other matters, the risk premium on low and high risk bonds. CEG has updated this analysis which is attached to this revised submission at Attachment 5.7.

CEG's updated report continues to show a trend of higher risk premiums at times of lower CGS yields, such as those experienced in early 2009 and at the current time. CEG's examination of low risk debt such state government debt (rated AAA for NSW and Victoria and AA+ for Queensland) found that the risk premia on these securities has:[83]

- increased materially since mid-2011, albeit with a decline in mid-2012; and
- returned to levels not seen since the midst of the 2008/09 financial crisis.

Figure 5.4 - Risk premiums on State Government debt relative to CGS



APA GasNet notes that CEG has vigorously rebutted the assertions made by Lally that the rise in state government bond yields is a result of higher default risk.[84]

Figures 5 and 6 of the CEG report also illustrate that the risk premia for:

[83] CEG, *Internal consistency of risk free rate and MRP in the CAPM* -, November 2012, [pp. 11-12]

[84] See CEG, *Internal Consistency of MRP and Risk Free Rate: Response to AER Victorian Gas Distribution Draft Decision*, November 2012, [pp. 34-43]. Attachment 5.7

- NSW and Queensland Treasury bonds (10-yrs) spiked in 2008/09 and again in mid-2011 and were 75 and 107 basis points over the agreed averaging period, well over their respective pre-2007 averages of 25 and 23 basis points; and
- 4-year AAA corporate bonds followed a similar pattern as state government debt and was 86 basis points during the agreed averaging period which again was well above its pre-2007 average of 57.

CEG also observes that the spread on more risky corporate debt, such as BBB benchmark bonds is also elevated compared to its pre-2009 averages.

APA GasNet notes that there are deep and liquid markets for these debt securities, especially the low risk state government bonds and AAA corporate bonds. As a consequence, the observed increase risk premia for these assets strongly support a conclusion of a general heightened risk premia during the agreed sampling period.

The key message to be drawn from this analysis is that, as the evidence demonstrates that the premia on assets which are only slightly more risky than CGS has increased sharply, it is unreasonable to expect that the risk premium demanded for holding risky assets, such as traded equities, would remain stable.

To our knowledge no regulator, market analyst, academic nor financial expert has offered a reasonable explanation why the risk premium for low risk assets has increased whilst the risk premium for more risk equity assets would be expected to remain stable. Furthermore, we are unaware of any Australian equity or bond market data that is inconsistent with a trend of higher risk premia.

APA GasNet submits that the raised risk premia for less risky bonds implicitly shows that the conditions in the financial market are such that investors are requiring higher compensation to invest in risky assets, which include equity investments. Increases in the risk premium for assets that are only slightly more risky than CGS is further evidence that retaining a fixed MRP of 6.00 per cent is untenable for the agreed averaging period.

5.5.1.3 *Demonstrated practice of market practitioners*

Ernst & Young (EY) has undertaken an assessment of the prevailing cost of equity in the Australian market for funds.[85] EY has undertaken a review of 889 independent expert reports issued between 1 January 2008 and 10 October 2012.

These reports provide relevant information on the prevailing cost of equity as they are prepared by:[86]

> accredited independent experts, working within an explicit regime of regulation, comprising both formal statutory rules and less formal guidelines, which require that the experts be accountable for the results of their work.

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[85] Ernst & Young, *Market Evidence on the Cost of Equity– Victorian Gas Access Arrangement Review 2013-2017*, November 2012. Attachment 5.8

[86] *Ibid*, paragraph [42].

EY's reviewed 889 independent valuation reports issued between 1 January 2008 and 10 October 2012. EY found that 132 of these reports assessed the prevailing cost of equity using the CAPM and seventeen of these 132 reports were issued in the 2012.

EY's analysis of the seventeen independent expert reports issued in 2012, showed that the expected return on the market portfolio was 10.7 per cent, when a zero value is assigned to imputation credits.[87] Assigning a value of 0.25 for imputation credits created EY estimates that a further 100 basis points should be added to the return on the market on the market portfolio. In other words, to be consistent with the AER's finding that imputations credits created have a value of 0.25 of their face value leads to a finding of an expected return on the market of 11.7 per cent.[88]

EY's finding that the expected return on the market, from independent valuation reports, is 11.7 per cent implies a MRP of 8.48 per cent during the agreed averaging period.

APA GasNet submits that EY's examination of independent valuation reports provides further evidence that a MRP of 6.00 per cent is unsustainable in the current market.

5.5.1.4 *Expected real return on the market*

Professor Alan Gregory has prepared the following two reports (attached) for this revised submission, entitled:

- *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium;*[89] *and*
- *The Risk Free Rate and the Present Value Principle.*[90]

Gregory also cites The Smithers & Co Report that concluded:[91]

> "There is considerably more uncertainty about the true historic equity premium and (hence the risk-free rate) than there is about the true cost of equity capital", leading to the following recommendation that "For this reason we regard the standard approach to building up the cost of equity, from estimates of the safe rate and the equity premium, as problematic. We would recommend, instead, that estimates should be

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87 *Ibid*, paragraph [28].

88 The AER ascribes a value for imputation credits, whereas the independent experts ascribe a value of zero. The AER's headline cost of equity presumes, then, that some value is delivered to investors through the tax system. To compare like with like, the observer could equally reduce the AER's calculated return on market (Rm) by the value of imputation credits. As noted in the EY report, under either approach, the gap between the AER's cost of equity and the independent experts' assessment widens if the value of imputation credits is taken into account.

89 Gregory, A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, November 2012.

90 Gregory, A., *The Risk Free Rate and the Present Value Principle*, November 2012.

91 Gregory, A., *The Risk Free Rate and the Present Value Principle*, November 2012, paragraph 27.

> derived from estimates of the aggregate equity return (the cost of equity for the average firm), and the safe rate." (the Smithers Report, 2003, p.48). This conclusion does not just depend on the US evidence in Siegel (1998) and Smithers and Wright (2002), but explicitly draws on the UK and international market evidence in Dimson, Marsh and Staunton (2001).

That is, the market risk premium should be derived from subtracting the observed risk free rate from observed market returns, in contrast to the AER's approach of deriving market returns by adding the observed risk free rate and a fixed market risk premium.

Gregory makes the additional point that instability in the underlying Australian bond series reinforces his concerns with estimating a fixed long term MRP in Australia.[92]

Gregory concludes that:[93]

> If the E(RM) has a more stable mean, the consequence is that direct estimates of E(RM) are likely to be more statistically reliable than indirect estimates formed by summing RF and MRP. This may be of particular importance in the present environment of exceptionally low levels of RF.

Gregory reports provides the following two estimates of the long term real return on the market:[94]

- 8.6 per cent - using data drawn from the Brailsford et al (2002, 2012) data from 1958 to 2001 an assumed gamma of 0.25; and
- 8.9 per cent using the widely cited international evidence of Dimson, Marsh and Staunton (2012) for the period 1900-2012 and an assumption that imputation credits have a zero value.

In contrast, if the Draft Decision on the MRP were to be applied, the real return on the market would be 6.56 per cent.[95]

APA GasNet notes that the premise that real returns on the market are relatively more stable over time is consistent with the joint report prepared by the respective experts for AER (Associate Professor Martin Lally) and ActewAGL (Gregory

92 Gregory, A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, November 2012, paragraph 17.

93 Gregory, A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, November 2012, paragraph 80.

94 Gregory, A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, November 2012, paragraphs 20-21.

95 The nominal expected return on the market if the draft parameters are adopted would be 9.22 per cent (ie, 3.22% + 6.00%), this results in an expected real return on the market of 6.56 per cent (ie, $\frac{1+9.22\%}{1+2.5\%} - 1$).

Houston, NERA), in the matter before the Federal Court of Australia.[96] Lally and Houston agreed that:[97]

> The risk free rate and the MRP tend to move inversely with each other as investors' appetite for or aversion to risk fluctuates in line with macroeconomic circumstances. For example, during the global financial crisis, the market risk premium very likely increased (as investor became more risk averse and market volatility increased), while the risk free rate clearly reduced (as investors created a flight to safety and quality).

APA GasNet believes that this provides further evidence for an upward adjustment to the long term average MRP is required if it is to be applied to the risk free rate prevailing over the agreed averaging period.

5.5.1.5 Regulatory responses to the low risk free rates

APA GasNet notes that other Australian jurisdictional regulators have also confronted the issue associated with the historical low risk free rates. For example, the Independent Pricing and Regulatory Tribunal of NSW (IPART) has in the last year made four regulatory decisions. These decisions were cited by the AER in Table 4.4 of its Draft Decision, namely:

- *IPART, Final report, Review of water prices for Sydney Desalination Plant Ltd Pty, December 2011;*
- *IPART, Final report, Review of water prices for Sydney Water Corporation's water, sewerage, drainage and other services, June 2012;*
- *IPART, Final report, Review of water prices for Sydney Catchment Authority, June 2012; and*
- *IPART, Final report, Changes in regulated electricity retail prices from 1 July 2012, July 2012.*

The AER's Draft Decision noted that in these decisions IPART determined a MRP of between 5.5 per cent and 6.5 per cent. However, it would be misleading to believe that IPART's cost of capital determination accepted that the current equity risk premium fell within this range.

In the review of retail electricity prices, IPART concluded that:[98]

> We note that there may be an inconsistency between using short term data for the risk free rate and using long term data for the MRP. As stakeholders have noted, there may be an inversely proportional relationship between the MRP and the risk free rate…Our 2010 determination uses short term averages of the yield on government

[96] ActewAGL Distribution v The Australian Energy Regulator [2011] FCA 639 (8 June 2011)

[97] Mr Gregory Houston and Dr Martin Lally – *Joint Report, Prepared in the context of proceedings between ActewAGL and the Australian Energy Regulator*, March 2011. (attachment to NERA Economic Consulting, *Estimating the Cost of Equity under the CAPM*, Expert report of Gregory Houston, November 2012. (Attachment 5.3 to this submission)

[98] IPART, *Final Report- Changes in regulated electricity prices from 1 July 2012*, 13 June 2012, p. 107.

> bonds, and an MRP value that is based on the long term historical arithmetic average of market returns over the risk free rate.
>
> …
>
> The risk free rate yields have declined significantly since making the 2010 determination….the current yield of 3.7% is significantly below both the risk free rate used in our 2010 determination and the long term rates.
>
> We have recently made decisions for the water industry that recognise this issue. Rather than adjusting the risk free rate or revaluing the MRP, we made a judgment [sic] when selecting the WACC point estimate from within the range. We have adopted the same approach in this determination.

In the four decisions cited in the Draft Decision, IPART set a point estimate WACC substantially above the midpoint of its reasonable cost of capital range.[99] SFG Consulting estimated that a MRP of between 7.0-7.5% would be required to reproduce the WACC point estimate adopted in the review of retail electricity prices.[100]

Given the proximity of IPART decisions to the agreed averaging period this clearly demonstrates the need for the AER to adopt a MRP above its historical long term average.

5.5.1.6 *Forward estimates of the cost of equity*

Finally, the most direct method for estimating the current MRP is to estimate forward looking methods and models of the cost of equity. The most common method for directly estimating the forward looking MRP is to apply the dividend growth models (DGM).

In our original proposal submission we outlined how three experts had independently estimated the current forward looking MRP used different DGM. These estimates uniformly found that the prevailing MRP (at the end of 2011 and beginning of 2012) was substantially above its historical average, ie:

- NERA's DGM takes a very conservative approach, using a combination of Bloomberg consensus forecasts, the long-run growth in dividends per share (DPS) and a 10 year bond yield of 3.99 per cent per annum which results in a MRP estimate of 7.69 per cent;

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[99] *Sydney Desalination* decision had a WACC range of 5.1% to 6.9% and a point estimate of 6.7%;
Sydney Water decision had a WACC range of 4.0% to 5.6% and a point estimate of 5.6%;
Sydney Catchment Authority decision had a WACC range of 4.0% to 5.6% and a point estimate of 5.6%; and
Review of retail electricity prices decision had a WACC range of:
- 5.0% to 7.4% and a point estimate of 7.1% for generation; and
- 5.8% to 8.7% and a point estimate of 8.0% for retail.

[100] SFG Consulting, *The market risk premium: response to AER Victorian Gas Draft Decision*, October 2012, p. 36.

- CEG's DGM is based on the AMP method using the end of December 2011 dividend yields from the RBA, long run dividend growth of 6.6 per cent nominal, a risk free rate of 3.77 per cent and an assumption that each dollar of dividend comes with 11.125 cents value of franking credits which results in a MRP estimate of 8.52 per cent; and
- Capital Research's DGM employed a price earning model, together with a risk free rate of 3.73 per cent and an assumption that each dollar of dividend comes with 11.125 cents value of franking credits which results in a MRP estimate of 9.56 per cent.

APA GasNet maintains whilst there may be an open debate on how the DGM should be specified there is no better method for directly estimating the prevailing cost of equity. By providing three independent DGMs that consistently estimate a MRP that is substantially above the long term average of the MRP provides compelling evidence that historical average MRP is unsustainable in current market.

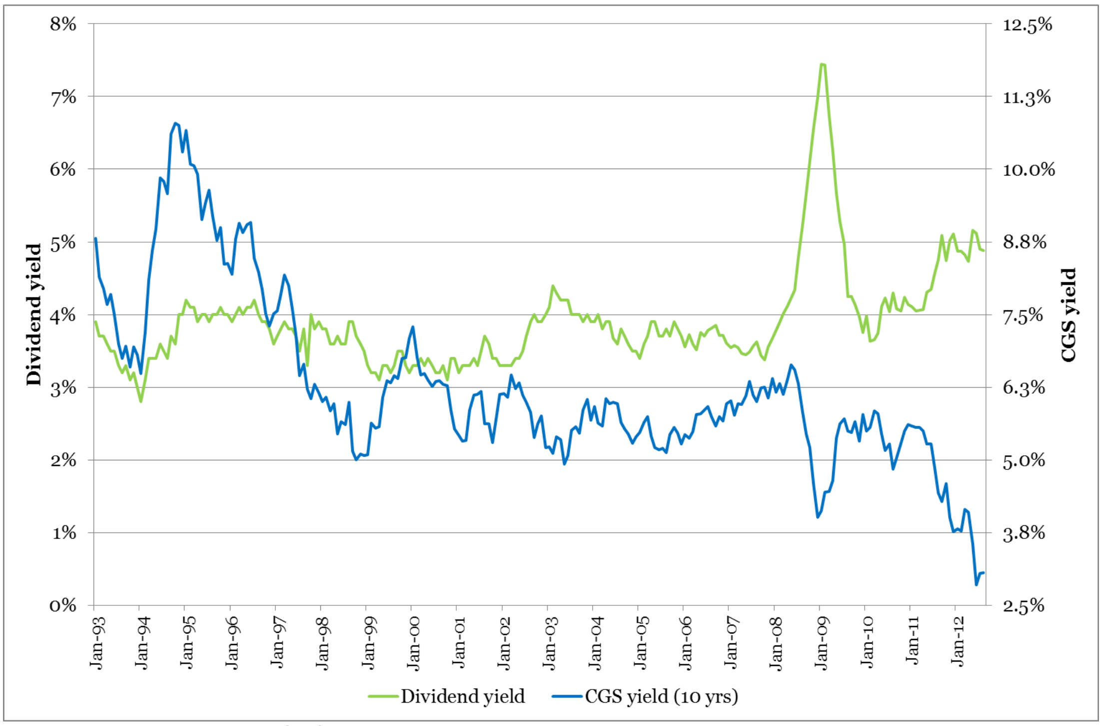
CEG has updated its DGM analysis for the period 13 August 2012 to 11 September 2012 and found that, if a fixed 6.0 per cent MRP is assumed, listed regulated Australian energy utilities would need to have a negative long term dividend growth rate to sustain an average cost of equity of 8.0 per cent.[101] This is clearly implausible and provides another clear example that the prevailing MRP over the agreed averaging period is above 6.0 per cent.

CEG also undertook a DGM for the whole market for the period to the end of September 2012 which shows that the expected return on the market at the end of September 2012 is 11.94 per cent. CEG also shows that the return on the market portfolio has not fallen in line with CGS yields. The negative relationship between the risk free rate and the MRP is shown below in Figure 5.4, which is a reproduction of Figure 11 of the CEG report.[102]

[101] CEG, *Internal consistency of risk free rate and MRP in the CAPM*, November 2012, [p. 18].

[102] CEG, *Internal consistency of risk free rate and MRP in the CAPM*, November 2012.

Figure 5.5: Risk premiums on listed equities (AMP method) vs 10yr yields on CGS



Source: RBA, CEG analysis

APA GasNet notes that CEG has vigorously rebutted the critique made by Lally of the existence of potential bias in CEG's DGM analysis.[103] CEG also highlights that:[104]

> Accepting Lally's adjustment to the DGM calculations, the resulting estimate of the spot MRP (7.82%) is still well above the 6% MRP being used by the AER. Lally provides no competing estimate that is lower than 7.82%.

All forward looking measures of the MRP ubiquitously support a premium over 6 per cent.

5.6 Summary and conclusion

In this chapter, APA GasNet has shown that:

1. the CAPM is a model of *expected returns* and so, as a matter of principle, the objective of the estimation process is to obtain the *best estimate of the forward looking cost of equity* as at the date at which it is to be applied (or, as close as practicable to that date);
2. APA GasNet and the AER have agreed that the risk free rate should be estimated over the period starting 13 September 2012 and end on 26 September 2012;

[103] CEG, *Internal consistency of risk free rate and MRP in the CAPM*, November 2012.

[104] CEG, *Internal consistency of risk free rate and MRP in the CAPM*, November 2012.

3. correct application of the CAPM requires that the adopted MRP be the best estimate of the forward looking MRP during the agreed averaging period;
4. the use of historical average MRP may be common regulatory practice, however, any historical estimate must be crosschecked to ensure that it reflects the prevailing conditions in the market for funds during the agreed averaging period;
5. the Draft Decision to adopt a MRP of 6.00 per cent appears to be based almost entirely on historical data, which is incapable of determining whether this historical average MRP reflects market conditions during the agreed averaging period that was characterised by historically low risk free rates;
6. a compelling body of evidence that the forward looking MRP during the agreed averaging period is above its historical average of 6.00 per cent, this includes:
   - evidence contained in the report from Gregory that the expected total return on equity is relatively stable over time, indicating that the market risk premium rises when risk free rates fall;
   - the observations provided by CEG that returns on risky assets have increased inversely to falls in the risk free rate, clearly indicating a widening of market risk premiums;
   - the survey by EY that shows that currently observable cost of equity capital prevailing in the market is in the order of 10.70 per cent (which ascribes a zero value for imputation credits). This leads to a MRP of 7.48 per cent, on the basis of a risk free rate of 3.22 per cent, even though this assumes that imputation credits have no value;[105]
   - the best estimate of the expected return on the market during the agreed averaging period is 11.94 per cent,[106] based on reasonable assumptions in the dividend growth model. This leads to a MRP of 8.74 per cent, on the basis of a risk free rate of 3.22 per cent.

APA GasNet's framework for estimating the cost of equity to apply during the 2013-2017 regulatory control period is to specify an internally consistent CAPM whereby both the risk free rate and the expected return on the market are estimated over a consistent period. Furthermore, that period should start on the 13 September 2012 and end on the 26 September 2012, in line with the agreed averaging period for the risk free rate.

APA GasNet submits that the use of historical estimates of the MRP does not reflect the conditions in the market that prevail during the agreed assessment period. Therefore, we propose that the return on the market be exclusively set on the basis

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105 Note that this corresponds to a return on equity of 12.50 per cent if the post tax return on equity is grossed up for a 0.25 value of imputation credits, ie, $12.50\% = 10.70\% \times \left(\frac{1}{1-T(1-\gamma)}\right)$.

106 CEG notes (Table 4) that even if an adjustment as proposed by Lally was made, the return on the market would be 11.24 per cent, indicating a current MRP of 8.02 per cent.

of the DGM on the market specified by CEG. CEG estimate that the expected return on the market is 11.94 per cent on the basis that:

- the market dividend yield for the end of September 2012 as reported by the RBA was 4.80 per cent;
- the market dividend yield is scaled up by a factor of 1.1125 to capture the value of imputation credits;[107] and
- adding to the grossed up market dividend yield the dividend per share growth rate of 6.6 per cent (which is based on the average real growth rate of dividends from 1959 to 2012 plus inflation of 2.5 per cent).

This results in an expected return on the market of 11.94 per cent. Given APA GasNet's risk free rate is 3.22 per cent this results in a MRP for the agreed averaging period of 8.72 per cent.

This estimate of the cost of equity reflects the prevailing conditions in the market for funds and the risks involved in providing reference services and is in line with other the estimates of the cost of equity, ie:[108]

- 10.4 – 14.1 per cent estimated by CEG using a DGM for regulated businesses; and
- 10.66 per cent using estimates of historical average real interest rates, forecast inflation and the long term MRP.

Adopting the other agreed WACC parameters this results in:

- an estimate of the cost of equity of 10.20per cent;
- an estimated cost of debt of 6.68 per cent; and
- a WACC of 8.09 per cent, using a debt gearing ratio of 60 per cent.

5.6.1 Alternate approach

As discussed above, APA GasNet is concerned that in current market conditions, the AER's approach of blending currently observable parameters (the risk free rate) and parameters based on measurement over long term averages (the market return and risk free rate) in the CAPM delivers a cost of equity which does not reflect prevailing market conditions.

Based on the analysis and expert findings above, APA GasNet submits that an internally consistent approach to applying the CAPM, using currently observable parameters (in particular using the return on the market and the risk free rate to calculate the current market risk premium) is the theoretically and technically

[107] This is based on the following assumptions:

- a corporate tax rate of 30 per cent;
- the value of imputation credits distributed (theta) is 35 per cent; and
- the proportion of dividends that are franked is 75 per cent.

[108] CEG, *Internal consistency of risk free rate and MRP in the CAPM*, November 2012.

superior approach to estimating the cost of capital consistent with the prevailing conditions in the market.

As an alternate approach, APA GasNet believes that the CAPM could also be specified using a long term average risk free rate and MRP. As discussed by Gray, Zenner and Damodaran above, specifying the CAPM using historical long term averages of both the risk free rate and market return parameters[109] would also be internally consistent and can be expected to deliver a cost of which reflects prevailing market conditions provided that the overall market return is relatively stable over time.

APA GasNet notes that the use of long term averages results in a comparable estimated cost of equity as that proposed by APA GasNet. In our view, the use of long term averages results in a reasonable estimate of the cost of equity and is a practicable solution where there are concerns with using a forward estimate of the MRP.

APA GasNet acknowledges that there may be a number of ways that historical data could be used to estimate CAPM parameters. For the purposes of this submission APA GasNet has adopted the specification of the historical CAPM contained in the CEG report that estimates the long term risk free rate for the period since the RBA has had an explicit inflation target of between 2 and 3 per cent over the business cycle (ie, 1 July 1993), which results in a real risk free rate of 3.28 per cent and a nominal risk free rate of 5.86 per cent. We understand that another specification of the historical CAPM would be to apply the approach adopted by IPART in its most recent decisions.

[109] This is fundamentally the approach the AER used to estimate the 6.0 per cent MRP.

Table 5.3: Comparison of the rate of return proposed for APA GasNet

	Previous ACCC decision	APA GasNet March 2012 proposal[a]	AER Draft Decision[b]	APA GasNet Revised proposal[c]	APA GasNet Alternate proposal
Nominal risk free rate	6.29%	3.99%	2.98%	3.22%	5.86%
Market risk premium	6.00%	8.50%	6.00%	8.72%	6.00%
Expected market return	12.29%	12.49%	8.98%	11.94%	11.86%
Equity beta	1.0	0.8	0.8	0.8	0.8
Debt risk premium	3.09%	3.92%	3.76%	3.46%	3.46%
Gearing level	60%	60%	60%	60%	60%
Inflation forecast	2.69%	2.50%	2.50%	2.50%	2.50%
Gamma	0.5	0.25	0.25	0.25	0.25
Nominal cost of equity	12.29%	10.79%	7.78%	10.20%	10.66%
Nominal cost of debt	9.38%	7.91%	6.74%	6.68%	6.68%
Nominal vanilla WACC	**10.55%**	**9.06%**	**7.16%**	**8.09%**	**8.27%**

[a] Indicative rate only using market data from 21 November 2011 and ending 16 December 2011.
[b] Indicative rate only using market data from July-August 2012.
[c] Using the agreed averaging period from 13 September 2012 and ending 26 September 2012.

6 Depreciation

Revision 5.1: Make all necessary amendments to reflect the AER's draft decision on the proposed forecast regulatory depreciation allowance for the 2013–17 access arrangement period, as set out in Table 5.1.
Revision 5.2: Make all necessary amendments to reflect the AER's draft decision on the proposed method for modelling the return of capital (and return on capital) for the 2013–17 access arrangement period, as set out in section 5.4.1.
Revision 5.3: Make all necessary amendments to reflect the AER's draft decision on the remaining economic lives as at 1 January 2013, as set out in table 5.3

APA GasNet accepts Revision 5.3 as a correction of a clerical error, and has implemented it in its revised modelling.

Regarding Revisions 5.1 and 5.2, APA GasNet does not accept these revisions for the reasons outlined below.

In the Draft Decision the AER does not approve APA GasNet's proposed regulatory depreciation allowance. The AER accepts APA GasNet's use of the straight-line method to calculate the regulatory depreciation allowance and the standard economic lives used to calculate this allowance. However, the AER does not accept APA GasNet's proposed approach to modelling the return of capital.

As the AER notes in its Draft Decision[110], its discretion in respect of the depreciation schedule is limited. This means that, in circumstances where APA GasNet's approach to depreciation complies with the NGL and the Rules and is consistent with the applicable criteria, the AER cannot reject this aspect of APA GasNet's revised access arrangement proposal and require an amendment to that proposal because the AER considers a different approach would be preferable or in better conformity with the criteria. Thus, the AER is required to start with APA GasNet's depreciation schedule and determine whether that schedule is consistent with the various criteria in rule 89.

It is only in circumstances that the AER determines that the depreciation schedule designed by APA GasNet is inconsistent with the criteria in rule 89 that the AER may withhold its approval to this element of the revisions to the access arrangement and require amendments necessary to bring the revisions into compliance with the requirements of the rules. In the NGR there is a note to the relevant rule which sets out the effect of a provision being a limited discretion which uses the rule relating to the design of a depreciation schedule as an example. The note provides:

[110] Draft Decision, p 111.

Example:

The AER has limited discretion under rule 89. (See rule 89(3).) This rule governs the design of a depreciation schedule. In dealing with a full access arrangement submitted for its approval, the AER cannot, in its draft decision, insist on change to an aspect of a depreciation schedule governed by rule 89 unless the AER considers change necessary to correct non-compliance with a provision of the Law or an inconsistency between the schedule and the applicable criteria. Even though the AER might consider change desirable to achieve more complete conformity between the schedule and the principles and objectives of the Law, it would not be entitled to give effect to that view in the decision making process.

The applicable depreciation criteria state that the depreciation schedule should be designed:[111]

(a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and

(b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and

(c) so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and

(d) so that (subject to the rules about capital redundancy), an asset is depreciated only once (ie that the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base (adjusted, if the accounting method approved by the AER permits, for inflation)); and

(e) so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.

The AER states in its Draft Decision that the basis for its rejection of APA GasNet's approach to modelling the return of capital is that it does not comply with criterion (a) above – that is, the AER considers that APA GasNet's depreciation schedule is not designed so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services.[112] The AER does not raise any issue of non-compliance in respect of criteria (b), (c), (d). The AER apparently considers that APA GasNet's proposed approach is not necessary to satisfy criterion (e),[113] but does not say that it does not comply with criterion (e).

The AER's primary concern with APA GasNet's approach appears to be in relation to the use of unindexed asset values to calculate depreciation amounts. Although the AER accepts APA GasNet's depreciation methodology and asset lives, it does not accept the use of unindexed asset values to calculate the depreciation allowance. The AER says it is concerned with the incentives created by APA

[111] NGR, Rule 89(1).

[112] Draft Decision, p 114.

[113] Draft Decision, p 114.

GasNet's proposed approach and the potential for "unnecessarily high prices in the short to medium term".

Following consideration of the Draft Decision, APA GasNet has maintained its approach to calculating the depreciation allowance on the basis of unindexed asset values. It has done so for three main reasons:

- There is no requirement for indexation of the capital base under the NGR. Rather, it is open to the service provider to calculate the depreciation allowance either based on indexed or unindexed values for the capital base.
- APA GasNet considers that its approach to calculating the depreciation allowance does provide for variation in reference tariffs over time in a way that promotes efficient growth in the market for reference services (that is, APA GasNet's proposed approach does satisfy criterion (a)). Further, and although this is not necessary under a limited discretion rule, APA GasNet considers that its approach is in fact preferable to the AER's approach, in the sense that it better promotes efficient growth in the market. This is supported by the expert report of Mr Jeff Balchin (Attachment 6.1) which concludes that APA GasNet's proposed approach to calculating the depreciation allowance better meets the requirements of criterion (a), compared to the AER's proposed approach.
- The AER's approach does not satisfy criterion (e). Rather, adopting APA GasNet's approach to calculation of the depreciation allowance is necessary to meet APA GasNet's reasonable needs for cash flow to meet financing, non-capital and other costs.

Further, APA GasNet's approach is designed in a manner that satisfies each of criteria (b), (c) and (d), and this does not appear to be the subject of any debate.

APA GasNet amplifies below why it considers its approach to depreciation provides for variation in reference tariffs over time in a way that promotes efficient growth in the market for reference services and also why its approach is necessary to meet APA GasNet's reasonable needs for cash flow to meet financing, non-capital and other costs.

6.1 Relevant requirements of the NGR

Under the NGR, it is open to a service provider to choose whether or not to index the capital base for the purpose of calculating reference tariffs. There is no requirement that the projected capital base for a particular period include an adjustment for inflation. Moreover the NGR explicitly allows for the provision of financial information either on a nominal basis, a real basis or "some other recognised basis for dealing with the effects of inflation".

This can be contrasted with the position under the National Electricity Rules (NER). Under the NER, the value of the regulatory asset base must be adjusted for inflation between years in a regulatory period, so as to maintain the real value of the asset base as at the beginning of each year. The NER does not include an equivalent provision to rule 73 of the NGR providing flexibility to report financial information in either real or nominal terms (or on some other basis). The NER also contains more prescriptive requirements in relation to depreciation schedules, compared to the NGR.

The difference between the NER and NGR on this issue is likely to reflect the different characteristics of gas networks and pipelines, particularly the different demand characteristics. The greater flexibility in the NGR reflects the fact that different pipeline assets may have different demand and expenditure profiles and that it may be appropriate in some cases to defer or bring forward depreciation.

It is also noteworthy that the depreciation criteria in the NGR explicitly refer to promoting efficient growth in the market for reference services (an objective which does not appear in the NER) and state that this may involve deferral of a substantial proportion of the depreciation. The NGR outlines the circumstances in which deferral of a substantial proportion of depreciation may be necessary in order to deliver reference tariffs that promote efficient growth in the market for reference services, being where:

- the present market for pipeline services is relatively immature;
- the reference tariffs have been calculated on the assumption of significant market growth; and
- the pipeline has been designed and constructed so as to accommodate future growth in demand.

As discussed below, none of the above circumstances apply in the case of the VTS. In fact, the opposite of the above circumstances exist with respect to the VTS.

In short, it is clear that unlike the NER, the NGR does not require indexation of the capital base. Indexation of the capital base is clearly an option under the NGR, but it is not mandatory.

For the reasons set out below, APA GasNet considers that in the circumstances of the VTS, its proposed approach to calculating the depreciation allowance based on unindexed asset values does meet the relevant depreciation criteria, including the requirement that reference tariffs vary over time in a way that promotes efficient growth in the market for reference services.

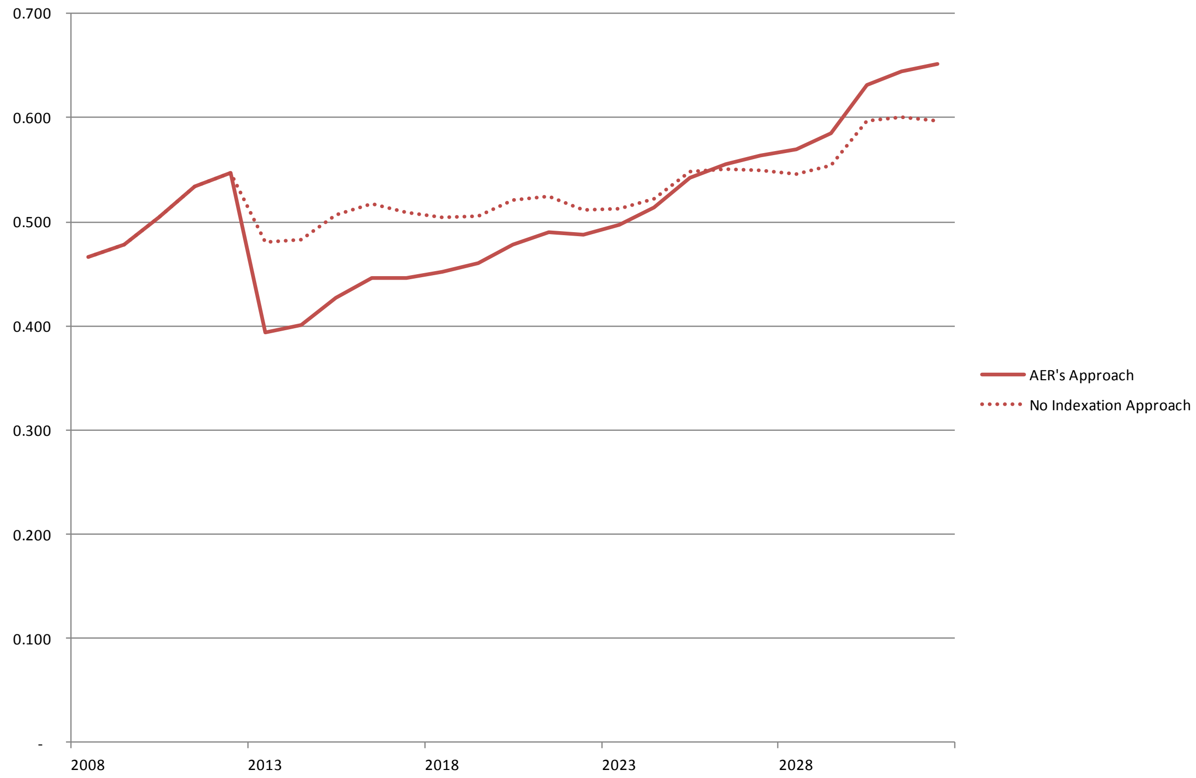
6.2 Efficient growth in the market for reference services

6.2.1 APA GasNet's proposed approach will promote efficient growth in the market

APA GasNet submits that its proposed approach to determining the depreciation allowance is designed so as to promote efficient growth in the market for reference services. This is primarily because APA GasNet's proposed approach provides for a relatively stable price path over time, and indeed a more stable price path than would result from application of the AER's proposed approach.

The projected path of reference tariffs based on the two alternative approaches is shown in Figure 6.1. This shows that APA GasNet's proposed approach will deliver a more stable tariff path over time.

Figure 6.1: Projected indicative reference tariff path 2013-2032 ($/GJ, nominal)

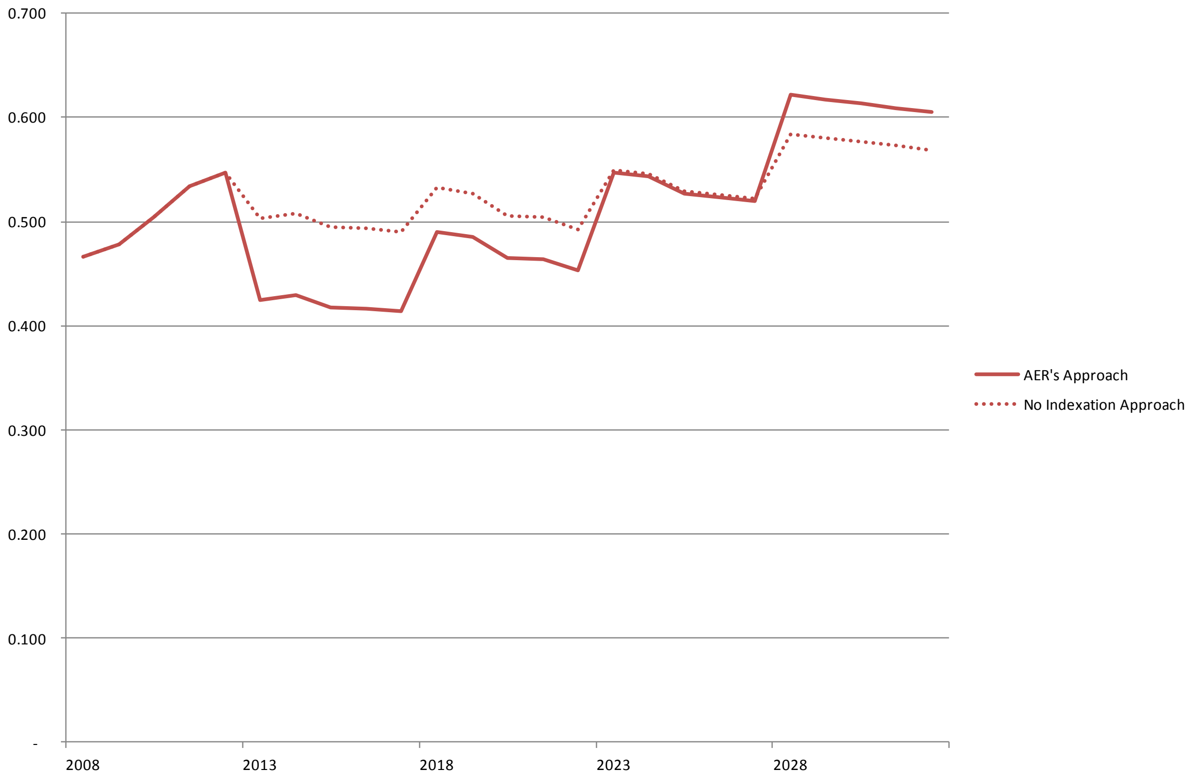


Note: Indicative tariff paths are calculated using the same methodology as in Figure 1 of the Draft Decision, and using inputs as set out in the Draft Decision. For the 2018-2022 access arrangement period, the indicative tariff path is based on same expenditure profile and rate of return as set out in the Draft Decision for the 2013-2017 access arrangement period.

Figure 6.1 has been prepared assuming that the WACC the AER proposes for the next regulatory period continues in subsequent periods, and that there is no increase in capital expenditure in subsequent periods. As discussed below, it is in fact likely that the WACC will increase in subsequent periods, and that there will be additional capital expenditure. That will serve to *increase* the instability and price shock likely to result from the AER's approach.

Figure 6.2 shows the same comparison, but with reference tariffs smoothed within access arrangement periods:

Figure 6.2: Smoothed indicative reference tariff path 2013-2032 ($/GJ, nominal)



Note: Indicative tariff paths are calculated using the same methodology as in Figure 1 of the Draft Decision, and using inputs as set out in the Draft Decision. For the 2018-2022 access arrangement period, the indicative tariff path is based on same expenditure profile and rate of return as set out in the Draft Decision for the 2013-2017 access arrangement period.

APA GasNet submits that a more stable path for reference tariffs will better promote efficient growth in the market for reference services over time for several reasons, including:

- A more stable path for reference tariffs will provide more reliable signals to service providers as to the genuinely sustainable level of demand for reference services, which will in turn promote investment certainty and therefore promote efficient investment by APA GasNet in pipeline assets;
- Similarly, a more stable path for reference tariffs will provide more reliable signals to APA GasNet's customers (and through such customers, end-users) as to the genuinely sustainable level of reference tariffs and therefore promote efficient investment in associated facilities.

In contrast, a price path which involves substantial reductions in tariffs followed by increases in tariffs will not provide good signals to APA GasNet as to the sustainable level of demand, or its customers (and end users) as to the sustainable level of reference tariffs. Such a situation will operate to undermine investment certainty for both APA GasNet and its customers. This issue is address in the statutory declaration of Robert Wheals, which is Attachment 6.2 to this submission.

APA GasNet has designed its depreciation schedule in a way that is consistent with the efficient growth in the market for reference services, having regard to the specific circumstances of the VTS. The particular circumstances of the VTS which are relevant in this context include:

- That the VTS is currently operating with no material system-wide surplus capacity; and
- Cost pressures are likely to increase in the access arrangement period that will commence operation on or about January 2018 in light of both significant expenditure requirements associated with maintaining the VTS in future periods and an anticipated return to more normal market conditions that should see an increase in some cost of capital parameters, in particular the risk free rate.

Each of these issues is addressed below

Capacity on the VTS

The statutory declaration of Mark Fothergill (Attachment 6.3) to this submission) demonstrates that there is currently no material excess capacity on the VTS. Indeed some zones of the VTS are fully utilised on a regular basis.

Table 6.1 shows forecast capacity and peak day demand over the 2013-2017. This shows that there is no material surplus capacity on the VTS.

Table 6.1: VTS capacity and utilisation

Year	**2013**	**2014**	**2015**	**2016**	**2017**
Forecast Peak Day Demand	**TJ**	**TJ**	**TJ**	**TJ**	**TJ**
AEMO winter 1 in 20 peak day system demand forecast (medium scenario)	1273	1269	1274	1282	1291
Culcairn	38	38	68	68	68
Estimated Gas-fired Powered Generation (GPG)	25	25	25	25	25
Total	**1336**	**1332**	**1367**	**1375**	**1384**
Forecast Peak Day Demand on Pipeline Sections					
Demand on SWP	353	353	402	402	402
Demand on Northern Zone	152	155	187	187	188
Demand on Longford-Melbourne	983	979	995	1003	1012
Forecast Capacity					
Capacity on SWP	353	353	414	414	414
Capacity on Northern Zone	152	155	187	187	188
Capacity on Longford – Melbourne	1030	1030	1030	1030	1030
Utilisation on Peak Day					
Utilisation on South West Pipeline	100%	100%	97%	97%	97%
Utilisation on Northern Zone	100%	100%	100%	100%	100%
Utilisation on Longford-Melbourne	95%	95%	97%	97%	98%

Notes: (1) peak day system demand forecasts are taken from the AEMO Victorian Gas DTS Medium Term Outlook (2011), Table A1-9; (2) peak day demand forecasts for each zone are capped at the capacity of that zone (meaning that any excess demand in a particular zone is not reflected).

In these circumstances, a substantial reduction in reference tariffs (as would occur under the AER's preferred approach) could not be considered to be consistent with the promotion of efficient growth in the market for reference services. To the extent that there is any increase in demand for reference services as a result of the reduction in tariffs, the current capacity of the VTS will be unable to meet this additional demand.

The PwC Report (Attachment 6.1) notes that a reduction of prices at the time of capacity constraints cannot increase allocative efficiency, but rather may well reduce allocative efficiency.[114]

In these circumstances, a more stable price path (such as that provided for by APA GasNet's approach) will be consistent with the promotion of efficient growth in the market for reference services.

Accounting for future cost pressures

APA GasNet anticipates that its expenditure requirements are likely to materially increase in future access arrangement periods. As noted in the statutory declaration of Mark Fothergill (Attachment 6.3 to this submission) it is forecast that substantial engineering works will likely be required in future periods for several reasons, including:

- To ensure the capacity of the pipeline can meet current and projected demand (as noted above);
- To ensure the design of the pipeline is compliant with safety standards, which may change over time;
- To adapt the design of the pipeline to changes in the external environment, such as increasing urbanisation; and
- To repair ageing parts of the pipeline.

Additionally, it may be expected that the allowed cost of capital will revert to its long-term average in future periods as yields on Commonwealth Government Securities return to more normal levels. The Balchin Report notes that the current yield on 10-year Commonwealth Government Securities is anomalously low and that several independent forecasters expect an increase in this yield in future.[115]

APA GasNet's proposed approach to calculating the depreciation allowance will serve to accommodate these expected future cost pressures, or at least accommodate them better than an approach involving indexation of the capital base, by increasing the initial rate at which the value of the existing RAB is reduced. The effect of this is to reduce the RAB faster in the immediate term and to accommodate future capital expenditure requirements, while potentially avoiding significant tariff increases in future. In short, the effect of APA GasNet's approach is to promote a

[114] PwC, *Depreciation of assets under the National Gas Rules: Expert Report*, November 2012, p 10.
[115] PwC, *Depreciation of assets under the National Gas Rules: Expert Report*, November 2012, p 19.

more stable price path over time in circumstances where there are likely to be significant future expenditure requirements.

In contrast, the AER's proposed approach to calculating the depreciation allowance is likely to lead to significant variation in tariffs over time. If the AER's approach is implemented, there will be a very substantial reduction in tariffs in the forthcoming access arrangement period, followed by a likely substantial increase in tariffs in later periods to accommodate the above future capital expenditure requirements.

In these circumstances, an approach which effectively defers more depreciation and leads to a substantial short-term reduction in reference tariffs will not promote efficient growth in the market for reference services. APA GasNet's approach which provides for a smoother tariff path will promote efficient growth in the market for reference services and in this regard is consistent with the rules. It is therefore not open to the AER to withhold its approval to this element of the access arrangement revisions.

6.3 The AER's concerns in relation to APA GasNet's proposed approach

The AER considers that APA GasNet's proposal will inhibit efficient growth in the market for reference services for three reasons:

- It will lead to inefficient asset utilisation – that is, under or over utilisation of the asset at different times in its life cycle;
- It will lead to "unnecessarily high prices in the short to medium term", which could discourage gas usage and downstream investment; and
- It could create incentives to manage and replace assets based on reasons other than the efficient provision of reference services.

Each of these concerns is addressed below.

Inefficient asset utilisation

The AER's primary concern in relation to utilisation of assets comprising the VTS is that there may be "under-utilisation" early in the life of these assets, and "over-utilisation" later. This concern is premised on the assumption that under APA GasNet's approach to depreciation, tariffs will be higher in the short term and lower as the assets age. This is illustrated by Figure 5.1 of the Draft Decision, which shows revenue profiles for a hypothetical asset under the two alternative approaches to calculating depreciation.

However the factual circumstances surrounding the VTS are very different to the simple example illustrated by the AER in Figure 5.1 of the Draft Decision. The VTS is not a single asset at the beginning of its life, but rather a system comprising many different assets, some of which are newer than others. Moreover the market served by the VTS is a mature market, with already high levels of demand relative to system capacity. Further, the AER's approach does not account for the anomalously low WACC proposed to be adopted by the AER for the next access arrangement, nor the likely need for increased capital expenditure in the future.

In the context of a network or system such as the VTS, the path of reference tariffs over time will be influenced by several factors, not just the choice of depreciation approach. Factors which may influence how reference tariffs vary over time include:

- the system's need for augmentation or expansion at any point in time;
- the need for asset replacement; and
- changes in the operating environment which may drive changes in capital and/or operating expenditure.

In this context, it cannot be assumed that prices for access to the system will decline over time in line with the revenue profile for a single asset.

As noted above and in the statutory declaration of Mark Fothergill (Attachment 6.3 to this submission) substantial engineering works are likely to be required in future periods, which will impose a significant expenditure burden. Moreover it may be expected that the allowed rate of return will return closer to its long-term average in future periods.

APA GasNet's proposed approach to depreciation seeks to accommodate these expected future cost pressures by increasing the initial rate at which the value of the existing RAB is reduced. As noted above, the effect of this is to promote a more stable price path over time in circumstances where there are likely to be significant future expenditure requirements.

APA GasNet submits that a more stable price path will promote efficient asset utilisation. This is mainly because a more stable price path will tend to promote more stable demand, which will promote efficient utilisation of and investment in pipeline assets.

Scope for "unnecessarily high prices in the short to medium term"

The AER's concern around the scope for unnecessarily high prices in the short to medium term appears to be premised on several important (but unstated) assumptions.

First, the AER appears to assume that lower reference tariffs in the short term will lead to higher gas usage and higher utilisation of the assets comprising the VTS. Conversely, the AER assumes that implementation of APA GasNet's approach would lead to higher tariffs such that gas usage would be discouraged.

It is important to note that implementation of APA GasNet's approach would lead to relatively stable tariffs in the short to medium term, whereas the AER's approach would lead to a substantial reduction in tariffs – this is illustrated in Figure 1 and Figure 2 above. Given this, it is not correct for the AER to suggest that implementation of APA GasNet's approach would lead to an increase in tariffs such that gas usage would be discouraged.

It also cannot be assumed that any short term reduction in tariffs (as is likely to occur if the AER's approach were to be implemented) would lead to greater utilisation of the assets comprising the VTS.

Inefficient asset management

The AER suggests in its Draft Decision that by providing for a lower depreciated value of the RAB in future, APA GasNet's approach could create incentives for replacement of assets sooner than may otherwise be the case.

APA GasNet submits that the rate at which the existing RAB is initially depreciated will have no impact on incentives to undertake future capital expenditure.

In the context of the VTS, APA GasNet's investment in asset management and replacement is largely driven by external factors, such as the location of gas supply, changes in demand, and the need to maintain security of supply. APA GasNet will undertake these investments as the need arises, and provided that a reasonable return on these investments is provided for by the regulatory framework.

It should also be noted that APA GasNet is capital constrained and therefore must decide between competing expenditure needs. In this context, APA GasNet typically prioritises expansion of the network to accommodate changes in demand, over asset replacement.

In any event, future capital management and replacement programs will be subject to oversight and approval by the AER. To the extent that the AER considers that any proposed asset replacement program is not consistent with efficient asset management practices, the AER may choose not to approve all or part of it (in which case APA GasNet would not be allowed a return on this investment through tariffs).

6.4 APA GasNet's reasonable needs for cash flow

The approach to depreciation proposed by APA GasNet is necessary to meet APA GasNet's reasonable needs for cash flow to meet financing, non-capital and other costs. Conversely, adopting an approach which maintains an indexed value of the RAB (as proposed by the AER) would mean that there would be insufficient cash flow for APA GasNet to meet financing and other costs.

Modelling undertaken by Australia Ratings indicates that on the basis of the AER's Draft Decision, there would be insufficient cash flow for APA GasNet (as a standalone business) to maintain a BBB+ credit rating (refer to Australia Ratings Report, Attachment 6.4). On the basis of key metrics used by rating agencies to determine credit ratings (including ratios of free funds to debt levels and interest), and assuming revenues over the forthcoming access arrangement period as set out in the Draft Decision, APA GasNet would only generate sufficient cash flow to justify a credit rating of, at most, BBB.

This has important implications given that the cost of debt is estimated on the basis of a BBB+ credit rating. If it is assumed that the BBB+ credit rating reflects the benchmark financing structure and is based on cash flows that can be expected by an efficient standalone business, then it is clear the approach taken by the AER in the Draft Decision does not allow APA GasNet sufficient cash flow to meet this standard. Moreover if the AER is to maintain its position on depreciation while adopting a BBB+ credit rating assumption for the purposes of the cost of debt calculation, APA GasNet would not have sufficient cash flow to meet its financing costs – APA GasNet's financing costs would be higher than the costs of a BBB+ rated entity due to its lower implied credit rating. The AER's draft decision is internally inconsistent in this regard.

It is therefore important, and consistent with the requirements of the rules, for APA GasNet to adopt an approach to depreciation based on unindexed asset values, so that it can generate sufficient cash flow over the forthcoming access arrangement period to meet its financing, non-capital and other costs.

In these circumstances, the APA GasNet approach satisfies criterion (e). The Draft Decision does not suggest to the contrary. However, the AER approach does not satisfy criterion (e). Therefore, the AER cannot (consistently with the Rules) adopt its approach over the APA GasNet approach.

7 Incentive mechanisms

7.1 Theoretical basis of incentives

The AER is able to rely on the functioning of incentive mechanisms in assessing the prudence of capital and operating expenditure. This methodology was first developed under the previous National Gas Code, where in s8.49, the regulator had the ability to infer, through the operation of an incentive regime, whether capital or operating expenditure is efficient and complies with other criteria prescribed by the Code. This concept has been carried over into the Rules in Rule 71.

APA GasNet supports the principle of a regulator relying on the effectiveness of an incentive regime in assessing the prudence of costs incurred that are affected by that incentive mechanism.

This is the case in the APA GasNet Access Arrangement review. APA GasNet responded to the signals inherent in the incentive mechanism, and outlines below the ways in which its opex forecasts are consistent with those mechanisms.

APA GasNet considers that two key incentive mechanisms are influencing business behaviour: the Revealed Cost Methodology and the Efficiency Benefit Sharing Scheme (EBSS). These are discussed below in the context of the access regime in which they operate.

7.1.1 The gas access regime

The gas access regime is an incentive regulation regime that provides a powerful incentive to regulated businesses to manage costs. It does this through the five-yearly "set and forget" regulatory process, where the regime encourages improvements in efficiency by allowing the business to retain the benefit of reductions in operating costs until the next review.

The purpose of this incentive is to encourage improvements in the efficiency of the business, in full recognition that, over time, these will translate into lower prices for consumers.

APA GasNet considers that this incentive mechanism is a foundational element of the gas access regime.

7.1.2 The revealed cost methodology

At its heart, the revealed cost methodology assumes that, if the business responds to the incentives inherent in the gas access regime, then the business' actual costs (its "revealed costs") must represent the lowest sustainable cost required to operate the business at that time.

These revealed costs are then used as the foundation to forecast operating costs into the future.

APA GasNet considers that the revealed cost methodology is sound in principle in that it assumes that the business responds to incentives to reduce opex.

But in its “vanilla” form, the revealed cost methodology inherently assumes that the business’ operating environment is stable, and will be largely the same from the “base year” through the following five year AA period. That is, the revealed cost methodology inherently includes a “forward looking stability” assumption.

Of course the “vanilla” revealed cost methodology is not the version applied in practice. In practice, considerable effort is undertaken to adjust the base year to remove costs incurred in the base year that are not expected to be incurred every year into the next AA period.[116] This is then adjusted (positively or negatively) for costs relating to the increased scope of activity, based on growth in the network, its load, number of customers, etc (“scope changes”).

Even with these adjustments, however, the revealed cost methodology still contains an inherent assumption that the business operating environment remains unchanged from that in place in the base year.

In order to address any changes to the operating environment, a mechanism of proposal and assessment of “step changes” is introduced, as discussed more fully below.

Incentives promoted by the revealed cost methodology

APA GasNet considers that the use of the revealed cost methodology, acting in concert with the incentives inherent in the gas access regime, effectively promotes ongoing reduction in costs to the long term benefit of consumers of gas.

However, the combination of the “set and forget” approach and the revealed cost methodology (inadvertently) incentivises savings to be achieved in the early years of the AA period so that the business can retain the benefit of those savings for the longest possible time. In contrast, where an efficiency-improving initiative is identified late in a regulatory period, the business would only be able to retain the benefits for a relatively short period, thus reducing the incentive to undertake the efficiency-enhancing activity. The business, it is argued, has an incentive to “store” these efficiency-improving initiatives identified late in a regulatory period, and implement them early in the following regulatory period.

Also, as the AER identifies,[117] the use of the revealed cost methodology also introduces the incentive for the business to “load” costs into the base year, presumably with an aim to influence the opex forecasts for the next five year period.

In order to counter these two aspects of the revealed cost methodology, the AER introduced an additional incentive mechanism, the EBSS, as discussed below.

7.1.3 The EBSS

An opex Efficiency Benefit Sharing Scheme (EBSS) was introduced in the second AA period (2003-07) to address the ACCC’s view that there was a reduction in the

[116] An example is the removal of flood repair costs in the Roma to Brisbane Pipeline Access Arrangement review.

[117] AER draft decision s7.4.2.

strength of the incentive to undertake efficiency-improving activity in the later years of the regulatory period.

At its heart, the EBSS allows a business to retain the benefits of efficiency improvements for a full five year period, regardless of which year of the regulatory period the activities are undertaken. The stated purpose of this is to remove the disincentive to defer efficiency-improving activity to the first year of the following regulatory period.

The EBSS is symmetrical in that it penalises a business for a full five years in the event that its outturn costs are greater than the AER's approved AA forecast, which were based on the application of the revealed cost methodology.

The AER identifies this penalty feature as an important deterrent to the business' incentive, discussed above, to game the system by loading costs into the base year with an aim to inflate the forecast opex allowance. The carryover of the EBSS penalty would negate any increase in opex forecast that the business could achieve by such behaviour.[118]

In essence, the EBSS rewards (penalises) a business for incurring expenditure which turns out to be less than (greater than) the previous AER-approved forecast.[119]

While the EBSS allows adjustment for material divergence caused by changes in government regulation or other recognised pass through events, it does not adjust for other changes in the operating environment.

The EBSS inherently assumes then, that the business environment in the base year is representative of the business environment in the five years of the forecast AA period.

That is, the EBSS inherently includes a "*backward looking stability*" assumption. This is important in the way the EBSS interacts with the revealed cost methodology, as discussed below.

Incentives promoted by the EBSS

The key goal of the EBSS is to remove the incentive, under the revealed cost methodology, to defer efficiency-improving initiatives to the start of next regulatory period.

A secondary goal is to remove the incentive on the business to defer expenditure within the regulatory period in order to "load" the base year as a strategy to influence the forecast opex in the next regulatory period.

APA GasNet considers that the EBSS is effective at achieving these two goals.

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118 AER draft decision s7.4.2.

119 This forecast reflects the AER's acceptance or rejection of the case put forward by the regulated business in seeking adjustments to its base year costs. In this regard, the EBSS rewards or penalises actual performance as measured against the AER's opex forecast rather than the business' opex forecast.

The five year period of the EBSS also assumes that any increase in opex within a regulatory period would be either:

- driven by a change in operating environment and therefore subject to a pass through application (and excluded from the EBSS penalty/reward calculation); or
- efficiency enhancing.

Where the increase in opex is efficiency enhancing, the EBSS assumes that the expenditure will have a significant identifiable commercial payoff within a five year period, and that the business will undertake this investment. The base year can therefore be considered efficient, in that it does not include the cost of inefficient practices.

This does not mean, however, that the base year necessarily includes *all* costs that would be considered efficient and prudent in the forecast period. This is because the incentives are different for expenditure that does not have an identifiable efficiency benefit, for example prudent but non-urgent maintenance activity. In these cases, the business has a clear incentive to defer new expenditure to the extent possible (that is, within existing regulatory obligations) such that it does not incur a penalty under the EBSS that cannot be offset by an efficiency gain. This 'double disincentive' is discussed further below.

7.1.4 Interaction of the revealed cost methodology and the EBSS

As discussed above, the revealed cost methodology inherently includes a "*forward-looking stability*" assumption that assumes that the operating environment in the forecast period will be the same as that in the base year.

The EBSS includes an inherent "*backward-looking stability*" assumption that assumes that the operating environment in which an under- or overspend is assessed is the same as was in place in the previous base year (on which the opex forecasts were based).

APA GasNet accepts that this combination removes any incentive to game the system by deferring opex in one year of the regulatory period to the base year as a strategy to increase the forecast opex in the following regulatory period.

The double disincentive

Critically, the removal of the incentive to defer opex creates a double disincentive to bring forward opex.

The inherent assumption under the revealed cost methodology is that the opex forecast represents the lowest sustainable cost of operating the system based on the operating conditions the system faced in the base year. The corollary of this is that the business is not funded for additional costs that may arise due to changes in that operating environment during the regulatory period that are not also pass through events.

Any unforecast opex costs incurred then must be sourced from the business' return on equity. This creates a disincentive for the business to undertake that expenditure, or if the necessary expenditure is undertaken as prudent operator would, a penalty is incurred by the operation of the EBSS.

Incurring the unforecast expenditure will then result in an opex overspend in the year of the expenditure, which will be captured by the EBSS, and will result in an EBSS penalty for the next 5 years.[120] This will counteract any increase in the opex allowance, meaning the business must carry this cost for five years before it can begin to recover these costs through tariffs.

So while the business has no incentive to defer opex, it has a double disincentive to bring forward opex from the forecast to current regulatory period: first, to fund the opex out of its own returns with no scope to recover the costs through tariffs, and second to suffer the five year EBSS penalty for doing so.

A business will therefore have a strong disincentive against incurring additional prudent opex, or equally to defer prudent opex, to the extent it can be reflected in the future period opex forecast.

This places a significant importance on the analysis of the step change proposals. These are often "requests" by the business to allow it to recover the cost of prudent and efficient opex without suffering the "double disincentive" arising from incurring that opex.

The AER's current application of the revealed cost methodology and the EBSS imposes the double disincentive on the business.

Double disincentive to advance costs to base year

The AER has refused to accept a number of opex step changes on the grounds that if it was necessary to incur a cost, it would already be incurred and would be included in the base year opex:[121]

> In general the AER considers a step increase in opex is not consistent with the above requirement where the additional expenditure is intended to comply with a regulatory requirement or industry standard that has not changed since the 2008–12 access arrangement period. In such cases, it is the AER's view that such expenditure would already be included in base opex for a prudent service provider acting in accordance with accepted good industry practice to achieve the lowest sustainable cost of delivering pipeline services.

Where operating conditions change or new initiatives are identified, the double disincentive encourages the business to manage the pipeline system by deferring non-urgent non-efficiency gaining expenditure (for example some types of maintenance or replacement expenditure or changes in business practices to

[120] AER draft decision s7.4.2: "For example, if APA GasNet's opex increases in the base year its opex allowance for the following access arrangement period will be higher but it will incur a negative carryover ensuring it retains the efficiency loss for five years after the loss being made."

[121] AER draft decision s9.2.4.

manage emerging risks) until the next period when they can be reflected in opex through a step change.

The AER has not recognised this double disincentive, however, where it disallows a non-efficiency gaining step change on the grounds that the AER believes that it should have been included in the base year.

Summary

In summary, it would be reasonable to assume that a prudent operator, responding to the incentives in the regime, would reduce costs to the lowest sustainable level consistent with the assumptions inherent in the previous calculation of the opex forecast, and would defer costs for new (non-urgent) activities until they could be included in the opex allowance at the next review.

This is precisely what APA GasNet has done.

APA GasNet submits therefore, that it has clearly and prudently responded to the incentives inherent in the regulatory regime.

7.1.5 AER application of the revealed cost methodology and EBSS

Following from the discussion of the regime and its incentives above, it is apparent that the AER has failed to apply the revealed cost methodology in a number of significant ways.

Dismissal of foundation premise

As discussed above, the primary foundation premise of the revealed cost methodology is that the base year costs reflect the lowest sustainable cost of operating the network.

However, the AER assumes[122] that the base year opex includes some costs for non-recurrent opex that will not be included in future years:

> The AER's assessment of proposed step changes also recognises that a service provider's opex program will not be exactly the same from year to year. For example, actual opex in the base year reflects both recurrent expenditure and non-recurrent expenditure. That is, some of the expenditure will be ongoing while some will be related to one-off occurrences. When forecasting opex for the 2013–17 access arrangement the AER has not sought to estimate all non-recurrent (or one-off) expenditure incurred in the base year. In this way, the base year will inevitably include some opex that will not be undertaken in all other years.

This passage is at odds with the foundation of the revealed cost methodology and the AER's draft decision. The revealed cost methodology explicitly assumes that the business responds to the incentives inherent in the regime such that the "revealed costs" reflect the lowest sustainable cost of operating the system.

The AER's assumption, that there are costs included in the base year "revealed costs" that will not be incurred in future years, appears to disregard the key principle on which the revealed cost methodology relies.

[122] AER Draft Decision Part 2 Section 9.2.4.

The AER appears to have misunderstood the APA GasNet submission in this regard.

S6.5.3 of the draft decision indicates that the base year opex includes $271,000 average annual cost of non-annual opex as identified by the AER. While APA GasNet acknowledges that in some years the non-annual opex will be greater or lesser than this amount, on average the $271,000 included in the base year opex reflects the average annual cost of identified non-recurrent opex. This $271,000 should therefore remain in the base year for the purposes of determining forecast operating expenditure.

The step changes included in the opex forecast are for projects in addition to those non-annual opex amounts; these costs are not already reflected in the base year costs.

7.1.6 Imposition of the double disincentive

For the AER to reject the opex step changes is either a clear indication that these projects are not necessary for the prudent operation of the system, or that it requires the business to incur the double-disincentive penalty before it will accept that these projects are required.

In section 6.5.3 of the draft decision, the AER comments that:

> The AER considers that an increase in opex to implement an existing regulatory requirement may provide an incentive for service providers to spend less than required in meeting such requirements or standards. The AER considers this practice is not consistent with a prudent service provider acting efficiently in accordance with accepted good industry practice to achieve the lowest sustainable cost of delivering pipeline services.

APA GasNet considers that a prudent operator will do everything possible to meet required standards at the lowest possible costs. This is consistent with the incentives inherent in the access regime. However, as experience with standards and obligations improves, it may be revealed that more activity beyond the original minimalist approach is required. This is particularly the case with safety obligations, which tend to grow over time, as discussed in relation to safety management studies below.

The strong double disincentive to advance opex into the base year means that a step change approach is the only mechanism available to be able to recover these costs.

APA GasNet urges the AER to consider the interaction of the incentives in the regime in considering the discussion of opex in the next chapter.

7.2 *Incentive mechanism to apply in access arrangement*

Revision 7.1: Delete and replace s8.2(c) of the access arrangement proposal to state: The efficiency gain for 2013 is to be calculated in accordance with the following formula: $E_{2013} = (F_{2013} – A_{2013}) – (F_{2012} – A_{2012}) + (F_{2011} – A_{2011})$ where: F_{2013} is the forecast operating costs for 2013 as specified in clause 8.2(f) A_{2013} is the actual operating costs for 2013 as specified in clause 8.2(e) F_{2012} is the forecast operating costs for 2012 as specified in clause 8.2(f) A_{2012} is the actual operating costs for 2012 as specified in clause 8.2(e) F_{2011} is the forecast operating costs for 2011 as specified in clause 8.2(f) A_{2011} is the actual operating costs for 2011 as specified in clause 8.2(e).
Revision 7.2: Amend s8.2(e) to state: in each case, At, At-1, A2011, A2012 and A2013 must be determined

AER's revisions 7.1 and 7.2 change the operation of the incentive mechanism to retrospectively apply the EBSS to differences between forecast and actual expenditure in 2012. APA GasNet does not accept this change.

While APA GasNet agrees that it is theoretically possible to apply an EBSS across all years of the access arrangement period, it does not think it is appropriate or within the AER's powers under the fixed principle for the AER to retrospectively apply the EBSS to APA GasNet's 2012 operating and maintenance expenditure.

The EBSS included in the 2008-12 access arrangement period was designed to operate over 4 years, with the final year of the period, 2012, omitted from the EBSS calculation. This was intended to provide a clear break between periods and the operation of the EBSS.

As described above, the intent of the EBSS is to provide an incentive to businesses to manage costs and deliver cost efficiencies which are later passed on to consumers. The EBSS also plays an important role in ensuring the efficiency of the base year, which for the current purposes is 2011.

At the time of the AER's draft decision in mid-September 2012, the year to which this decision would apply was already three quarters concluded without APA GasNet having any expectation of the application of the EBSS to expenditure in that year. It is therefore difficult to see how the EBSS could operate to incentivise APA GasNet in any but the most minor way in the remaining months of 2012. Instead, the application of the EBSS to 2012 expenditure is likely to operate to penalise APA GasNet for no discernible efficiency gain. It should be noted that APA GasNet already faces significant incentives not to overspend in 2012 as any overspend would be funded from the return on equity, as described in the previous section.

Further, APA GasNet does not consider that the AER has the power to retrospectively apply the EBSS to 2012. The EBSS applying to the current access arrangement period is subject to a fixed principle that binds the AER. As regulatory year 2012 is not subject to the EBSS under the fixed principle, it is not in the AER's powers to retrospectively include 2012 in the EBSS through the operation of the following access arrangement. Doing so would negate the intent fixed principles under the Rules.

APA GasNet has therefore not accepted AER revisions 7.1 and 7.2, and retained the current EBSS in the access arrangement.

APA GasNet seeks an opportunity to further engage with the AER as to the appropriate formulation of the EBSS to apply in the access arrangement.

Revision 7.3:
Delete and replace s8.2(f)(i) of the access arrangement proposal to state: the forecast operating costs for that year as shown in table 11.1 of the Service Provider's Access Arrangement Information; plus

APA GasNet accepts AER revision 7.3.

7.3 Determination of forecast operating and maintenance expenditure

Revision 7.4:
Delete and replace s8.2(h) of the access arrangement proposal to state: In calculating the allowable revenue for operations and maintenance expenditure for the Fifth Access Arrangement Period, the Regulator must:
(i) determine the base operations and maintenance expenditure for 2017 to be equal to the actual operating costs in 2016 plus the difference between forecast operating costs in 2016 and 2017 as specified in clause 8.2(f) and, to avoid doubt, not take into account the efficiency gain (loss) made in 2017; and
(ii) take into account forecast changes from the 2017 base opex in:
(A) maintenance costs due to network expansion (scale changes)
(B) real labour and materials costs (real cost escalation)
(C) other efficient costs not reflected in the 2017 base opex (step changes); and
(D) capitalisation policy changes.

AER revision 7.4 relates to a fixed principle that establishes the mechanism for calculating operating and maintenance expenditure for the fifth access arrangement period.

APA GasNet accepts this revision in part.

APA GasNet accepts the AER's revision to clause 8.2(h)(i), deleting the requirement for the AER to comply with the Rules.

APA GasNet does not accept the remainder of revision 7.4.

As proposed by APA GasNet, the fixed principle set 2016 as the base year for forecast expenditure. This approach is consistent with established regulatory practice which selects the most recent year to the forecast period for which actual numbers will be available.

The AER's revisions to this section, however, change the base year to 2017, the final year of the access arrangement period. The AER has not provided any rationale for this change, other than offering that this change, as well as other changes to clause 8.2(h), are intended to 'clarify' the approach to forecasting opex.[123]

APA GasNet considers that the AER's amendments go beyond clarification, and instead materially change APA GasNet's proposal as to how operating and maintenance expenditure will be determined in the future. As the AER provides no further justification as to its required changes to this section, APA GasNet has no basis on which to respond to the required revisions. APA GasNet therefore does not accept the AER's revisions.

APA GasNet seeks an opportunity to further engage with the AER as to the appropriate formulation of clause 8.2(h).

Revision 7.5:

Delete and replace table 11.1 in the proposed Access arrangement information with table 7.4.

This revision is of a summary nature and reflects the AER's draft decision on operating and maintenance expenditure. APA GasNet has adopted the amendment in principle, but included updated values in table 11.1 of the Access Arrangement Information.

[123] AER 2012 Draft Decision, Part 2 p 235

8 Operating expenditure

This chapter should be read in conjunction with the discussion on incentive mechanisms in chapter 7. The AER required a number of revisions to operating costs, which are discussed below.

Revision 6.1: Make all necessary amendments to reflect the AER's draft decision on the proposed opex allowances for the 2013–17 access arrangement period, as set out in table 6.1 and table 6.10.
Revision C.1: Opex and capex forecasts should be amended to reflect the labour cost forecasts set out in table c.1.

The AER did not accept APA GasNet's forecast opex. The AER considered that several elements of APA GasNet's proposal did not comply with opex criteria for forecasts and estimates in accordance with NGR r 91 and 74.

APA GasNet addresses this required amendment by providing the detailed information required by the AER as discussed in the text surrounding this required amendment.

8.1 Base Year Costs

APA GasNet proposed the manner in which the opex for the 2013-2017 access arrangement was to be calculated in accordance with APA GasNet's 2008-12 access arrangement fixed principle.[124] The AER accepted that under the fixed principle that 2011 is the appropriate base year. [125]

APA GasNet notes that in some cost categories, different approaches were taken by the AER in its draft decision relative to those proposed by APA GasNet, particularly between adjustments to the base year costs or treatment as a step change.

Where the outcome is the same, APA GasNet considers that the AER has accepted APA GasNet's proposal, and therefore confines its comments below to those areas in which the AER and APA GasNet approaches result in different outcomes.

8.1.1 Adjustments to base year costs

The AER in its draft decision did not approve a number of proposed adjustments to base year costs. These are addressed below.

8.1.1.1 Allocation between regulated and non-regulated functions

$0.30m ($2012)

The AER has accepted the proposed base year cost adjustment as a step change, achieving the same end result. APA GasNet has provided some minor refinement regarding the amount of the step change.

[124] AER, Draft Decision Section 6.2.2

[125] AER, Draft Decision Page 197

8.1.1.2 ESV levy increase

$0.09m ($2012)

As discussed in s6.5.3 of the draft decision, the AER has accepted this amount as a step change.

8.1.1.3 Insurance costs

$0.53m ($2012)

In the draft decision, the AER has rejected APA GasNet's claim for an additional amount to reflect insurance premiums, citing two reasons:[126]

- The AER believes that the increase in insurance costs would not be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice; and
- Forecast insurance cost increases are not required because APA GasNet will be compensated for the actual insurance cost increases included in CPI.

In the draft decision, the AER did not assess the information prepared by APA GasNet's insurance broker that was filed by APA GasNet in support of the increased insurance premiums.

APA GasNet submits that insurance is a global commodity, of which APA GasNet is a price taker; it has virtually no scope to influence the costs of insurance, particularly compared to the influences of major disasters such as Hurricane Katrina or Cyclone Yasi. It is not clear on what foundation the AER could conclude that increased insurance costs would not be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice.

APA GasNet submits that it is not reasonable to conclude that increases in insurance costs would be covered by CPI adjustments to tariffs. Over recent years, insurance costs have increased at a rate much higher than inflation, as evidenced by the shortfall between the forecast insurance costs in the base year and the premiums quoted looking forward.

In the case of insurance, APA GasNet submits that the AER has misapplied the fixed principle in the previous Access Arrangement. Clause 7.2(h)(iii) provides:

> In calculating the allowable revenues for operations and maintenance expenditure for the Fourth Access Arrangement Period, the Regulator must: …
>
> (iii) take into account forecast changes in workload, taxes, Regulatory Events, insurance premiums and other relevant costs between 2011 and each year of the Fourth Access Arrangement Period

APA GasNet notes that insurance premiums are specifically addressed in the fixed principle, and this is why insurance costs should properly be dealt with in the base year adjustment.

[126] AER Draft Decision Part 2 Section 6.5.3.

APA GasNet proposed an adjustment to the base year to compensate for increases in insurance costs over the previous AA period. Using this construct, APA GasNet will take the risk that future insurance cost increases can be contained with the CPI tariff mechanism. APA GasNet submits that its forecast insurance costs would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, and therefore comply with Rule 91(1).

8.1.1.4 *Expected escalation of base year costs in 2012*

APA GasNet proposed $1.35m ($2012); AER allowed $0.45m ($2012)

The relevant portion of the fixed principle in this regard reads:

> In calculating the allowable revenues for operations and maintenance expenditure for the Fourth Access Arrangement Period, the Regulator must: …
>
> (ii) take into account the actual operating costs in 2011, adjusted for the change in forecast operating costs between 2011 and 2012 and, to avoid doubt, not taking into account the efficiency gain (loss) made in 2012;

APA GasNet has reviewed the fixed principle in this regard, and concludes that the methodology the AER has applied is in accordance with the fixed principle in the previous Access Arrangement.

APA GasNet considers that the amount allowed by the AER has been calculated in accordance with the fixed principle in the previous Access Arrangement.

8.1.1.5 *Movements in provisions*

-$1.03m ($2012)

In assessing APA GasNet's base year opex, the AER has removed from the actual 2011 costs any movement in provisions.

The AER's reasons for removing the movement in provision is summarised in the following passage:[127]

> APA GasNet's opex includes provisions. A provision is a liability of uncertain timing or amount. Provision accounts are used to set aside amounts for the payments of these liabilities for when they arise for settlement. A movement in provisions occurs when the amount set aside differs to the amount paid out. The AER considers the movement in these provisions does not represents [sic] actual costs incurred in a given year and should be removed from base year expenditure. The AER considers this necessary in setting forecast opex for APA GasNet, on the basis that movements in provisions:
>
> - may be used to represent the reported accounts for APA GasNet differently from its underlying economic circumstances;
> - may prevent and distort the comparison of APA GasNet's expenditure on a consistent basis from year to year; and

[127] AER draft decision s6.5.2.

- can be affected by a change in accounting standards despite expenditure remaining unchanged.

Based on the above, the AER considers removing the movement in provisions is a reasonable basis for forecasting opex and will produce the best opex forecast possible in the circumstances.

While not specified in the draft decision, the AER has removed movements in provisions totalling $1.03m, related to three cost categories:

- Accrual of annual leave liabilities [information redacted];
- Accrual of long service leave liabilities [information redacted]; and
- Funding obligations associated with the APA GasNet Defined Benefit Superannuation Plan [information redacted].

These are discussed below, following a brief discussion of the nature of accruals and provisions.

Provisions and accruals

One of the features of modern financial accounting is that revenue is "recognised" according to robust criteria, whereas expenses are "matched" to the revenue they were incurred to earn, or to the period to which they pertain. Often this matching of expenses does not align with the related cash transaction, so accruals and provisions are used to accommodate the timing difference.

For example, an insurance premium of $1.2m may be paid in October to cover the year in advance. Under cash accounting a massive insurance expense would be recorded in October, and none in any other month. Using standard accrual accounting, a "prepaid expense" balance sheet account would be recorded when the payment is made, and each month a month's worth of the insurance costs ($100,000 in this example) would be matched to revenue earned in that month.

Table 8.1 - Example of expense recording under cash and accrual accounting

Month	Cash accounting		Accrual accounting		
	Cash	Expense	Cash	Expense	Prepaid account
Oct	$1,200,000	$1,200,000	$1,200,000	$100,000	$1,100,000
Nov	0	0	0	$100,000	$1,000,000
Dec	0	0	0	$100,000	$900,000
Jan	0	0	0	$100,000	$800,000
Feb	0	0	0	$100,000	$700,000
Mar	0	0	0	$100,000	$600,000
Apr	0	0	0	$100,000	$500,000
May	0	0	0	$100,000	$400,000
Jun	0	0	0	$100,000	$300,000
Jul	0	0	0	$100,000	$200,000
Aug	0	0	0	$100,000	$100,000
Sep	0	0	0	$100,000	0

In this example, cash accounting would see the entire $1.2m of insurance expense recorded in the first fiscal year ended June 30, and none would be reported in the second. Accrual accounting, however, would show $900,000 of insurance expense recorded in the first fiscal year ended June 30, and $300,000 would be reported in the second; the accrual accounting would match the insurance expense to the period to which it related, notwithstanding that the cash transaction was in a different period.

A prepaid expense (as in the example above) applies where cash is paid in advance of the expense being matched to the appropriate period. A provision works in exactly the opposite way, to record a liability where the expense has been matched to revenue but the cash payment is to be made at a later date.

Accrual accounting is a normal practice in the preparation of financial accounts, and to the extent that actual opex costs for the base year are drawn from the financial accounts in the first instance, they will be impacted by these business as usual accruals. This is the case with the APA GasNet accounts, and any other business that prepares its accounts in accordance with Australian Accounting Standards.

Importantly, the management of provisions is strictly controlled by AASB 137. While the draft decision references this standard it does so in only the most cursory way – a closer review of AASB 137 would have made it clear to the AER that it is not permissible for a business to use provisions to manipulate reported expenditure incomes in the way that the AER suggests.

For the AER to remove the movement in provisions charged to expense undermines the very purpose of the accrual accounting system, and without re-adjusting for the timing of cash outlays, produces misleading operating expenditure values which are not a suitable foundation on which to forecast operating expense into the future.

In the draft decision, the AER removes the expenditure side of the provision accounting in three areas, as discussed below. However, the AER has made no attempt to adjust for any actual cash outlays that may have occurred in 2011 that are not recorded as expenses in the accrual accounts for that year.

Annual leave

In the normal course of operating a business, employers become obliged to provide paid recreational leave to employees. The employer becomes liable to pay salary and other costs while the employee is on leave, although the employee may not take his or her annual leave in the same year in which the entitlement was earned.

Accrual accounting records the expense associated with the annual leave entitlement in the year in which the employee earns those entitlements. Any "untaken" leave accrues as a liability (a provision) in the balance sheet. When the employee takes the related leave, in a year after which it was earned, the payment of salary etc is recorded against the provision in the year taken. That is, the cash payment is not recorded as an expense in the year the leave is taken.

At year end, the value of the provision is determined by multiplying the number of untaken leave days by the salary applicable to those days.

When an employee takes annual leave, the business must maintain his or her salary at the level in place at the time the leave is taken, not at the time the leave is earned. For example, if an employee earns leave in 2010 at a salary of $60,000 per year, and then takes the annual leave in 2012 at a salary of $80,000 (say, after a promotion), the employer is obliged to maintain his or her salary at the $80,000 level.

On average over a long period, one might reasonably expect the number of untaken leave days per employee ("person-days") at the end of each financial year to remain relatively stable. However, the balance in the provision would reasonably be expected to increase as:

- the number of employees in the organisation grows (number of employees multiplied by an average number of "person-days" of outstanding leave requires more days' leave to be accrued); and
- normal average salary increases through labour cost escalation, promotion, etc.

It is this normal increase in the value of the provision that the AER has removed from the base year costs.

It is important to note that the value of the annual leave earned in a year prior to being taken will not be recorded as an expense in the year the leave is taken. Importantly, the 2011 base year expenses, drawn from the financial accounting records, do not reflect the cost of leave taken in 2011 that was earned and expensed in prior years. However, the AER has made no attempt to "true up" the cash outlays to align to its removal of the movement in the related provision.

APA GasNet submits that the movement in the Annual Leave provision is a normal part of business, and therefore rejects the AER's adjustment to remove the movement in Annual Leave provision in the base year adjustment.

Long service leave

Through the course of investigating the AER's required revision to base year costs for movement in provisions, APA GasNet has uncovered an error that does warrant adjustment.

As with the discussion of Annual Leave discussed above, APA GasNet accrues for the amount of leave earned but not taken at the end of the year. In the case of Long Service Leave, the provision reflects that there may be a period of some years between when Long Service Leave is earned and when the leave is actually taken (and related salary and other costs paid). The provision balance would be reasonably expected to grow over time in the same manner.

In previous years, APA GasNet accrued Long Service Leave only for employees with more than 5 years' service. In 2011, APA GasNet amended its expense matching policy to accrue Long Service Leave entitlements (1.3 weeks' salary per employee per year) commencing the first year of service.

This resulted in an increase in the Long Service Leave provision related to those employees who, at the time of the change, had 1-4 years of service. This introduced a 'spike" in the provision (and the expense) that should reasonably be smoothed over the regulatory period.

The increase in the Long Service Leave provision was $516,000.[128] APA GasNet submits that to ensure this increased cost to the business is recovered over the forecast AA period, an annual amount equal to one fifth of that amount, or $103,000 per year, should be reflected in the base year costs. This results, in a required adjustment to APA GasNet's originally submitted base year costs of $413,000.

It should be noted that this adjustment will recover the accrued expense over the five years of the forecast AA period. It will then "automatically" drop off when a revealed cost analysis is conducted at the next 5-yearly review.

Defined benefit superannuation obligation

In a Defined Contribution ("Accumulation") superannuation plan, the employer makes regular contributions to an employee's superannuation fund, and that is the extent of its obligation. The employee is then at risk for movements in the market or the performance of the fund in terms of the amount of superannuation he or she has available at retirement.

In contrast, in a Defined Benefit plan, the employee's entitlement to superannuation is generally defined in terms of a formula. For example, on retirement, an employee

[128] Response to AER Information Request 13.

who is a member of a defined benefit superannuation plan may be entitled to "5% per year of service times the final year's salary". So an employee retiring after 40 years, on a final year's salary of $100,000, would be entitled to a lump sum payment of (5% x 40 x $100,000) $200,000.

Importantly, the employer, not the employee, is at risk for movements in the market or the performance of the fund, and is obliged to ensure that sufficient funds are in place to finance the retirement obligations when they arise.

The contributions required of the employer to make up any shortfalls in the fund resulting from market movements or poor fund performance is a legitimate expense associated with the regulated business. These costs must ultimately be recovered through tariffs charged for providing pipeline services.

This approach has been accepted by the ERA in Western Australia in the context of the Access Arrangement for the Goldfields Gas Transmission Pipeline:[129]

> In summary the Authority has agreed that addressing the deficit in the Defined Benefit Superannuation Schemes by including an amount in GGP operating costs is appropriate.

However, quantifying the amount to be included in the opex forecast can be more difficult than in the case of Annual Leave, primarily because of the delay between the valuation of the fund and the eventual retirement of the fund members. An independent actuary advises on the relationship between the fund's obligations and balance and, based on projections of retirement ages and mortality, etc, determines whether the fund will be capable of meeting its obligations, or whether the business is required to contribute additional capital.

In September 2012, EquipSuper (the fund manager) advised that the actuary had determined that additional contributions to the fund were required, and required the employer contribution rate to be increased to [redacted] of salary for plan members.[130]

However, under AASB 119 (and further to the accruals discussion above), the full amount of the additional contribution is not expensed through the profit and loss statement in the year of payment – a provision is established for the shortfall and a "normal" amount is expensed through the profit and loss statement.

Importantly, it is this "normal" amount that is reflected in the movement in provisions that the AER has removed from the base year opex calculation.

As discussed above, the AER's key ground for denying inclusion of the movement in provisions is that "The AER considers the movement in these provisions does not represents [sic] actual costs incurred in a given year and should be removed from base year expenditure."

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[129] Economic Regulation Authority, *Draft Decision on GGT's Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline – Redacted version* Submitted by Goldfields Gas Transmission Pty Ltd, 9 October 2009, from para 607. This principle, albeit with a different amount, was confirmed in the Final Decision dated 13 May 2010, para 359.

[130] EquipSuper, correspondence to APA Group (ex GasNet Australia) dated 12 September 2012 (provided confidentially)

For consistency, then, the AER must add in those cash outlays that are not reflected in the base year expenses derived from the accrual-based financial accounts.

Mercer, the global superannuation and remuneration advisory firm, undertakes a semi-annual analysis of the APA GasNet defined benefit superannuation scheme, reporting on the value of the fund, its obligations, and the amounts to be recorded in accordance with AASB 119. The latest report, dated 10 July 2012, indicates:[131] [132]

Figure 8.1 – Extract from Mercer valuation report

[information redacted]

This report clearly indicates that the amount reflected in the 2011/12 operating costs would be [redacted], while the actual employer contributions were [redacted].

If the AER is to maintain its position of removing the amount of the expense (reflected in the movement in provisions), on the grounds that "these provisions does not represents [sic] actual costs incurred in a given year and should be removed from base year expenditure" then it must for consistency of position reinstate the actual cash outlays. In relation to defined benefits superannuation obligation this would be removing [redacted] of provision and insert the actual cash contribution of [redacted] in the base year. APA submits that the preferred approach is to include the provision amount.

Conclusion

Going forward, it must be recognised that an AER adjustment to base year opex to remove changes in provisions will require adjustment to a cash basis of accounting for every access arrangement review going forward. This would necessarily require the service provider to maintain a separate accounting system to deliver cash-based accounts for regulatory purposes. It would also add complexity to annual reporting of regulatory accounts, as the reconciliation to the audited statutory accounts would be significantly more complex.

On balance, APA GasNet considers that this complexity is not warranted.

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[131] Confidentiality note: This information has been provided confidentially as it could cause untoward concern on the part of fund members.

[132] Mercer, *Report under Australian Accounting Standard AASB119 for the financial year ending 30 June 2012 relating to EquipSuper*. GasNet Australian (Operations)Pty Ltd, 10 July 2012, p4. Note that while this report relates to a financial year, whereas APA GasNet's costs were reported on a calendar year basis, the key principles are unchanged. The comparable 2011 calendar year figures reflect company contributions of [redacted] and expense recognised of [redacted].

However, APA GasNet accepts that it would be reasonable to adjust base year opex for the Long Service Leave error identified above. APA GasNet therefore accepts an adjustment to base year opex of $413,000.

In summary APA submits that the movements in provisions that should be included in the base year costs are:

- accrual of annual leave liabilities $98k;
- accrual of long service leave liabilities $103k; and
- funding obligation associated with APA GasNet Defined Benefits Superannuation Plan [redacted].

8.2 Step Changes

This section discusses those proposed step changes in which APA GasNet and the AER have reached different conclusions.

8.2.1 Environmental net gain obligations

APA GasNet proposed $980,000 ($2012) over the 2013-2017 period to meet its regulatory obligations in regards to native vegetation impacted by pipeline operation. The AER has accepted the requirement to meet the net gain obligations, however as the AER has only approved part of the forecast capex for the Northern Expansion project, it considered that the impact on native vegetation will be correspondingly less and therefore has approved an amount $812,000 ($2012) for the 2013-2017 period.

In light of the AER's revisions to the project scope, Monarc Environmental has completed net gain assessments for the first 35.4km of the Northern Expansion from the Wollert Compressor Station to Clonbinane Pressure Limiter. They have determined a net gain requirement of approximately 7.5 Habitat Ha (Hha) and an assortment of scattered trees. These figures have largely been accepted by the Department of Sustainability and Environment (DSE), subject to their own field inspection. Of this figure, approximately 2.8 Hha is within the expanded Urban Growth Boundary (UGB) and 4.7 Hha beyond the expanded UGB.

All net gain obligations for the area within the UGB are required to be placed within the proposed Western Grassland Reserves and would be met by a once-off payment to DSE. This is expected to be approximately $400,000. In addition to the payment for net gain, there will be a requirement to undertake a Salvage and Translocation Programme for Striped Legless Lizards and a Conservation Management Plan for Growling Grass Frog. The net cost of these programmes are expected to be in the order of $150,000.

In addition, APA GasNet will be required to acquire a property to meet the offset obligations for the portion outside the UGB. Based on past experience, a property containing around 40-50 land hectares of native vegetation would be required, assuming such a property could be found with the appropriate vegetation types, coverage, species, trees, condition etc. APA GasNet has not included the acquisition costs of this property here.

Reasonable land management costs for such a property would be in the order of $170,000 in year one to establish the site, erect fencing and undertake initial weed sprays and plantings. An annual average maintenance cost of $120,000 (at current prices) would be required for the subsequent 9 years to undertake controlled burns, weed spraying, planting, land & bush management.

APA GasNet has included this updated amount in its opex forecasts.

8.2.2 Safety management studies - monitoring and rectification

The AER did not allow the amount of $900,000 ($2012) to undertake the safety management studies as it did not accept that the obligations on the pipeline operator have materially changed since the 2008-12 access arrangement period.

While APA GasNet acknowledges that there is not a specific new obligation to conduct this work, it is driven by the ongoing urban encroachment on the network, and the findings of the recent Royal Commission covering the Black Saturday bushfires in Victoria.

Items identified during the last Safety Management Study requiring additional focus are:

- Fire resistance measures of APA GasNet assets in light of Black Saturday bushfires in Victoria - review implications of loss of power and control (eg. burnt cables, heat affected control equipment) at sites vulnerable to severe bushfire or where power may be cut by bushfires, and develop further mitigation processes were necessary
- Fire resistance - confirm that sites vulnerable to severe bushfire will not suffer any loss of containment in the event of worst-case bushfire; develop further mitigation measures if loss of containment possible
- Facilities on GIS - review completeness of data, increase photography (inc. dates), etc
- Small pits - review all syphon boxes, valve access tubes and in-site fibreglass boxes for protection against vehicle damage, and develop further mitigation where necessary.
- Vehicle barriers - review need for and positions of additional bollards and/or Armco type guardrail due to increased urban encroachment. Many sites have changed risk profiles due to additional vehicle traffic.

As discussed above in section 7.1.3, APA GasNet has responded to the incentive inherent in the system by deferring this expenditure to avoid the “double disincentive” imposed by the application of the revealed cost methodology and the EBSS. However APA GasNet submits that it is prudent and efficient expenditure that would be undertaken by a prudent service provider, acting efficiently in accordance with good industry practice.

8.2.3 Maintenance of hazardous area dossiers

The AER did not allow the amount of $2.2m ($2012) to complete the hazardous area dossiers in order that it complies with legal requirements of the relevant standards. The AER is not satisfied from the information provided by APA GasNet that amount incurred in 2011 was not sufficient to ensure that APA GasNet met the relevant standards.

The AER's reasons for not approving this increase in opex costs are not clear. The AER has simply stated that it is "not satisfied", but has provided no reasons to indicate the grounds on which it is not satisfied: [133]

The AER's draft decision is to not approve an increase in APA GasNet's opex to fund these positions. It is not satisfied that an incremental increase in opex for these activities would lead to opex 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.

The AER also believes that these costs should already be included in the 2011 base year costs, and therefore a step change is not required:[134]

The AER is not satisfied from the information provided by APA GasNet that the opex it incurred in 2011 maintaining hazardous area dossiers was not sufficient to ensure APA GasNet met the relevant Australian standards. As such, the AER does not consider that an increase in APA GasNet's opex to fund this program would be consistent with r. 91 of the NGR.

Australian Standard AS60079.14:2009 (Electrical installations, design, selection and erection) was adopted into Australia in 2009. This is a regulatory requirement for all electrical installations that are, or may be, exposed to explosive atmospheres. Being adopted within the previous access arrangement period, it is reasonable to presume that no costs were forecast in the previous access arrangement for compliance with it.

This Australian standard identifies a requirement to carry out periodic inspections of all sites, at a frequency of no greater than 4 years. The standard goes on to identify the documentation (Hazardous Area Dossiers) required to be created, maintained and managed as part of maintaining these installations.

APA GasNet has been undertaking the initial establishment the Hazardous Area Dossiers, and developing an inspection regime for all sites in line with regulatory requirements, as part of the SIB capex program.

There is therefore no opex cost included in the base year related to the establishment of the Hazardous Area Dossiers.

Once established, however, the Hazardous Area Dossiers must be subject to an ongoing maintenance program.

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[133] AER draft decision s6.5.3.

[134] AER draft decision s6.5.3.

As these dossiers are completed, the extent of additional work required to maintain them is now better appreciated. APA GasNet has in excess of 200 sites requiring dossiers to be managed and maintained, varying in complexity from one day per inspection, up to a compressor station site which would be in the vicinity of one week required for the verification inspections.

This specialist work requires two specifically trained personnel. Additional time will be required to update data for all sites via a purpose built database, and updating the dossier applicable for the site.

Routine inspections and rectification program will be required to commence during 2013. Accordingly, this regulatory requirement opex cost is not in APA GasNet's 2011 base year.

APA GasNet therefore re-affirms to the AER that these costs:

- 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; and
- are not included in the base year costs.

8.2.4 Energy Safe Victoria levies

APA GasNet notes that this amount has been transferred from an adjustment to the base year as proposed by APA GasNet, to a step change in the same amount as approved by the AER.

Save for the "double disincentive" impact as discussed above, APA GasNet considers that the AER has approved the forecast with a different mechanism.

As this is in essence a government or regulatory cost, APA GasNet submits that it should be removed from the application of the EBSS scheme.

8.2.5 Direct Carbon Costs

This section should be read in conjunction with section 12.5.

As discussed in APA GasNet's March 2012 submission, the *Clean Energy Act 2011* received royal assent on 18 November 2011. The Act introduces a carbon trading scheme in Australia designed to impose a price on carbon emissions from 1 July 2012. The first three years of the carbon pricing scheme has a fixed price path after that the scheme moves to a floating price period. Under the floating price period the price path forecast by the Australian Treasury is the price path required to meet the emission reduction target of 5% by 2020 on 2000 emission levels.

Pending the final decision from the Clean Energy Regulator as discussed below, APA GasNet may incur considerable costs in the current access arrangement period associated with purchasing permits to be surrendered to the Clean Energy Regulator under the *Clean Energy Act 2011*. These costs arise in relation to direct emissions, from fuel gas and fugitive emissions, and also from indirect costs such as increased electricity prices and administration costs for managing compliance and procuring permits.

In its original submission of March 2012, APA GasNet had calculated its potential liability on the basis of the methodology set out in the *National Greenhouse and Energy Reporting Act 2007*, based on expected transport volumes and fugitive emissions.

For the first three years of the scheme APA GasNet had applied the fixed carbon price set out in the Clean Energy Act, and after that date had adopted a carbon price consistent with Australian Treasury modelling. The Deputy Prime Minister and Treasurer and the Minister for Climate Change and Energy Efficiency released the Strong growth low pollution: modelling a carbon price (SGLP) report on 10 July 2011. An update to the SGLP report was released on 21 September 2011. APA GasNet had used the updated price path from 21 September 2011.

8.2.5.1 Liability for carbon tax costs

APA GasNet and AEMO have consistently differed on the question of who should bear liability for the carbon tax and jointly lodged an application to the Clean Energy Regulator to decide this issue.

On 5 October 2012, APA GasNet received a message from the Clean Energy Regulator as follows:

> On the 24 September 2009, the Greenhouse and Energy Data Officer (GEDO) received a joint submission from the Australian Energy Market Operator (AEMO) and APA Group informing the GEDO that both parties were in dispute as to which party has operational control over the GTS [Gas Transmission System] operating facility. The joint submission requested the GEDO initiate a declaration of operational control under paragraph 55(1)(b) of the *National Greenhouse and Energy Reporting* (NGER) *Act 2007* in order to resolve the dispute.
>
> As a result of the inability of both parties to reach an agreement, the greenhouse gas emissions, energy consumption and energy production from the activities that comprise the GTS operating facility are not currently being reported under the NGER Act. The GEDO considered that the objects of the NGER Act would be best served by resolving this impasse with a declaration of operational control, allowing the data from the GTS operating facility to be appropriately reported under the NGER Act.
>
> For this reason the GEDO decided to initiate a declaration on his own initiative under paragraph 55(1)(b) of the NGER Act in relation to whether AEMO or APA Group has operational control over the GTS operating facility.
>
> Please note that the functions of the GEDO transferred to the Clean Energy Regulator (the Regulator) on 2 April 2012 as legislated under amendments to the NGER Act and the *Clean Energy Regulator Act 2011*. The Regulator has delegated its authority in regards to making decisions under paragraph 55(1)(b) of the NGER Act to Ross Carter, Executive General Manager, Regulatory Division. Note that Ross Carter was the GEDO before the transfer of the GEDO's functions to the Regulator.
>
> Having considered the information available, Ross Carter is **proposing to declare that the GTS operating facility is under the operational control of the Australian Energy Market Operator**.
>
> (emphasis in original).

The Green Energy Regulator included in this message its Reasons for Decision, in which the "operational control" test under s11A of the *NGER Act* featured prominently.[135] These reasons for Decision are included as Attachment 8.3.

Information available at the time of writing indicates that the obligations for the carbon tax are expected to rest with AEMO rather than APA GasNet. However, APA GasNet acknowledges that there remains some uncertainty on this issue.

Acknowledging that this is a proposed declaration, APA GasNet has accepted this aspect of the AER's required revision and removed the forecast carbon tax costs from its forecast opex in anticipation of the declaration being finalised.

Recognising the scope for the Clean Energy Regulator's final decision to differ from the draft, APA GasNet has proposed a more flexible carbon cost pass through provision in section 12.5.

8.2.6 Expanded apprenticeship program

In its regulatory proposal, APA GasNet proposed a step change to continue its apprenticeship program and hire new apprentices.[136] In its Draft Decision, the AER rejected this step change on the following basis:

- it considered the step change is not required for a prudent service provider, acting efficiently, to continue its apprenticeship program in the 2013-17 access arrangement period. The AER claimed that expenditure from the apprenticeship program has been included in APA GasNet's base year opex allowance providing it with expenditure to continue the program. The AER has further stated that the labour costs for the current apprentices which are ending their apprenticeships, will be covered by the base year costs of the staff they are replacing and providing a step change would double count APA GasNet's apprenticeship costs;[137]
- it is not satisfied a step change for an expansion of the apprenticeship program would lead to a forecast of total opex that has been arrived at on a reasonable basis, or is the best forecast possible in the circumstances. The AER has stated it considers a forecast of opex that includes a step change in opex for the expanded apprenticeship program would be a forecast of opex that would not 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;[138] and
- while at a project level it may be prudent for APA GasNet to incur additional opex for the expanded apprenticeship program, the AER considered the purpose

[135] See Australian Government Clean Energy Regulator, *Draft Decsion [sic] and Statement of Reasons Under Paragraph 55(1)(b) of the National Greenhouse and Energy Reporting Act 2007*, sections D.9 through D.12.

[136] APA GasNet, *Access arrangement submission,* 31 March 2012, p171.

[137] AER, Draft Decision, Part 2 Section 6.5.3

[138] AER, Draft Decision, Part 2 Section 6.5.3

> of the expanded apprenticeship program is to improve the skills of APA GasNet's staff, and that by doing so, would likely deliver productivity improvements. The AER therefore holds the view that a step increase in the program is not required to incentivise APA GasNet to improve this program and subsequently that a fundamental increase in opex to fund technical training is not consistent with rr74(2) or 91 of the NGR.[139]

Following consideration of the Draft Decision, APA GasNet does not accept this decision and substantially disagrees with the reasoning and decision of the AER.

APA GasNet set out the basis for its required step change in its Regulatory Proposal, but key to the need for an expanded apprenticeship program, is the shortage of skilled labour and engineering support for its pipelines and facilities operations and maintenance works, and difficulties in attracting and retaining suitably qualified and trained staff.

APA GasNet is rapidly losing experienced workers, and unable to replace them with workers of the same or similar skillset. Each time an experienced worker leaves the business through retirement or otherwise, APA GasNet loses valuable knowledge and acumen, which can no longer benefit it or other APA GasNet workers. Over the course of the earlier access arrangement period APA GasNet had 43 staff members leave (31 people) or retire (12 people) out of a total 2011 workforce of 104.[140] In addition, 72% of APA GasNet's total staff (including fixed term, casual and permanent employees) is over 40 years old (39% is over 50 years old), and only 9% of staff is under 30 years old.

In addition, as a prudent service provider acting efficiently,[141] APA GasNet does not pay its staff exorbitant salaries, but instead, pays sector average salaries to its workers.

If the skill shortage is not properly addressed, APA GasNet may have no choice but to increase salaries to attract skilled workers, which may be viewed as constitute inefficient planning and operations.

As noted in its Regulatory Proposal,[142] problems with skill shortages and an ageing workforce have increased since the start of the earlier access arrangement period. As part of a measure to work around such skill deficiencies, APA GasNet has, over the past two years, spent considerable time, effort and expense to train apprentices to attempt to appease the skill shortage. As set out in the Regulatory Proposal,[143] APA GasNet currently has four apprentices, all of which are approaching the end of their training and will be effectively integrated in labour staffing levels included in the base year costs and are expected to remain with APA GasNet in the forecast period.

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[139] AER, Draft Decision, Part 2 Section 6.5.3

[140] APA Response to Information Request No.15.

[141] Pursuant to r 91(1) of the NGR.

[142] APA GasNet, *Access arrangement submission,* 31 March 2012, p171.

[143] APA GasNet, *Access arrangement submission,* 31 March 2012, p171.

In the coming forecast period, APA GasNet is seeking to expand its apprenticeship training program and, to do so, requires a step change. APA GasNet responds to the AER's reasoning for denying such step change as follows.

The step change is required by APA GasNet as a prudent service provider, acting efficiently

The step change proposed by APA GasNet will not double count APA GasNet's apprenticeship costs and the labour costs for the current apprentices which are ending their apprenticeships will not be covered by the base year costs of the staff they are replacing. APA GasNet is seeking to expand its program to address the skill shortage issue it is facing, hence it needs to invest more into its program to ensure it can provide the required skills for its future. It would be imprudent of APA GasNet to not recognise it has a skill shortage issue and not provide suitable investment to address that issue. A problem not addressed today will result in inefficiency.

Forecast of total opex is reasonable

APA GasNet is seeking a minimal increase to its apprenticeship program, and is doing so to address a serious and industry wide recognised issue of skill shortages. In this light it is difficult to see how the AER has not been satisfied that a step change for an expansion of the apprenticeship program has not lead to a forecast of total opex on a reasonable basis or one that is the best forecast in the circumstances. As discussed below, APA GasNet is aware of other industry service providers who have had step changes for their apprenticeship costs approved, and it is hard to reconcile such outcomes with that facing APA GasNet.

Apprenticeship program as an incentive

The AER has made the assumption that the program will increase productivity in the business as it foreshadows that the program will serve to increase the skills of staff.[144] The AER's assumption is, however, somewhat short sighted and lacking practical insight. A worker with two or three years' experience is no substitute for a worker with twenty or more years' experience who is exiting the business. It is incorrect to assume that because you have an apprenticeship training program which is teaching skills to new staff, that you are likely to deliver productivity improvements throughout the business, particularly in the short term. Through the program, APA GasNet is essentially replacing experienced workers with inexperienced staff, so there is not a like-for-like replacement. If anything, productivity is likely to decrease due to the outflow of experienced workers and the inflow of inexperience. APA GasNet needs to improve the numbers in its apprenticeship program so it can bolster its workforce in the coming years to cope with a number of retirements and attrition affecting its business and the industry.

As a responsible and prudent service provider, APA GasNet also has a community obligation to train apprentices. A prudent service provider acting efficiently and in

[144] AER, Draft Decision, Part 2 Section 6.5.3

accordance with good industry practice, has an obligation to interact with its community and provide jobs and address the emerging needs of industry and society. By denying the step change sought by APA GasNet, the AER is sending the message that this industry is one about cutting costs in the short term, not addressing needs of society, and lacking any future vision. Such an approach is void of suitable vision for our economy and society.

As referred to above, the AER has previously approved a step change for apprenticeship programs for other service providers. In its Regulatory Proposal to the AER,[145] ActewAGL noted its skill shortage issue, stating:

> ActewAGL Distibution has found it increasingly difficult to recruit staff, particularly experienced staff both to the field and professional positions. In 2005, it was decided to increase the investment in developing future tradespeople locally by increasing the apprentice intake. An audit conducted within the ActewAGL Distribution Electricity Networks business at that time highlighted that a more strategically focussed approach was required for succession planning activities across the whole business to ensure the adequate resourcing of key roles.

ActewAGL Distribution stated that it made a specific adjustment to the apprenticeship training program to account for both the increased scope of the program during the current regulatory control period, and its intention to maintain the program throughout the next regulatory control period. It noted that it will maintain the number of trainees in the program throughout the next regulatory control period to counter the need for increased staff to deal with increasing maintenance and capital activity, and increases in planned retirement of existing staff.[146] ActewAGL Distribution proposed a $0.5 million increase in operating costs for the program over the 2009-14 regulatory period.

In its Draft Determination in respect of ActewAGL Distribution,[147] the AER noted that ActewAGL Distribution had incorporated a step increase in its apprentice training program to reflect the cost of additional apprentices and trainees in the next regulatory control period. Interestingly, the AER commented, "that it considers training and apprenticeship programs are a valid tool in addressing staff shortages facing NSPs in Australia" and that the "increase in numbers participating in ActewAGL's apprenticeship and training program should help ease the labour shortage facing ActewAGL in the next regulatory control period."

The AER further concluded that the costs included by ActewAGL Distribution in the apprentice and training program cost estimates did not double count retention benefits and were appropriately extrapolated given the step change was estimated as the cost of additional apprentices required to increase the number of participants and then keep that number steady over the next regulatory control period. The AER considered that the adjustment to the base year opex provided an adequate basis from which to forecast apprenticeship and training program costs.

[145] ActewAGL Distribution Determination 2009-14 Regulatory Proposal to the AER June 2008, p182.

[146] Draft Decision for ActewAGL Distribution, 7 November 2008, p97.

[147] Draft Decision for ActewAGL Distribution, 7 November 2008, p98.

It is difficult to see how the AER has come to such a contrasting decision for ActewAGL Distribution on such similar facts. APA GasNet requests the AER consider its comments in respect of ActewAGL Distribution in light of the facts before them for APA GasNet, particularly in relation to apprenticeship programs being a valid tool in addressing staff shortages and allowing adjustment to the base year opex.

Businesses subject to such stringent regulation should be afforded certainty and consistency in decisions made by the body which regulates them. If the AER considers that ActewAGL Distribution was acting as a prudent service provider, then it should likewise find that APA GasNet, in similar circumstances, is also acting as a prudent service provider.

As a result of the above, APA GasNet considers it proposal for its expanded apprenticeship program to be operating expenditure as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services. In its view, APA GasNet has no alternative but to increase expenditure on its apprenticeship program. The alternative is to hire experienced labour at above market costs – it is unclear how this can be seen to be more efficient.

8.2.7 Western district depot

The AER did not approve costs for the establishment of a depot in Warrnambool to accommodate staff currently working from home and APA GasNet did not identify a legislative change that requires it to change its health and safety practices.

APA GasNet acknowledges that it did not provide information regarding a new legislative change requiring it to establish a depot at Warrnambool; indeed it would be reasonable to conclude that there is not a new legislative change requiring this expenditure *per se*.

However, the operation of the network has changed since the last opex cost assessment was undertaken. Where APA GasNet previously had one employee in the region, it now has three.

With a single employee in the region, it was prudent and reasonable for APA GasNet to manage the HSE risks associated with an employee working from a home base. However, with a larger number of employees in the region, the prudent approach to managing HSE risks is to establish a permanent base.

Many of APA GasNet's regions have either a compressor station or similar premise to carryout non worksite type work activities from. However in the Warrnambool area, most of our facilities are either very small or within the TRU Energy gas storage facility, which is not conducive to have personnel based there to carry out routine functions. This facility is also approximately 60 minutes' drive from Warrnambool to get access for this site. Therefore it is viewed less efficient for people to access these sites for routine administrative activities.

This challenge also goes for equipment deliveries to the TRU Energy site: advance notice is required, being an operational gas plant, further delays are experienced with delivery drivers also requiring site inductions for heavy deliveries. The local practice until now has seen deliveries going to employees' private homes, this was seen as unfair and an imposition, to expect individuals to have large delivery trucks digging up their private drive ways, and having their private homes be used as places of business and storing company equipment. The establishment of this depot is about being fair to APA GasNet employees: one of the main drivers in this project is to give families' privacy back to our valued staff. The Warrnambool depot also provides a base for remote staff (Melbourne based) to work out of whilst they are in the area.

In the initial costing for the establishment, APA GasNet had budgeted $50,000 for an annual lease. Following discussions with a privately sourced landlord, APA GasNet were able to secure a lease in a suitable factory for $32,780 per annum. This lower amount has been included in the revised opex forecast.

8.2.8 Adjustments to reflect non-recurrent opex

The AER did not accept costs of $1.295m ($2012) for non-recurrent opex costs including the following:

- New gas heating facilities inspections;
- Line valve actuator overhauls;
- Pressure vessel inspections; and
- Restore hard standing at specific sites.

The AER considered that these costs were not treated symmetrically.

APA GasNet has reviewed its opex cost forecasts in light of this decision and has found that the base year figure includes an average annual amount for these non-annual operating expenditures. Including these projects in the step changes calculation inadvertently double counted them. APA GasNet therefore accepts the removal of these items from the proposed step changes.

8.2.9 Allocation between regulated and non-regulated functions

$0.24m ($2012)

The split between the regulated and non-regulated component has been adjusted from 88.18 per cent in the previous AA period to 93.01 per cent for the forecast period. This is based on the respective RAB values incorporating the capital spend associated with non-regulated assets.

8.3 Escalation of base year costs

8.3.1 Network growth (scale escalation)

The AER did not accept the total amount forecast for the Network growth included in the escalation of the base year costs. The reduction was due to the consideration that as the augmentation capex has been reduced, that the opex would be reduced correspondingly.

APA GasNet has discussed in section 4 of this document the forecast capital expenditure and therefore the network growth component has been adjusted to reflect the revised forecast capex.

8.3.2 Real cost escalation

In its Draft Decision, the AER has substituted real labour cost escalator values proposed by APA GasNet with the LPI wage forecasts developed by Deloitte Access Economics (DAE) — AER's economics adviser. According to the AER, the cost escalators proposed by APA GasNet do not reasonably reflect a realistic expectation of the cost inputs required to achieve the capital and operating expenditure objectives under the Rules. The AER's substitute escalators significantly reduce APA GasNet's expenditure forecasts over the 2013 – 2017 access arrangement period.

APA GasNet has revised its proposal in a number of respects to adopt the AER's preferred escalator methodology. APA GasNet's remaining area of concern, however, relates to the use of a single set of forecasts when the theoretical literature suggests that forecast accuracy can be improved by combining multiple forecasts. In APA GasNet's view, using combined forecasts is more likely to lead to the best possible forecast under the circumstances.

The following sections discuss APA GasNet's revised proposal.

EGWWS v EGW wage forecasts

Under the *National Gas Law*, a service provider should be provided with a reasonable opportunity to recover at least its efficient costs in providing pipeline services. APA GasNet believes this requirement is best met by approving labour cost escalators pertinent to the electricity and gas utilities and not the broader 'Utilities' sector. This position was reflected in APA GasNet's original submission, which used the wage escalator for EGW services alone, rather than the labour costs growth for the combined EGWWS industry.

Despite this reasoning, the AER in its draft decision adopted forecast wages growth in the EGWWS industry to escalate APA GasNet's internal labour. The AER has similarly applied wages growth in the EGWWS industry to escalate other utility providers' internal labour costs in its recent determinations.[148]

APA GasNet considers that the inclusion of waste services understates the growth in true labour costs for the mostly higher skilled (and more highly demanded) occupations in the gas industry, both historically and going forward.[149] Despite this, APA GasNet has adopted the AER's preference for the wages growth in the EGWWS industry in its revised proposal.

[148] For eg, see AER, Final Decision, Powerlink Transmission Determination, April 2012.

[149] BIS Shrapnel, *Real labour Cost Escalation Forecasts to 2017 – Australia and Victoria*, p.27, October 2012 (Attachment 8.4).

APA GasNet further accepts the AER's use of the EGWWS escalator to apply to all internal labour.

AWOTE v LPI

APA GasNet considers that the AWOTE series is a better wage series for forecasting purposes under the Rules than the LPI series used by the AER, as it is more likely to reflect the real labour costs faced by pipeline service providers on the grounds that AWOTE:

- is a more comprehensive measure of wages than the LPI series preferred by the AER; and
- takes into account workforce compositional changes over time, and is therefore considered the best measure for capturing the change in total labour costs. Compositional labour force change is an important issue for APA GasNet.

Despite this reasoning and the limitations of the LPI[150], the AER in its draft decision required the application of increases in the LPI to escalate labour costs.

While APA GasNet does not accept the AER's reasoning for preferring the LPI measure over the AWOTE measure, it has applied the LPI measure in its revised proposal for the purposes of estimating wage cost movements in its capital and operating expenditure. APA GasNet remains concerned that the use of LPI ignores a potentially important source of growth in its labour costs.

Use of single set of forecasts

The AER considered the LPI wage forecasts developed by DAE as representing the best forecasts possible. APA GasNet rejects this proposition.

As the AER itself recognises, there is an overwhelming body of statistical literature that argues that forecast accuracy can be improved by combining multiple individual forecasts, see studies by Bates and Granger (1969)[151], Harvey (2002)[152], Clements (1989)[153], and Armstrong (2005)[154].

The theoretical argument for combining multiple forecasts to reduce forecast error is also supported by data. Independent empirical analysis undertaken by Professor Borland (see expert report at Attachment 8.5) shows that a forecast that is an average of DAE and BIS Shrapnel forecasts is associated with lower forecast error than one using either the individual DAE or BIS Shrapnel forecasts. AER's own analysis also arrived at this conclusion. Hence, in APA GasNet's view, the AER has

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150 See BIS Shrapnel report for complete discussion on the limitations of the LPI.

151 Bates, J. and C. Granger (1969), 'The combination of forecasts', Operations Research, 20, 451-68.

152 Newbold, P. and D. Harvey (2002), 'Forecast combination and encompassing' in M. Clements and D. Hendry (eds) A Companion to Economic Forecasting (Oxford: Blackwell), pages 268-83.

153 Robert T. Clemen, 'Combining forecasts" A review and annotated bibliography', International Journal of Forecasting, Volume 5, issue 4, 1989, pp, 559-583.

154 Armstrong, J. (2005), 'The forecasting canon: Generalizations to improve forecasting accuracy', Foresight, 1, 29-35.

no basis for concluding that forecasts made by DAE alone are superior to one that is based on an average of DAE and BIS Shrapnel forecasts.

On this basis, APA GasNet has applied an average of DAE and BIS Shrapnel values for the purposes of estimating wage cost movements in its capital and operating expenditure. While this approach deviates from APA GasNet's original proposal to use BIS Shrapnel's forecasts alone, APA GasNet has revised its forecast approach in response to the discussion in the AER's draft decision.

Application of new Enterprise Bargaining Agreement

APA Group recently negotiated a new Enterprise Bargaining Agreement (EBA). APA GasNet believes that the wage outcomes negotiated in this new wage agreement reflects the efficient costs of APA GasNet, and should be applied in relation to movements in its internal labour costs for the duration of the new EBA, as proposed in its original proposal.[155] APA GasNet notes that the AER did not address this part of APA GasNet's proposal in its draft decision, and therefore APA GasNet has not had opportunity to address any concerns the AER may have with this approach.

Use of negotiated EBA outcomes is consistent with the decision of the Australian Competition Tribunal in respect of real cost escalators to apply to the Ergon Energy capital and operating expenditure forecasts.[156] The Tribunal found that the AER had made an error in not accepting the existing Union Collective Agreement (UCA – effectively the same type of agreement as an EBA) outcomes in the years in which it applied as it had not investigated: [157]

> the circumstances in which the UCA had been negotiated but rather relying on its consultant's figure to arrive at its real escalator for the first year of the regulatory period…

This implies that the circumstances in which an EBA has been negotiated are relevant to whether it should be considered to reflect the efficient and prudent costs of the business, and used in preference to values derived on the basis of sectoral trends alone. APA GasNet considers that the new APA Group EBA can be considered to reflect the efficient and prudent costs of the business for a number of reasons, as described below.

The new EBA was finalised in October 2012, and applies to all APA Group transmission staff that are not on individual contracts in Victoria, Western Australia, Northern Territory, South Australia and Queensland. The Agreement expires on 1 November 2014. The EBA is also consistent with another recent agreement negotiated by APA Group in relation to its NSW transmission assets.

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[155] APA GasNet 2012, Access Arrangement submission: Labour cost escalation – application to APA GasNet costs - confidential attachment D-3

[156] Australian Competition Tribunal 2010, *Application by Ergon Energy Corporation Limited (Labour Cost Escalators) (No 3) [2010] ACompT 11 (24 December 2010)*

[157] *Application by Ergon Energy Corporation Limited (Labour Cost Escalators) (No 3) [2010] ACompT 11 para 58*

The broad application of the new EBA provides important incentives for APA Group to ensure that it reflects an efficient and prudent outcome, and delivers the lowest sustainable wage costs for the business going forward.

The EBA applies to employees working on both regulated and unregulated assets.[158] This means that APA Group had significant incentive to contain wage increases as:

- wage increases applying to unregulated assets cannot be reflected in regulated prices, and in many cases existing contracts cannot be updated to recover increased costs; and
- wage increases also apply to assets for which access arrangements are already in place, and therefore there is no scope for those access arrangements to be updated to reflect the wages outcome (for example the Amadeus Gas Pipeline).

These factors mean that the EBA has been negotiated independently of the current regulatory process and timing. They also mean that any increases in wages directly affect APA Group's profits as they cannot be reflected in prices. This provides clear incentives for APA Group to contain wage growth. The EBA also reflects the current labour market as it has only recently been agreed.

APA GasNet considers that for these reasons the EBA outcome should be adopted by the AER as the best forecast or estimate of APA GasNet's future wage growth possible in the circumstances, in accordance with the requirements of Rule 74. Adopting the negotiated wage rates in APA GasNet's EBA ensures labour cost forecasts take account of the specific labour market conditions facing APA GasNet, and reflect the efficient costs of providing pipeline services.

Revised labour cost escalators

Table 8.2 shows the wages growth escalation factors that have been applied to the internal and external labour components of operating and capital expenditure forecasts. The revised labour cost escalation forecast comprises:

- the annual wage increases included in APA GasNet's new EBA with its staff, applied to internal labour until the end of 2014 (the duration of the new agreement); and
- the average of DAE and BIS Shrapnel LPI forecasts for the Victorian EGWWS industry (from 2015) and Contractor labour (from 2013 to 2017). The BIS Shrapnel forecasts have been updated for APA GasNet's Revised Access Arrangement Proposal.[159]

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[158] More than half of the staff to which the new EBA applies are not APA GasNet employees

[159] We acknowledge that the AER may engage DAE to update their May 2012 LPI wage forecasts when considering their final decision on our revised proposal.

Table 8.2: Real Labour Cost Escalators (% change in LPI terms)

Category	2013	2014	2015	2016	2017
Internal labour	1.3	1.5	1.7	1.4	1.5
Contractor labour	0.8	1.4	1.6	1.2	1.3

Source: APA GasNet Enterprise Bargain Outcomes, DAE and BIS Shrapnel advice

APA GasNet considers that these forecast escalators represent the best possible forecasts in the circumstances, and must be accepted by the AER in its final decision. APA GasNet has accepted or otherwise addressed all issues raised by the AER in its draft decision. APA GasNet has applied a methodology consistent with issues raised by the AER in its draft decision (the relative accuracy of combined forecasts), and relevant regulatory precedent (the use of EBA outcomes in place of forecasts where they are shown to be efficient and prudent).

APA GasNet does not consider that it would be within the AER's powers under the Rules to reject this proposal on the basis that more up to date values may be available at the time of its final decision. To do so would negate the intent of the Rules that a service provider's submission be accepted if it satisfies, amongst other things, the requirement that it represents the best possible forecast or estimate possible in the circumstances of the submission (that is, the time that it is made).

8.3.3 Reset costs (from 2008-12 regulatory period)

In its Regulatory Proposal, APA GasNet sought to recover its costs for the preparation of its access arrangement for the 2008-12 access arrangement period in 2013. APA GasNet sought to do this on the basis of established regulatory practice, which has been to carry forward costs associated with the preparation of each access arrangement revision proposal as an adjustment to forecast operating expenditure.[160]

The AER has not accepted APA GasNet's recovery of reset costs associated with the 2008-12 access arrangement period in 2013 on the grounds that total revenue for the year be determined using the building blocks approach, which includes a forecast of opex for each regulatory year of the access arrangement period. APA GasNet does not accept this decision as it is entirely inconsistent with the intended operation of the earlier access arrangement, and the ACCC's decision in respect of that access arrangement.

APA GasNet adopted its proposed approach in line with that approved by the ACCC as part of its 2003-08 access arrangement. In the ACCC's draft decision in respect of that access arrangement, the ACCC stated: [161]

[160] APA GasNet, *Access arrangement submission,* 31 March 2012, p181.

[161] Australian Competition and Consumer Commission 2002, *GasNet Australia access arrangement revisions for the Principal Transmission System: Draft Decision,* 14 August p 82.

> …GasNet has not included forecast review costs for 2006 and 2007 in its proposed access arrangement information. The Commission understands that GasNet proposes to recover these costs in the third, rather than the second period, as these costs relate to revisions to the access arrangement for the third period.
>
> …
>
> The Commission considers that it is appropriate to not include forecasts for review costs in 2006 and 2007 in the reference tariff calculation for the second access arrangement period. The Commission acknowledges that this approach to the treatment of operations and maintenance expenditure represents a departure from incentive regulation, but as noted in relation to the proposed pass through mechanism (section 3.2.3 of this Draft Decision), this approach is acceptable under the provisions of the Code."

The ACCC determined that the approach (whereby reset costs are not forecast in the period they are incurred but instead recovered in the following period as an allowance), was undertaken in accordance with the Code, and a suitable practice at that. As a result, forecast operating expenditure approved by the ACCC in 2008 did not include reset costs associated with the 2013-17 access arrangement period. This is evident as forecast operating expenditure approved by the ACCC do not show a step in costs in 2011 or 2012, which would be in the order of $1 million if they had been forecast in line with the previous period. Instead, base year costs (which are the same in each year of the forecast period) are adjusted by defined step and scope changes, which do not include reset costs.[162] Forecast reset costs were omitted as they were expected to be recovered in 2013, in accordance with approved practice.

It is inconceivable that a practice condoned by the ACCC is now coming into question by the AER and may result in APA GasNet unable to recover substantial costs which it is entitled to recover.

In its regulatory proposal, APA GasNet submitted that transitional provisions associated with the introduction of the NGL provide that the NGL does not "affect the previous operation of the provision or anything suffered, done or begun under the provision." APA GasNet cited clause 43(1)(b) of Schedule 3 of the NGL[163] for that purpose. As foreshadowed by the AER in its Draft Determination, APA GasNet did intend to refer to clause 3(1)(b) of Schedule 3 of the NGL.[164] The AER has not accepted this approach however, and has argued that a decision made by the AER on reset costs will not "affect the previous operation" of the Gas Code and that in addition, there is not anything that has been suffered, done or begun or in accordance with the old access law or Gas Code with respect to the reset costs now being proposed by APA GasNet.[165] APA GasNet strongly disputes this determination.

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[162] APA GasNet 2008, *GasNet Australia Access Arrangement Information*, commencement 1 January 2008, pp7-8.

[163] APA GasNet, *Access arrangement submission,* 31 March 2012, p181.

[164] Draft Determination, pp219-220.

[165] Draft Determination, pp219-220.

Clause 3(1)(b) of Schedule 3 of the NGL provides that the repeal of the old access law or Gas Code does not:

> affect the previous operation of the old access law or Gas Code or anything suffered, done or begun under or in accordance with the old access law or Gas Code…

It is difficult to see how the AER can determine that its draft decision on reset costs will not affect the previous operation of the Gas Code and further, that nothing has been suffered done or begun in accordance with the Gas Code. As set out above, the ACCC approved APA GasNet's approach to recovering reset costs under the Gas Code. As a result, APA GasNet has relied on that approval and condoned practice which would entitle it to recover its reset costs in the next regulatory period. A practice was therefore begun under the Gas Code and costs were not recovered on the basis they would be recovered in the next regulatory period. APA GasNet's recovery of reset costs should not now be refused as to do so would be in clear breach of the NGL.

In addition to its rights under clause 3(1)(b) of schedule 3 of the NGL, APA GasNet considers it is further entitled to recover its reset costs under clause (3)(1)(c), which provides that the repeal of the old access law or Gas Code does not:

> affect a right, privilege or liability acquired, accrued or incurred under the old access law or Gas Code; or…

APA GasNet is of that view that when the ACCC approved its ability to recover in the 2008-12 regulatory period, APA GasNet acquired a right to recover its costs in such a way, and that pursuant to the NGL, the repeal of the Gas Code should not affect this right acquired by APA GasNet to do so. APA GasNet should therefore be entitled to exercise its right and recover its reset costs in the next regulatory period, as approved by the ACCC in the 2008-12 access arrangement.

APA GasNet notes the AER encountered a similar situation in 2010 in respect of the ActewAGL gas distribution network and the recovery of ActewAGL's regulatory costs.[166] In that situation, ActewAGL sought recovery of reset costs incurred in the earlier access arrangement period as capital expenditure, despite these costs being more appropriately considered as operating expenditure by the AER. In its final decision, the AER approved the capitalisation of reset costs as a 'one-off', stating:

> Nevertheless, the AER approves the inclusion of these costs in the opening capital base as a transitional measure between the Code and the NGR on this occasion. It does so on the basis that in the past the ICRC has treated ActewAGL's regulatory costs as capital expenditure and ActewAGL's proposed recoupment of these regulatory costs in the access arrangement period is consistent with this past treatment. The AER considers that this treatment is one-off, specific to ActewAGL's circumstances and does not provide a precedent for other service providers.[167]

[166] Australian Energy Regulator 2010, *ACT, Queanbeyan and Palerang gas distribution network access arrangement proposal 1 July 2010-30 June 2015: Final Decision – Public,* March 2010, pp 19-20.

[167] Australian Energy Regulatory 2010, *ACT, Queanbeyan and Palerang gas distribution network access arrangement proposal 1 July 2010-30 June 2015: Final Decision – Public*, March p20.

APA GasNet does note that the AER at the time did not intend the ActewACL decision in respect of regulatory costs to set a precedent for other service providers (presumably to support future capitalisation of reset costs). The decision does, however, present a similar situation where the AER recognised past regulatory treatment, and the need for transitional provisions to accommodate those arrangements in specific circumstances. APA GasNet submits that its circumstances warrant similar consideration by the AER given past regulatory treatment.

As a result of the above, APA GasNet does not accept the AER's decision on reset costs incurred in the 2008-12 period and has retained these in its revenue allowance for recovery in the forecast period.

8.3.4 Debt Raising Costs

Debt raising costs are designed to allow the business to recover the costs associated with refinancing its existing debt over time, and the costs associated with raising new debt to finance new capital expenditure.

The draft decision proposed to reduce the amount of new capital expenditure to be financed, and accordingly reduced the allowance for debt raising cost. This is largely a mechanical calculation, and APA GasNet accepts the proposed reduction in debt raising costs.

8.3.5 Other Allowances

The AER has accepted APA GasNet's approach to calculating a return on passive linepack and spare parts, however as the AER did not accept APA GasNet's proposed WACC, the AER has adjusted APA GAsNet's proposed allowances to account for the AER's WACC.

APA GasNet has revised the amount calculated for the return on passive linepack and spare parts to take into account the revised WACC as discuss in Section 5 of this document.

8.4 Conclusion

The AER's draft decision required only that APA GasNet adopt the operating cost forecast provided by the AER in the draft decision. However, the assessment of the reasonableness of that required Revision necessitated a more granular analysis of the operating cost forecast than was reflected in the required Revision.

This chapter has analysed the individual components of the operating cost forecast, and develops a revised opex forecast as shown in Table 8.3 below.

Table 8.3: Forecast operating expenditure

$000 (nominal)	2013	2014	2015	2016	2017
Labour	8,631	9,075	9,752	10,936	11,103
Materials	566	580	595	609	625
Outside Services	2,533	2,635	2,746	2,853	2,966
Other Operating Costs	7,385	7,753	8,341	8,564	8,778
Corporate Costs	10,952	11,402	11,894	12,364	12,865
Operating Costs	**30,067**	**31,445**	**33,329**	**35,325**	**36,336**
EBSS Allowance	996	-1,705	-2,181	-1,899	0
Debt Raising Costs	376	391	451	461	463
Other Allowances	207	213	220	226	231
Total Operating Expenditure	**31,646**	**30,344**	**31,818**	**34,113**	**37,029**

9 Total revenue requirement

The chapter summarises the outcomes of the previous chapters to develop the total revenue requirement for the 2012-17 Access Arrangement period.

9.1 Corporate income tax

The AER required the following revisions to be made relating to corporate income tax:

Revision 8.1: Make all necessary amendments to reflect the AER's draft decision on the proposed corporate income tax allowance for the 2013–17 access arrangement period, as set out in table 8.1.
Revision 8.2: Make all necessary amendments to reflect the AER's draft decision on the opening tax asset base as at 1 January 2013, as set out in table 8.3.
Revision 8.3: Make all necessary amendments to reflect the AER's draft decision on the remaining tax asset lives for the 2013–17 access arrangement period, as set out in table 8.4.

The calculation of the corporate income tax allowance is mechanical in nature and is conducted in the revenue model supplied to the AER. Revision 8.1 is therefore addressed by the model.

The AER also required minor amendments to asset tax lives, which APA GasNet has accepted and reflected in the tabled below.

Table 9.1: Tax asset base 208-2012

$m (nominal)	2008	2009	2010	2011	2012
Opening TAB	165.7	186.1	177.0	167.7	201.4
Capital expenditure	37.8	10.2	10.6	53.6	58.0
Tax depreciation	-17.4	-19.3	-19.9	-19.9	-22.4
Total	**186.1**	**177.0**	**167.7**	**201.4**	**237.0**

Table 9.2: Tax asset base 2012-2017

$m (nominal)	2013	2014	2015	2016	2012
Opening TAB	237.0	230.6	329.3	330.2	317.2
Capital expenditure	11.3	117.1	24.8	12.4	9.7
Tax depreciation	-17.7	-18.4	-24.0	-25.3	-26.0
Total	**230.6**	**329.3**	**330.2**	**317.2**	**300.9**

Table 9.3: Allowance for corporate income tax

$m (nominal)	2013	2014	2015	2016	2017
Tax allowance	9.5	9.6	9.9	9.7	8.8

Table 9.4: Total revenue requirement

$m (nominal)	2013	2014	2015	2016	2017
Return on capital	51.0	51.7	58.2	58.0	56.8
Depreciation	24.7	25.5	28.8	29.6	27.6
Tax allowance	9.5	9.6	9.9	9.7	8.8
Incentive mechanisms	1.0	-1.7	-2.2	-1.9	0.0
Operating expenditure	30.7	32.0	34.0	36.0	37.0
Total revenue requirement	**116.9**	**117.2**	**128.7**	**131.5**	**130.2**

10 Capacity utilisation forecasts

The Draft Decision did not approve APA GasNet's capacity utilisation forecasts for 2013-2017 access arrangement period. In particular, the Draft Decision did not accept the proposed increase in utilisation of the NSW Interconnection section of the VTS.

Revision 9.1:
Make all necessary amendments to reflect the AER's draft decision on the proposed capacity utilisation forecasts for the 2013–17 access arrangement period, as set out in Table 9.6, Table 9.7 and Table 9.8.

APA GasNet has examined the Draft Decision; the Draft Decisions for each of the Victorian Gas Distribution businesses and the AEMO updated forecasts to prepare the capacity utilisation forecast contained in this Revised Proposal Submission.

The relevant tables in the AAI have therefore been updated to reflect not only the changes arising out of the Draft Decision but also the further changes resulting from APA GasNet's response to that Draft Decision.

10.1 Tariff V & D

APA GasNet in preparing this revised proposal has adopted the Gas Distribution businesses forecasts of their respective Tariff V loads. This ensures that APA GasNet's forecast is consistent with the forecasts approved by the AER. The Gas Distribution individual forecasts were developed by independent consultants and reviewed by ACIL Tasman for the AER. These forecasts were approved by the AER.

APA GasNet for the Tariff D forecast has utilised the latest available AEMO forecast. This approach is consistent with the preparation of the revised access arrangement where APA GasNet utilised the then latest available system demand forecast published by AEMO as the basis of its forecast demand for Tariff D for the 2013-17 AA period. AEMO updated this forecast in October 2012 and APA GasNet has utilised this later forecast in developing this revised proposal.

APA GasNet notes that the forecasts for the annual Tariff V loads that the Gas Distribution companies presented to the AER (and as approved) are different to both the earlier and the latest AEMO forecasts. As all Victorian Tariff V demand is supplied through the distribution systems, the aggregated distribution company forecasts should equal the total Tariff V load on the VTS less an allowance for Distribution Unaccounted for Gas (DUAFG). DUAFG is not included in the Gas Distribution Businesses forecasts as they relate only to sales gas. The transmission forecast includes allowance for DUAFG at the standard rate for each of the distribution businesses. There is also an allowance in the Gas Distribution Businesses forecasts for gas demand arising from distribution systems that are not supplied from the VTS such as the South and East Gippsland systems. However, the aggregate demand from these systems is quite small.

The variance between the aggregated gas distribution businesses forecasts and the Tariff V portion of the AEMO forecast, after allowance for DUAFG and non VTS supplied distribution demand, ranged from 8.1 PJ in 2013 to 12.2 PJ in 2017. The distribution company forecasts are lower than the AEMO forecast. The distribution forecasts have a decline in demand of 0.3% per annum over the AA period. APA GasNet understands that these forecasts reflect a continuation of the historical trend of reducing average gas usage by Tariff V customers. This is due to a combination of factors including continuing penetration of reverse cycle air conditioning, solar hot water, insulation retrofitting and six star new home regulations. While the AEMO forecast also takes these factors in consideration, the Gas Distribution Businesses forecasts are preferred because their forecasts reflect their individual circumstances and correlate well with their current experience.

APA GasNet therefore has used these approved forecasts for the Tariff V portion of its forecast demand for the 2013-17 AA period. The latest AEMO forecast has been utilised for Tariff D.

10.2 Gas to Culcairn

The draft decision approved a smaller gas to Culcairn project based on an incremental load of [redacted] TJ/day. APA GasNet has reviewed the project and is proposing a different solution in this response. This is discussed in section 4.2.1.1 above. This new proposal has changed the capacity and usage projected for the Interconnect over the 2013-17 AA period. These changes have been incorporated into the capacity utilisation forecasts.

11 Tariff setting

The AER required a number of revisions related to cost allocation and tariff setting. Except as discussed below, these have been implemented in the APA GasNet tariff model.

Revision 10.1: Allocate the direct (conforming) costs of the Warragul lateral to the Lurgi asset group and the Lurgi tariff zone.
Revision 10.2: Allocate the direct (conforming) costs of the Anglesea pipeline extension to the Geelong tariff zone.
Revision 10.3: Allocate the direct (conforming) costs of the Kalkallo lateral to the Metro tariff zone irrespective of the connection point of the lateral.
Revision 10.4: Provide the direct costs of the existing South West pipeline and Murray Valley assets on a stand-alone basis consistent with the treatment in the 2008–2012 access arrangement.
Revision 10.5: Provide the (conforming) costs of the Wollert to Wodonga expansion and the Stonehaven compressor on a stand-alone basis consistent with the treatment of the South West pipeline and the Murray Valley pipeline in the 2008–2012 access arrangement.
Revision 10.6: Allocate the direct costs on the Wollert to Wodonga pipeline using the standard physical path cost allocation procedure provided that the costs allocated to the Culcairn export tariff exceed the incremental (conforming) direct costs of the Wollert to Wodonga expansion. To the extent this is not achieved, allocate the additional incremental costs to the Culcairn export tariff.
Revision 10.7: Allocate the approved tax liabilities to asset group costs in the same way that the return on assets is allocated to asset group costs.
Revision 10.8: Remove the 'rolled-out' costs associated with the Interconnect assets, the South West pipeline and the Brooklyn Lara pipeline from the indirect costs allocated to tariff-V and tariff-D users in the Western zone.
Revision 10.9: Allocate indirect costs (including 'rolled-out' costs) to each of the Northern zones and the Culcairn export point on a variable basis between 0% and 100% to make the real tariff deviations from the 2008–12 access arrangement period, to the extent possible, commensurate with the forecast change in average revenue across the system.

Revision 10.10:   Calculate the shares of the direct costs of the South West pipeline (including the Stonehaven compressor) which are allocated as 'rolled-out' costs in such a way that the Port Campbell tariff is equal to the Longford injection tariff. However, the 'rolled-out' costs of the South West pipeline cannot be allowed to exceed 50% of the total direct costs of the pipeline.
Revision 10.11:   Calculate the shares of the direct costs of the Interconnect assets which are allocated as 'rolled-out' costs in such a way that the initial 2013 Culcairn injection tariff is equal to the real approved 2012 tariff from the 2008–12 access arrangement, adjusted for the average revenue change from 2012 to 2013, but no greater than the Longford injection tariff.
Revision 10.12:   Amend the tariff model to correct miscellaneous numerical, forecasting and coding errors which are noted in this draft decision.
Revision 10.13:   Insert the following paragraph to section 4.2 of the proposed access arrangement: (c) the AMDQ CC Tariff, being the tariffs for AMDQ CC services

APA GasNet has incorporated the cost allocations in accordance with Revisions 10.1 to 10.4.

APA GasNet has provided the cost allocations in accordance with Revision 10.5.

APA GasNet has confirmed that the direct costs of the Wollert to Culcairn expansion are less than the costs allocated to the Culcairn export tariff.

APA GasNet has incorporated the cost allocations in accordance with Revision 10.7.

Revision 10.8 was not required as no allocation of the ‘rolled out’ costs was applied to any Western zone tariffs in the APA GasNet submission tariff model.

Revision 10.9 has been implemented. The level of allocation of indirect costs to the various Northern zones is variable. APA GasNet expects to further adjust these levels in the final approval process when all the factors affecting the tariff levels are finalised. The percentage of indirect costs assigned to the Culcairn withdrawal tariff is currently zero but may change in the final outcome. Until all aspects of the tariff calculation are finalised the level of allocation of indirect and ‘rolled out’ costs to all of these zones is indicative only.

Revisions 10.10 to 10.12 have been implemented.

Revision 10.13 has not been implemented because, as discussed in Section 2, APA GasNet does not accept the AER’s decision to treat AMDQ CC as a pipeline service and provide a tariff.

11.1 Miscellaneous Revisions

Revision 10.12 noted that there were a number of errors in the tariff modelling. These were addressed as detailed below.

11.1.1 Geelong Zone

The Geelong withdrawal zone is to be reinforced by the addition of a new connection from the South West pipeline to Anglesea. The Draft Decision identified that the cost of the Anglesea pipeline should be included in the Geelong zone costs rather than the South West pipeline costs. APA GasNet has addressed this requirement by creating a separate asset zone for the Anglesea pipeline which is part of the Geelong zone. This amendment caused APA GasNet to remove a change to the tariff model that had been made by the AER to allow a more accurate tariff to be calculated for the Geelong withdrawal zone. The new asset zone coupled with adjustments to the gas flowpaths to incorporate the new zone enabled the correct allocation of costs to the Geelong withdrawal zone.

11.1.2 Optimised Replacement Costs (ORC)

ORC is used to allocate asset costs across the existing transmission system. The draft decision questioned some of the ORC valuations.

11.1.2.1 Euroa Compressor Station

The ORC for the Euroa compressor station was incorrectly captured in the zonal ORC values and this has been corrected.

11.1.2.2 Other Compressor Stations

Only costs of new facilities are incorporated into the ORC values whether the new facility is a replacement or system expansion. In the event that a new facility is a replacement of an existing facility, the prior ORC valuation is replaced by the new ORC valuation not added on to the old value. In the tariff model the value of an upgrade was added to the ORC valuation for the Gooding compressor station. This has been corrected.

11.1.3 Allocation of Base Year Costs

2011 is the base year for generating operating costs for the 2013-17 AA period. However, the Euroa compressor station was not commissioned until 2012 so its costs are not incorporated into the base year. At the same time that the commissioning of the Euroa compressor station occurred, there was a change in the operation of the transmission system such that, while the total operating costs remained relatively steady, the allocation of those costs across the system changed. Additionally, increased usage of compressors on the VTS means that relatively more effort will be expended on them than on the field regulators and city gates in future years so the overall allocation of base year operating costs has been adjusted to slightly reflect this change.

11.1.4 Gas Flows out of VTS at VicHub

Gas flows out of the VTS at VicHub have not been included in the allocation of required revenue as they have generally been small and sourced largely from injections at Longford. Because of these factors the revenue effect has been minimal and is accounted for in the annual tariff review mechanism.

In the submission for the 2013-17 AA period APA GasNet forecast gas flows out of the VTS at VicHub of 2 PJ/yr. However, these flows were not accounted for in the tariff model. APA GasNet chose to continue to treat flows at VicHub consistently with historical processes because the revenue effect of the flows is difficult to forecast and is still small. As per past practise the revenue will continue to be accounted for in the annual tariff review.

Gas flows out of the VTS at VicHub have increased from variable totals in the 2003-09 period averaging 0.3 PJ/year to 2.4 PJ in 2011. The monthly rate in 2012 YTD has almost halved. Much of this gas is still sourced from Longford and thus attracts no withdrawal tariff.

Because of the uncertainty in forecasting the gas flow and the small revenue effect APA GasNet continues to consider that it is better to ignore gas flows out of the VTS at VicHub in generating tariffs and to account for any actual revenue generated in the annual tariff review process. This process avoids the uncertainties in generating initial tariffs while still ensuring that all of the actual revenue that may be generated from such exports is captured in the allowed revenue over the AA period. Therefore APA GasNet has not accepted this revision.

11.1.5 Treatment of Warrnambool and Koroit Tariffs

The level of discount of indirect costs for the Warrnambool and Koroit tariffs was raised in the draft decision. The tariff model provides for discounts of more than 100% for these tariffs. While such discounts would not normally be acceptable, in this case they are actually the mechanism used to provide for the bypass tariffs that have been approved for these offtakes. The discount is at a level that results in the tariffs for these offtakes being set at the bypass tariff. Using this mechanism allows the re-allocation of revenue recovery, resulting from the discount, from these offtakes through the operation of the scaling factors in the tariff calculation sheet in the tariff model. This obviates the need for manual adjustment of the model.

11.2 Cost allocation to the reference and non-reference services

The AER has requested supporting information on the allocation process as identified in section 10.4.5 of the Draft decision.

APA GasNet has previously provided information supporting the net change of the allocation for the forecast period in information request No 24. This involved providing the information for the period 2008 – 2011 of the shared costs and the percentage applied to these costs.

APA GasNet could summarise its cost base into the following categories:

- Direct O&M (Regulated);
- Direct O&M (Non-regulated);
- Indirect Costs;
- Shared Costs; and
- Corporate Overheads.

APA GasNet has historically identified all direct costs at the lowest level possible including those non-regulated activities (non-reference services). This is consistent with APA Group's ring fencing obligations. In all circumstances where possible, all relevant labour, labour time-writing and direct O&M have been recorded against project codes linked to physical assets or pipeline activities whether they be of a regulated or non-regulated nature. The respective non-regulated services of LNG, Metering & 3rd party agreements are consistently identified and removed from any regulatory opex calculation.

Where indirect costs are common to both business segments generally as a result of a business organisational responsibility, (ie a Victorian Operations Manager) a portion of those costs are allocated out to the non-regulated business.

Shared costs are those support functions that include all of APA GasNet and are subject to the above percentage allocation.

Corporate overheads are those costs incurred by the wider APA Group and are included as a separate component.

The allocation principle has been in place during AA3 and has been modified to incorporate the transfer of costs from a local cost to the corporate overhead costs.[168] APA GasNet moved from a stand-alone entity to being integrated into the wider APA group during the AA3 period.[169]

Fundamentally the APA GasNet business has not changed significantly over the previous access period in that the regulated business coexists with the LNG, metering and third party businesses.

As assets are added to the system (ie Euroa CS), cost capturers are created consistent with the scope changes additions. Correspondingly, indirect costs are reallocated incorporating these new assets.

A list of the active operating costs projects and the allocation process has been included in confidential Attachment 11.1. This illustrates the range of cost capturers in existence in the APA GasNet business.

[168] APA GasNet Submission March, Section 9.1.1

[169] APA GasNet Submission March, Section 9.2.1

APA GasNet considers that the Draft Decision is not clear on the commencement date of new tariffs. In the tariff models accompanying this submission, all tariffs have been calculated as annual tariffs as would apply throughout the full year.

12 Tariff variation mechanism

12.1 Application of revised tariffs

12.1.1 Draft decision

In section 11.4.2 pages 313 - 314 of Part 2 of the Draft Decision the AER indicates that there will be a delay in the making of the final decision and that the AER has therefore taken into account the operation of rule 92(3) in fixing reference tariffs for the 2013-17 access arrangement period. The AER states that it considers that the 2013 reference tariffs under the 2013-17 access arrangement should take effect from 1 July 2013 until 31 December 2013.[170]

The AER does not set out in the Draft Decision how it proposes to take into account the operation of rule 92(3) in fixing reference tariffs for the 2013-17 access arrangement period, other than to indicate that the "interval of delay" should not result in service providers incurring a "windfall gain or loss, compared with what would have occurred if the 2013-17 access arrangements had taken effect from 1 January 2013".[171]

12.1.2 APA GasNet response

APA GasNet submits that no relevant "interval of delay" arises in respect of the APA GasNet access arrangements. Rule 92(3) uses the term "interval of delay" to refer an interval between a revision commencement date stated in a full access arrangement and the date on which revisions to the access arrangement actually commence.

Under the National Third Party Access Code for Natural Gas Pipelines (pursuant to which the access arrangement currently applying to the VTS was approved), an Access Arrangement was required to include, amongst other things, "a date upon which the next revisions to the Access Arrangement are intended to commence", which was termed the "Revisions Commencement Date".[172]

The access arrangement currently applying to the VTS contains the following Revision Commencement Date:

> 2.3 Revisions Commencement Date
>
> The Revisions Commencement Date is the later of 1 January 2013 and the date on which approval of revisions to this Access Arrangement take effect.[173]

Clause 3(9) of Schedule 1 of the NGR provides that a date designated in a "transitional access arrangement"[174] as a revisions commencement date will be taken to be a revision commencement date for the purposes of the NGR.

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170 Draft Decision. Part 2, Attachment 11.

171 Draft Decision. Part 2, Attachment 11.

172 Section 3.17(b) of the Code.

173 APA Group, *GasNet Australia Access Arrangement*, commencement date 1 January 2008, p 3.

Rule 92(3) of the NGR deals with the situation where there is an interval of time between a revision commencement date and the date on which revisions to the access arrangement actually commence. It provides:

> However, if there is an interval (the **interval of delay**) between a revision commencement date stated in a full access arrangement and the date on which revisions to the access arrangement actually commence:
>
> (e) (a) reference tariffs, as in force at the end of the previous access arrangement period, continue without variation for the interval of delay; but
>
> (f) (b) the operation of this subrule may be taken into account in fixing reference tariffs for the new access arrangement period.

As noted above, the date upon which it is intended revisions to the current APA GasNet access arrangement would take effect is the later of 1 January 2013 and the date on which approval of revisions to the access arrangement take effect. Given this, there is no relevant interval of delay between the revision commencement date stated in the current access arrangement and the date on which revisions to the current access arrangement are approved by the AER and actually commence. APA GasNet submits that rule 92(3)(b) does not have any relevant operation in these circumstances.

12.2 Updated references

Revision 11.1.
Delete the definition of Actual EDD and VW in Schedule D5 of the proposed access arrangement and replace it with the following:
Actual EDD is the actual measured EDDs for a Regulatory Year, as reported in the AEMO APR or otherwise made available by AEMO
VW is the actual withdrawal from the VTS excluding:
(i) any tariff refills at WUGS or the LNG Storage Facility; and
(ii) forecast volumes for the incremental Murray Valley tariff.

APA GasNet has incorporated the required changes in the revised access arrangement in accordance with Revision 11.1.

[174] The current access arrangement applying to the VTS is a "transitional access arrangement" as it is an access arrangement that was in force under the Code and which continues in force as a full access arrangement under clause 26 of Schedule 3 to the NGL (see definitions in clause 1 of Schedule 1 of the NGR).

12.3 Approval of tariff adjustments

> ***Revision 11.2:***
>
> Delete the following text under section 4.7.5 of the proposed access arrangement
>
> If Service Provider proposes adjustments to the Reference Tariffs (other than as a result of a Cost Pass-through Event) and those adjustments have not been approved by the next 1 January, then the Reference Tariffs will be adjusted with effect from that following 1 January in accordance with the notice, until such time as adjustments to Reference Tariffs are approved by the AER.
>
> and replace it with the following:
>
> If Service Provider proposes adjustments to the Reference Tariffs (other than as a result of a Cost Pass-through Event) and those adjustments have not been approved by the next 1 January, then the existing Reference Tariffs will apply until such time varied Reference Tariffs consistent with the access arrangement are approved by the AER.

APA GasNet has incorporated the required changes in the revised access arrangement in accordance with Revision 11.2.

12.4 Application of materiality threshold to cost pass through events

> ***Revision 11.3:***
>
> Replace the first paragraph under heading 4.7.2 of APA GasNet's proposed access arrangement with:
>
> Subject to the approval of the AER under the National Gas Rules, Reference Tariffs may be adjusted after one or more Cost Pass-through Event/s occurs in which each individual event materially increases or materially decreases, or is reasonably expected to materially increase or decrease, the cost of providing the Reference Service. If a carbon cost event occurs, Service Provider must apply to the AER for a cost pass through if the carbon cost event materially decreases the cost of providing the Reference Service. Any such adjustment will take effect from the next 1 January.

APA GasNet accepts this revision in part.

APA GasNet accepts the inclusion of the requirement that where a Carbon Cost Event occurs that decreases the cost of providing the Reference Service, APA GasNet must apply to the AER to have that change reflected in tariffs. This change has been incorporated into the revised access arrangement.

APA GasNet does not accept the other part of this revision, which introduces into the first paragraph of section 4.7.2 of the AA, a materiality threshold which could be interpreted as applying to all cost pass-through events. APA GasNet considers that the application of the materiality threshold is clearly set out in section 4.7.3 of the AA and the definition of each event. In particular, the AER has accepted APA GasNet’s proposal that no materiality threshold apply to the carbon cost event. The AER’s proposed additions potentially undermine this decision.

Another aspect of the AER’s proposed revision appears to be to ensure that, where a materiality threshold applies, it applies to each individual event. APA GasNet considers that this is already made clear in section 4.7.3 of the AA which states that:

> For the purpose of a defined Cost Pass-through Event which has a materiality threshold of materially increasing or decreasing the costs to Service Provider of providing the Reference Service, **an event is considered to materially increase or materially decrease costs where that event** *is reasonably expected to have* an impact of one per cent of the smoothed forecast revenue specified in the Access Arrangement Information, in the years of the Access Arrangement Period that the costs are incurred.

This refers to single events having to meet the materiality threshold, rather than events in aggregate (see text in bold). APA GasNet therefore does not consider that the AER's amendment is necessary.

APA GasNet has, however, incorporated an aspect of the AER's amendment into the definition of the materiality threshold related to a reasonable expectation of a material change in costs (see italicised text above). This amendment is consistent with the definition of a carbon cost event by ensuring that a pass through application can be made before all costs are necessarily finalised, but where those costs are reasonably expected to exceed the materiality threshold. This approach aids efficiency by ensuring that APA GasNet can make a cost pass through application as soon as possible after an event occurs, giving the AER and users maximum notice as to the event and the expected quantum of costs. This change is also consistent with the AER's required amendment 11.3, and the AER's revisions to the carbon cost event in amendment 11.4.

12.5 Carbon costs

This section should be considered in conjunction with section 8.2.5.

Regarding carbon costs, the AER requires APA GasNet to implement Revision 11.4:

> ***Revision 11.4:***
>
> APA GasNet's proposed revised access arrangement with:
>
> Carbon cost event–means:
>
> An event that occurs if, for a given Regulatory Year of the Access Arrangement Period, the Service Provider incurs a carbon cost (part of which may be an estimate) in complying with the carbon pricing mechanism established under the Clean Energy Act 2011 (Cth) and associated legislation relating to the management of greenhouse gas for that Regulatory Year. The carbon cost event is taken to have occurred at the time that it is possible for Service Provider to calculate the carbon costs it has incurred for a Regulatory Year without use of estimation.

12.5.1 Draft Decision

The draft decision amended the proposed carbon cost pass through in Revision 11.4. Where the proposed carbon cost pass through provision simply accommodated a true-up between forecast and actual carbon costs and tariffs, the draft decision pass through provision only allows carbon costs to be recovered once they are known with certainty.

APA GasNet considers that the carbon cost pass through mechanism must be consistent with the policy intention associated with providing behavioural price signals through the carbon tax, and with the treatment of carbon costs included in opex. In APA GasNet's original submission, forecast carbon costs were included in opex, and the pass through mechanism simply served to "true up" the forecast opex to the actual carbon costs incurred.[175]

The approach reflected in Revision 11.4 would be effective (and acceptable) if carbon costs were both imposed on APA GasNet and retained in the opex forecast.

However, the draft decision rejected APA GasNet's original proposal to include carbon costs in the opex forecast:[176]

> Accordingly, the AER does not approve APA GasNet's proposed opex allowance for the recovery of these direct carbon costs. The AER considers that if APA GasNet receives confirmation that it will incur this liability prior to the AER issuing its final decision, then the AER will assess this impact as part of the access arrangement determination. If APA GasNet does not receive confirmation until the 2013–17 access arrangement period, then the AER considers this would best be treated as a regulatory change pass through event.

The AER appears to understand the uncertainty on the issue, and concurs with APA GasNet on the key principle that APA GasNet should be able to pass through carbon costs if they are incurred:[177]

> The AER considers that in view of the uncertainty surrounding APA GasNet's liability for carbon costs, it is appropriate to approve an event that enables any carbon costs to be passed through, in the event that any are incurred.

However, should liability for carbon costs be imposed on APA GasNet, the current pass through provision in Revision 11.4 provides that the pass through event would not occur until "it is possible for Service Provider to calculate the carbon costs it has incurred for a Regulatory Year without use of estimation". This has two key implications:

- APA GasNet would not be able to recover costs through tariffs until the second year after the liability for carbon costs has been incurred; and
- Users would not see the price signals that might lead them to modify their behaviour to reduce the impact of the carbon costs, thus undermining the price signals inherent in the carbon tax policy regime, and the ability of users to manage their costs.

APA GasNet submits that this outcome would be unsatisfactory for both the service provider and users were APA GasNet ultimately to become responsible for carbon costs.

Given the uncertainty surrounding this issue driving the AER's decision to remove carbon tax from opex, it will be necessary to develop a pass through mechanism that:

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175 APA GasNet acknowledges a degree of complexity in the true-up mechanism in that it potentially included estimates for a particular year's carbon tax liability over two true-up years.

176 AER Draft Decision Part 2 Section 6.5.3

177 AER Draft Decision Part 2 Section 11.4.4

- is flexible enough to accommodate the Clean Energy Regulator's final declaration on the question of whether the carbon tax should be borne by APA GasNet or AEMO;
- allows carbon costs to be passed through to users in the same time frame as liability for those carbon costs is incurred;
- does not result in scope for gains or losses to APA GasNet on passing carbon costs through to users; and
- need not be activated in the event that the final decision of the Clean Energy Regulator imposes liability for carbon costs on AEMO.

It should be noted that the construction of carbon cost pass through provisions and true-up mechanisms have undergone considerable analysis since APA GasNet filed its proposal in March 2012. The current state of play can be found in the Roma to Brisbane Pipeline (RBP) AA where carbon costs are included in opex, and in the Allgas AA in circumstances where carbon costs are not included in opex. APA GasNet considers that it would be administratively simpler for all to utilise a pass through mechanism that has already been reviewed and approved by the AER.

In both the RBP and Allgas cases:

- forecast carbon costs are reflected in tariffs in the carbon year to which they apply in order to deliver the price signals to decision makers;
- the forecast amount of carbon costs are specified for the entire length of the regulatory period, and form one of the features of the pass through mechanism; and
- a true-up mechanism is included to ensure that the tax collection entity does not have scope to suffer or benefit as a result of passing the tax through to decision makers.

Given the remaining uncertainty on whether carbon costs will be borne by APA GasNet or AEMO, forecast carbon costs have been removed from the opex forecast as discussed in section 8.2.5. APA GasNet therefore proposes to proceed on the same basis as the carbon cost pass through and true-up mechanism approved by the AER for the Allgas network, as discussed below.

12.5.2 Carbon cost liability and cash flows

The regulatory treatment of carbon costs must be responsive to the features of the carbon cost scheme if it is to be effective in sending price signals to users and removing the risk of over or under collection of carbon costs by the service provider.

In this regard, it is important to understand the timing of incurrence of carbon liability, the payment for purchase and surrender of carbon certificates, the requirements for estimation in the scheme, and the date by which reconciliations are complete and actual carbon costs for a particular year are known.

In particular, using the 2012/13 carbon year as an example:[178]

Table 12.1: Carbon cost time line

Activity	Timing	Example
Incur carbon liability	Evenly through carbon year t	July 2012 – June 2013
Purchase and surrender carbon certificates worth 75% of forecast carbon liability	Month 12 of carbon year t	June 2013
Reconcile forecast to actual carbon liability	4 months after end of carbon year t (ie month 4 of carbon year t + 1)	October 2012
Purchase and surrender carbon certificates worth balance of reconciled carbon liability (about 25%)	8 months after end of carbon year t (ie month 8 of carbon year t + 1)	February 2013
File regulatory pass through application for carbon cost true-up	10 months after end of carbon year (ie month 10 of carbon year t + 1)	April 2013
Collect/refund differences between actual carbon costs and actual carbon costs collected through tariffs	Evenly through carbon year t + 2	July 2014 – June 2015

This is shown schematically in Figure 12.2.

By way of example, the Allgas carbon cost pass through mechanism, applied to APA GasNet, would therefore be expected to operate as follows: [179]

[178] This discussion presumes that the AER will approve APA GasNet tariffs effective 01 July 2013, and annual tariff changes on 01 July in each year thereafter. APA GasNet's tariff will actually vary by calendar year.

[179] Carbon values relevant to Allgas have been included here to demonstration purposes, as APA GasNet's forecast carbon costs in this revised submission is zero

Figure 12.1: Allgas carbon cost mechanism applied to APA GasNet

Line	Description	Unit	Carbon year 2012/13	Carbon year 2013/14	Carbon year 2014/15	Carbon year 2015/16	Carbon year 2016/17
1	Certified emissions figure for the network	Tonnes C02e	(To be reported each year in arrears)				
2	Forecast carbon emissions	Tonnes C02e	45,974	46,466	46,958	47,476	47,648
3	Actual carbon permit acquisition costs	$	(To be reported each year in arrears)				
4(a)	Forecast carbon permit acquisition costs	$	1,057,410	1,122,828	1,163,081	1,362,259	1,458,423
4(b)	Prior year (t-2) over (under) recovery	$	0	0	(9) [2012/13]	(9) [2013/14]	(9) [2014/15]
	Total	$	1,057,410	1,122,828	4(a) + 4(b)	4(a) + 4(b)	4(a) + 4(b)
	Forecast sales volumes						
5(a)	Tariff V	GJ	3,015,979	3,107,683	3,200,635	3,297,103	
5(b)	Tariff D	GJMHQ	2723	2733	2743	2753	
	Forecast carbon cost impact per unit						
6(a)	Tariff V	$/GJ	0.1057	0.1111	0.1139	0.1319	0.1407
6(b)	Tariff D	$/GJMHQ	0.7430	0.7889	0.8172	0.9572	1.0247
	Actual sales volumes						
7(a)	Tariff V	GJ	(To be reported each year in arrears)				
7(b)	Tariff D	GJMHQ	(To be reported each year in arrears)				
	Actual carbon cost recovery						
8(a)	Tariff V	$	(6a) * (7a)	(6a) * (7a)	(6a) * (7a)	(6a) * (7a)	(6a) * (7a)
8(b)	Tariff D	$	(6b) * (7b)	(6b) * (7b)	(6b) * (7b)	(6b) * (7b)	(6b) * (7b)
	Total						
9	Over (under) recovery	$	8(a)+8(b)-(4)	8(a)+8(b)-(4)	8(a)+8(b)-(4)	8(a)+8(b)-(4)	8(a)+8(b)-(4)

12.5.3 Adjustment to mechanism for VTS decision delay

Liability for carbon costs has been accruing since 01 July 2012, although as discussed above, there remains some debate about the party to whom they have been accruing. As the carbon scheme will have been in place for up to a year prior to carbon costs being reflected in tariffs, the carbon cost pass through will need to be able to accommodate carbon costs accrued over the 2012/13 fiscal year.

In the case of APA GasNet, the pass through mechanism will need to allow forecast costs for 2012/13 and 2013/14 to be collected through tariffs in 2013/14 and reconciled (for both carbon years) through tariffs in 2015/16. This is shown schematically in Figure 12.3.

Figure 12.2 – Schematic representation of carbon recovery and reconciliation

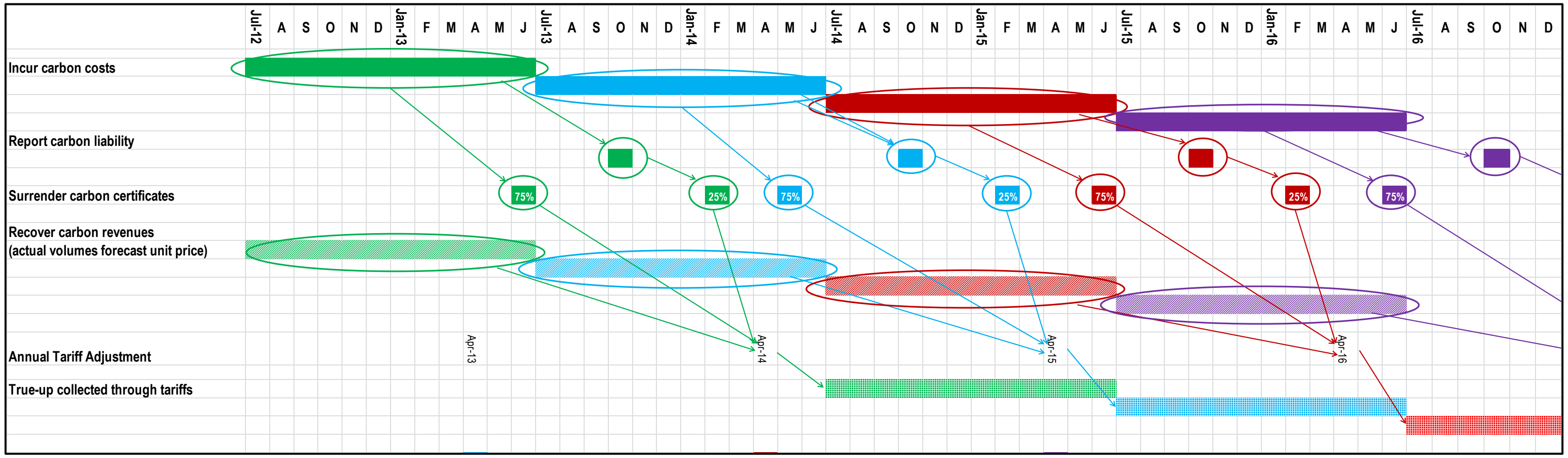
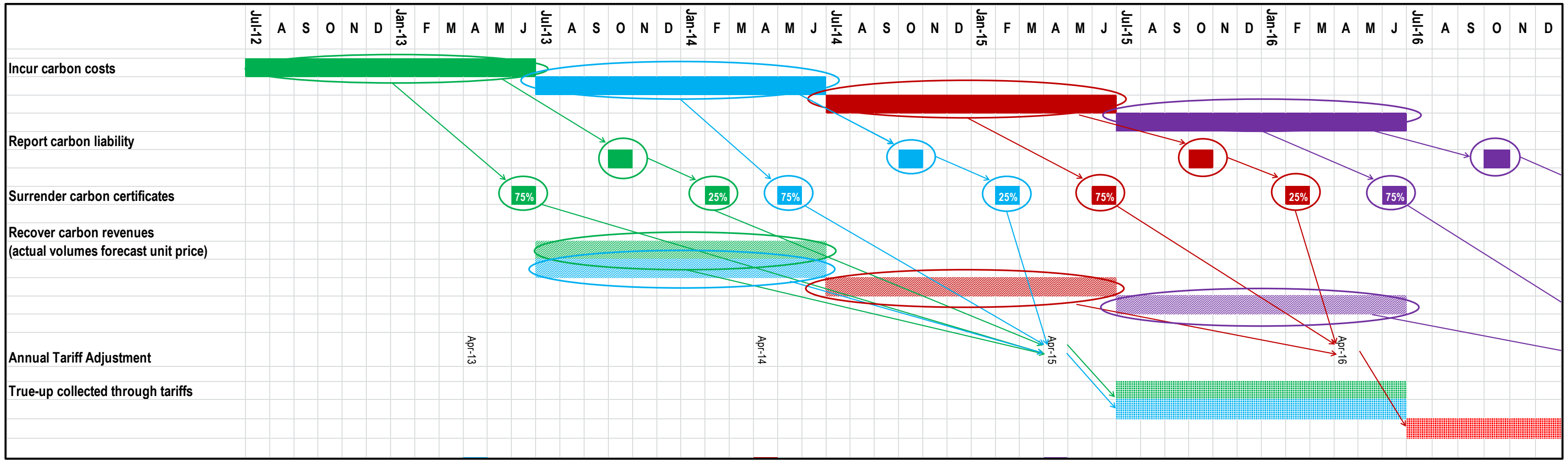


Figure 12.3 – Schematic representation of VTS carbon cost recovery and reconciliation with tariff delay



The Allgas carbon cost pass through mechanism, applied to APA GasNet as adjusted to accommodate the delay in implementing tariffs, would operate as follows:

Figure 12.4: Modified carbon cost true-up mechanism for APA GasNet

Line	Description	Unit	Carbon year 2012/13	Carbon year 2013/14	Carbon year 2014/15	Carbon year 2015/16	Carbon year 2016/17
1	Certified emissions figure for the network	Tonnes C02e	(To be reported each year in arrears)				
2	Forecast carbon emissions	Tonnes C02e	45,974	46,466	46,958	47,476	47,648
3	Actual carbon permit acquisition costs	$	(To be reported each year in arrears)				
4(a)	Forecast carbon permit acquisition costs	$	1,057,410	1,057,410 1,122,828	1,163,081	1,362,259	1,458,423
4(b)	Prior year (t-2) over (under) recovery	$	0	0		(9) [2012/13] (9) [2013/14]	(9) [2014/15]
	Total	$	1,057,410	2,180,238	1,163,081	4(a) + 4(b)	4(a) + 4(b)
	Forecast sales volumes						
5(a)	Tariff V	GJ	3,015,979	3,107,683	3,200,635	3,297,103	
5(b)	Tariff D	GJMHQ	2723	2733	2743	2753	
	Forecast carbon cost impact per unit						
6(a)	Tariff V	$/GJ	0.1057	0.2157	0.1139	0.1319	0.1407
6(b)	Tariff D	$/GJMHQ	0.7490	1.5319	0.8172	0.9572	1.0247
	Actual sales volumes						
7(a)	Tariff V	GJ	(To be reported each year in arrears)				
7(b)	Tariff D	GJMHQ	(To be reported each year in arrears)				
	Actual carbon cost recovery						
8(a)	Tariff V	$	(6a) * (7a)	(6a) * (7a)	(6a) * (7a)	(6a) * (7a)	(6a) * (7a)
8(b)	Tariff D	$	(6b) * (7b)	(6b) * (7b)	(6b) * (7b)	(6b) * (7b)	(6b) * (7b)
	Total						
9	Over (under) recovery	$	8(a)+8(b)-(4)	8(a)+8(b)-(4)	8(a)+8(b)-(4)	8(a)+8(b)-(4)	8(a)+8(b)-(4)

12.5.4 Way forward

APA GasNet proposes to amend the carbon cost pass through mechanism as outlined above. In this regard, the definition of a Carbon Cost Event must activate the pass through provisions when liability for carbon costs is established, rather than when the reconciliation has been finalised. In order to accommodate the regulatory delay, the pass through provision must also be able to recover carbon costs for with the liability has been established relating to a prior regulatory period (in this case 2012/13).

Importantly, if the final decision of the Green Energy Regulator confirms that liability for carbon costs is to rest with AEMO, then a carbon cost event would not occur, and the provision would remain inactive.

> Carbon cost event–means:
>
> An event that occurs if, for a given Regulatory Year of the Access Arrangement Period, the Service Provider ~~incurs~~ becomes liable for a carbon cost (part of which may be an estimate) in complying with the carbon pricing mechanism established under the Clean Energy Act 2011 (Cth) and associated legislation relating to the management of greenhouse gas for that Regulatory Year or a previous Regulatory Year. The carbon cost event is taken to have occurred at the time liability for carbon costs is established. Actual carbon costs and associated revenues are to be reconciled at the time that it is possible for Service Provider to calculate the carbon costs it has incurred for a Regulatory Year without use of estimation.

12.6 Insurance cap event

Revision 11.5:

Delete the definition of insurance cap event in section 4.7.2 of APA GasNet's proposed access arrangement and replace it with the following definition

An Insurance Cap Event means an event whereby:

(a) APA GasNet makes a claim on a relevant insurance policy;

(b) APA GasNet incurs costs beyond the relevant policy limit; and

(c) The costs beyond the relevant policy limit materially increase the costs to APA GasNet of providing reference services.

For the purposes of this Insurance Cap Event:

(d) The relevant policy limit is the greater of APA GasNet's actual policy limit at the time of the event that gives rise to the claim and its policy limit at the time the AER made its Final Decision on APA GasNet's access arrangement proposal for the period 2013-17, with reference to the forecast operating expenditure allowance approved in the AER's Final Decision and the reasons for that decision; and

(e) A relevant insurance policy is an insurance policy held during the 2013-17 Access Arrangement Period.

APA GasNet accepts this amendment, but has revised the text to be consistent with the terms and definitions included in the access arrangement revision proposal (for example references to "Service Provider" in place of "APA GasNet").

APA GasNet notes that this amendment is intended to incentivise APA GasNet to hold efficient levels of insurance. APA GasNet accepts that this incentive is appropriate, but also considers that the AER's decision elsewhere in the draft decision not to approve APA GasNet's actual insurance costs for the level of cover that APA GasNet considers to be efficient and prudent (see AER discussion on pages 215-6 of the draft decision) is inconsistent with this amendment.

APA GasNet has sought reinstatement of its actual insurance costs in its forecast operating expenditure as representing the costs incurred by a prudent service provider acting efficiently, and these costs ought to be accepted by the AER. Without this acceptance there would be a disconnect between the level of insurance (and associated cap) that the AER as approved as efficient and prudent, and the level of operating expenditure allowance required to attain that level of coverage. This would leave APA GasNet with an unacceptable double exposure (in opex and in costs exceeding the insurance cap) if it is not compensated for the actual costs of maintaining an efficient and prudent level of insurance.

Revision 11.6:
Delete sections 4.7.2 and 4.7.3 of APA GasNet's proposed access arrangement and insert the following at section 4.7.2:
Procedure for a Relevant Pass Through Event Variation in Reference Tariffs
APA GasNet will notify the AER of Relevant Pass Through Events within 90 business days of the relevant pass through event occurring, whether the costs would lead to an increase or decrease in Reference Tariffs.
When the costs of the Cost Pass Through Event incurred are known (or able to be estimated to a reasonable extent), then those costs shall be notified to the AER. When making a notification to the AER, APA GasNet will provide the AER with a statement, signed by an authorised officer of SP APA GasNet verifying that the costs of any pass through events are net of any payments made by an insurer or third party which partially or wholly offsets the financial impact of that event (including self insurance).
The AER must notify APA GasNet of its decision to approve or reject the proposed variations within 90 Business Days of receiving the notification. This period will be extended for the time taken by the Regulator to obtain information from APA GasNet, obtain expert advice or consult about the notification.
However, if the AER determines the difficulty of assessing or quantifying the effect of the Relevant Pass Through Event requires further consideration, the AER may require an extension of a specified duration. The AER will notify APA GasNet of the extension, and its duration, within 90 business days of receiving a notification from APA GasNet.
Subject to the approval of the AER under the NGR, Reference Tariffs may be varied after one or more Relevant Pass Through Event/s occurs, in which each individual event materially increases or materially decreases the cost of providing the reference services. Any such variation will take effect from the next 1 January. In making its decision on whether to approve the proposed Relevant Pass Through Event variation, the AER must take into account the following:
(a) the costs to be passed through are for the delivery of pipeline services
(b) the costs are incremental to costs already allowed for in reference tariffs
(c) the total costs to be passed through are building block components of total revenue
(d) the costs to be passed through meet the relevant National Gas Rules criteria for determining the building block for total revenue in determining reference services
(e) the efficiency of APA GasNet's decisions and actions in relation to the risk of the Relevant Pass Through Event occurring, including whether APA GasNet has failed to take any action that could reasonably be taken to reduce the magnitude of the costs incurred as a result of the Relevant Pass Through Event and whether APA GasNet has taken or omitted to take any action where such action or omission has increased the magnitude of the costs; and
(f) any other factors the AER considers relevant and consistent with the NGR and NGL.

APA GasNet notes that this revision is inconsistent with the AER's revision 11.3, which requires different changes to clause 4.7.2 of the access arrangement. In addition, these changes appear to overlap with the procedure for cost pass through applications included at section 4.7.4 of the access arrangement revision proposal, on which the AER has not require any amendment. APA GasNet assumes that the AER intended to refer to particular sections of clauses 4.7.2 and 4.7.4 of the access arrangement revision proposal, the text of which the AER appears to be amending in revision 11.6.

APA GasNet accepts the AER's amendment 11.6 in principle, though notes that it:

- Should apply to parts of clauses 4.7.2 and 4.7.4; and
- Introduces terms and definitions that are inconsistent with the current drafting of the access arrangement.

APA GasNet has therefore amended sections 4.7.2 and 4.7.4 of the access arrangement revision proposal to reflect the AER's intent in making this amendment (that is, the inclusion of a consideration related to the efficiency of APA GasNet's actions for decisions that could have reduced costs under the cost pass through event), while retaining the current structure of the access arrangement, consistency with AER revision 11.3, and existing terms and definitions.

APA GasNet notes there is a further amendment to section 4.7.4 contained in AER revision 11.6 that is not discussed in the draft decision related to extensions to the AER's time for considering cost pass through applications. APA GasNet has nevertheless incorporated this revision into the access arrangement.

APA GasNet has also clarified that the AER *may* extend the time it takes to assess a cost pass through application for the time taken to respond to requests for information, but is not required to do so. APA GasNet considers that a requirement that the AER take more time than it may need to undertake an assessment would not lead to an efficient process, however, the AER should have the scope to extend time if it feels that it needs to.

12.7 Other amendments

Revision 11.7:
Under section 4.7.3 of APA GasNet's proposed access arrangement, delete the words 'Access Arrangement Information' insert the following: 'specified in the AER's final decision on APA GasNet's access arrangement proposal'.

APA GasNet does not accept the AER's revision 11.7 as it does not reflect the process for approval of access arrangement revision proposals under the NGR.

Despite its name, the AER's "Final Decision" does not necessarily mark the end of the regulatory process or the tariffs that will ultimately apply in the access arrangement period. The tariff that will ultimately apply to Users can vary from the AER's Final Decision in a number of ways.

Under the Rule 64, the AER must propose an access arrangement where it refuses to approve a revision proposal under Rule 62 (its Final Decision). This AER imposed access arrangement need not be the same as that implied by the final decision, as the AER has scope to consult on its proposed access arrangement before it is imposed (see Rule 64(3)). Further, the AER's final decision can be varied by a decision of the Australian Competition Tribunal under section 259 of the NGL, or by an access arrangement variation proposal made under Rule 65.

In each of these cases, however, an updated Access Arrangement Information document should be prepared that will represent the most recent decision reflected in tariffs. It is therefore appropriate for the materiality threshold to refer to the Access Arrangement Information document as the relevant source of information as to the smoothed forecast revenue to be used in applying the materiality threshold.

Revision 11.8:
Replace the first paragraph under heading 4.6 of APA GasNet's proposed access arrangement with:
The initial Reference Tariffs (excluding GST) to apply from 1 July 2013 to 31 December 2013 are set out in Schedule A.

Revision 11.9:
APA GasNet is required to amend its proposed access arrangement:
(1) to make clear the Reference tariffs which applied in 2012 will continue to be apply in nominal terms until 1 July 2013.
(2) to make clear that 2013 Reference tariffs will only apply for the period 1 July 2013 to 31 December 2013
(3) to make changes to the process under section 4 of the access arrangement to reflect that 2013 Reference tariffs will commence on 1 July 2013 rather than on the start of the calendar year (1 January).

APA GasNet accepts these required amendments. APA GasNet notes that no changes are required to part 4 of the access arrangement to reflect the later start date of the access arrangement as the reference tariff adjustment mechanism applies within the access arrangement period.

Revision 11.10:
Delete section A2 and A3 in Schedule A of the proposed access arrangement and replace it with the following: (Table of tariffs)

AER revision 11.10 effectively updates reference tariffs to reflect the AER's revenue decision in the draft decision. APA GasNet has incorporated the intent of the required changes in the revised access arrangement in accordance with Revision 11.10, however APA GasNet has further updated tariffs to reflect its revised proposal.

13 Non tariff components

Revision 12.1 Amend the final two paragraphs of this clause as follows: *Following the word "interest" in each paragraph, insert:* Calculated at the Commonwealth Bank corporate overdraft reference rate plus two percentage points.*:*
Revision 12.2: Amend clause F8 of APA GasNet's Transmission Payment Deed, in appendix F of its access arrangement as follows: Insert a new paragraph between the first and second paragraph as follows: This clause does not apply to a failure to pay an amount where Service Provider has included that amount in an invoice issued under F2 and the user has disputed that amount, until such time as it is determined that the disputed amount is required to be paid.
Revision 12.3: Amend clause 5.1 of the proposed access arrangement to include the following: There are no applicable capacity trading requirements for the purposes of rules 48(1)(f) or 105 of the NGR.

13.1 Billing and Payment

APA GasNet accepts the AER's proposed revision 12.1.

13.2 Termination

APA GasNet accepts the AER's reasoning for its proposed revision to clause F8 of the Transmission Payment Deed, however, it considers further amendment should be made to the clause to ensure it is consistent with the NGO. While APA GasNet acknowledges the AER's concern that it should not be entitled to terminate the Transmission Payment Deed where a user has disputed an invoice, it considers this limitation should only be applied where the user is disputing the invoice in good faith. Such an amendment will protect users who have been incorrectly charged, but will not permit users to postpone payment of invoices by initiating spurious claims. APA GasNet therefore proposes to amend clause F8 of the Transmission Payment Deed and the AER's proposed revision 12.2 as follows:

"F.8 Termination

(a) The Transmission Payment Deed may, by written notice, be terminated or suspended by Service Provider, where the Shipper defaults in the performance of any of its material promises or obligations under the Transmission Payment Deed, after a 7 Business Day cure period.

(b) Clause F8(a) does not apply to a failure to pay an amount where Service Provider has included that amount in an invoice issued under clause F2 and the Shipper has a bona fide dispute in respect of an amount due under the invoice and has notified Service Provider of its

dispute, until such time as it is determined that the disputed amount is required to be paid.

(c) In addition to the above right to terminate or suspend the Transmission Payment Deed the Service Provider may also sue for damages or exercise any other available legal or equitable remedy.

(d) Either party may terminate the Transmission Payment Deed if:

(i) the Market Participant ceases to be a Market Participant;

(ii) the other party becomes insolvent; or

(iii) the Service Envelope Agreement between Service Provider and AEMO expires or is terminated.

(e) Termination of the Transmission Payment Deed will not affect any rights or obligations which may have accrued prior to termination."

13.3 Capacity trading requirements

APA GasNet accepts the AER's proposed revision 12.3.

A Attachments

Attachment 3.1	Application of Jemena Gas Networks (NSW) Ltd (No 3) [2011] ACompT 6 (25 February 2011), [56]
Attachment 4.1	Business Case BC175-Gas to Culcairn Project-Rev1
Attachment 5.1	CEG, *Internal Consistency of MRP and Risk Free Rate: Response to AER Victorian Gas Distribution Draft Decision*, November 2012
Attachment 5.2	PwC, *Economic meaning of gas legal instruments Expert report prepared for the Vic Gas Businesses*, November 2012
Attachment 5.3	NERA Economic Consulting, *Estimating the Cost of Equity under the CAPM*, Expert report of Gregory Houston, November 2012
Attachment 5.4	Gregory A., *The AER Approach to Establishing the Cost of Equity – Analysis of the Method Used to Establish the Risk Free Rate and the Market Risk Premium*, October 2012
Attachment 5.5	SFG Consulting, *The required rate of return on equity: Response to AER Victorian Gas Draft Decisions*, November 2012
Attachment 5.6	Wright, S., *Review of the Risk Free Rate and Cost of Equity Estimates: A Comparison of UK Approaches and the AER*, October 2012
Attachment 5.7	CEG, *Update to March 2012 Report on Consistency of the Risk Free Rate and MRP in the CAPM*, November 2012
Attachment 5.8	Ernst & Young, *Market Evidence on the Cost of Equity – Victorian Gas Access Arrangement Review 2013-2017*, November 2012
Attachment 5.9	Gregory, A., *The Risk Free Rate and the Present Value Principle*, November 2012
Attachment 6.1	PWC Depreciation of Assets Under the National Gas Rules
Attachment 6.2	*CONFIDENTIAL* Statutory Declaration Robert Wheals
Attachment 6.3	Statutory Declaration Mark Fothergill

Attachment 6.4	Australia Ratings, *Assessment of Implied Credit Rating Arising from the Australian Energy Regulator's Draft Decision on Access Arrangements for APA GasNet Australia (Operations) Pty Ltd for 2013-2017*, November 2012
Attachment 8.1	*CONFIDENTIAL Mercer report* - Jun 12 - Gasnet
Attachment 8.2	*CONFIDENTIAL EquipSuper Defined Benefit Scheme Funding Level* Sep12
Attachment 8.3	Australian Government Clean Energy Regulator, *Draft Decsion [sic] and Statement of Reasons Under Paragraph 55(1)(b) of the National Greenhouse and Energy Reporting Act 2007*, sections D.9 through D.12.
Attachment 8.4	BIS Shrapnel, *Real labour Cost Escalation Forecasts to 2017 – Australia and Victoria*, p.27, October 2012
Attachment 8.5	*Professor Jeff Borland, Recommendations for Methodology for Forecasting WPI Oct 2012*