APA Group

APT Allgas Energy Pty Limited

Access Arrangement

Response to AER draft decision
01 July 2011 – 30 June 2016

23 March 2011
20110311 APT Allgas revised Access Arrangement submission FINAL.doc

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1 Introduction

On 30 September 2010, APT Allgas filed its proposed revisions to its Access Arrangement, as required under its current Access Arrangement and the National Gas Rules. In accordance with Rule 59 of the National Gas Rules, the Australian Energy Regulator issued, on 17 February 2011, its draft decision on those proposed amendments.

In accordance with Rule 59(2), the AER specified the amendments required in order for it to approve APT Allgas' proposed revised Access Arrangement. In all, the AER required some 49 amendments before it would be prepared to approve the proposed revisions. Many of these amendments relate to the terms and conditions of service.

In accordance with Rule 59(3). the AER's draft decision established a deadline of 23 March 2011 for APT Allgas to revise the proposal, and 21 April 2011 for comments from interested parties.

Rule 60 of the National Gas Rules outlines the process for APT Allgas to respond to this draft decision:

> 60 Revision of access arrangement proposal in response to draft decision
>
> (1) The service provider may, within the revision period, submit additions or other amendments to the *access arrangement proposal* to address matters raised in the access arrangement draft *decision*.
>
> (2) The amendments must be limited to those necessary to address matters raised in the access arrangement draft *decision* unless the AER approves further amendments.
>
> (3) If the service provider submits amendments to the *access arrangement proposal*, the service provider must also provide the AER (together with the amendments) with a revised proposal incorporating the amendments.
>
> (4) As soon as practicable after receiving the revised *access arrangement proposal*, the AER must publish it on its website.

This submission addresses the AER's required amendments to the proposed revised Access Arrangement. In many cases, APT Allgas has accepted the amendments as specified in the draft decision. In others, APT Allgas has proposed revised wording to achieve substantially the same result. In a few cases, APT Allgas has not accepted the AER's required amendment and has provided additional information in support of its position.

This submission accompanies a revised proposed Access Arrangement and Access Arrangement Information, reflecting the approach taken to address the AER's amendments as outlined in this submission.

This submission follows the format of the AER's draft decision, addressing each required amendment in the order in which it was discussed in the draft decision. It is important to note that some amendments will have consequential impacts on other amendments; this submission has attempted to highlight these consequential amendments when they arise.

2 Services

Amendment 2.1: Amend the access arrangement proposal to include, as part of the inlet reconnection service, the relighting of appliances installed at the place or premises to which gas is delivered.

APT Allgas accepts this amendment and has made the necessary changes to the Access Arrangement. APT Allgas notes, however, that its obligation to relight appliances must be limited to circumstances where reasonable access has been provided, and where the relighting of appliances does not raise safety issues (for example the relighting of unsafe appliances). This limitation has been included in clause 2.1.3 of the access arrangement.

It should be noted that there is a consequential amendment arising from this amendment. In filing its original access arrangement revisions proposal, APT Allgas reduced the reconnection fee from its previous level to reflect the reduced cost associated with the redefined reconnection service.

APT Allgas has therefore reinstated the previously approved reconnection fee, as indexed by CPI, to reflect the cost of the reconnection and relight activity. This is reflected in the revisions to the tariff schedules in Appendix B of the Access Arrangement.

3 Capital Base

Amendment 3.1: amend the access arrangement and access arrangement information in order to be consistent with the following table:

Table 3.12: AER approved opening capital base ($m, nominal)

	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
Opening capital base	302.7	327.1	350.7	374.0	399.4	423.8
Add gross capex	25.2	19.3	25.1	26.6	26.4	
Add indexation	7.4	13.9	8.7	10.8	10.1	
Less depreciation	8.2	9.5	10.4	11.4	12.0	
Less capital contributions						
Less redundant assets						
Less disposals			0.05	0.2		
Closing capital base	327.1	350.7	374.0	399.4	423.8	

APT Allgas accepts this amendment and will make the appropriate change to its Access Arrangement Information as required.

APT Allgas has also corrected a transcription error in the AER's table shown above. The actual gross capex in 2009-10 is $26.3m, resulting in the following table to be included in the AAI:

Table 3-1 Opening capital base

($m Nominal)	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Opening capital base	302.7	327.1	350.7	374.0	399.4	423.8
Add: Gross capex	25.2	19.2	25.1	26.3	26.4	
Add: indexation	7.4	13.9	8.7	10.8	10.1	
Less: Depreciation	8.2	9.5	10.4	11.4	12.0	
Less: Capital contributions	-	-	-	-	-	
Less: Redundant assets	-	-	-	-	-	
Less: Disposals	-	-	0.0	0.2	-	
Closing capital base	**327.1**	**350.7**	**374.0**	**399.4**	**423.8**	

4 Depreciation

4.1 Depreciable lives

Amendment 4.1: make all amendments necessary in the access arrangement proposal and access arrangement information to take account of revised remaining asset lives in table 4.4 of this draft decision.

Table 4.4: APT Allgas's revised remaining asset lives as at 30 June 2011 (years)

Asset Category	Proposed remaining life	Weighted ave. remaining life	Revised remaining life
Network Pressure Control Facilities	27.5	42.9	35.8
HP Steel Mains	60.0	87.9	73.4
Distribution Mains	34.0	70.5	58.9
Distribution Mains - Steel Unprotected	17.6	11.1	9.3
Distribution Mains – PVC	28.2	13.0	13.0
Distribution Mains – Copper	34.7	73.0	73.0
M/LP Customer Services PE	35.1	49.4	41.3
M/LP Customer Services ST	35.2	107.7	107.7
Contract Metering Equipment	4.4	22.8	19.0
Tariff Metering Equipment	3.6	19.9	16.6
SCADA & Telemetry	4.7	68.1	68.1
Equipment & Others	3.3	5.0	5.0

Source: APT Allgas's RFM in an email to the AER, *RE: Confidential information and material outstanding*, 7 October 2010, and APT Allgas, Email to the AER, *AER Depreciation*, 2 December 2010.

In its original access arrangement revision proposal, APT Allgas proposed a consolidation of asset lives to align with standard Australian regulatory practice. The AER accepted this proposal for new assets.[1] APT Allgas acknowledges the AER's

[1] Australian Energy Regulator 2011, *APT Allgas, Access Arrangement Proposal for the QLD Gas Network, 1 July 2011 – 30 June 2016: Draft Decision*, February, p 49

acceptance of the proposed revised standard asset lives, and also the AER's comment that a change to remaining lives is warranted.[2]

The AER's acceptance of revised standard asset lives for new assets presents a duality of asset lives for calculating depreciation in the future. Where remaining lives are misaligned with revised standard lives, it will be necessary to maintain two sets of regulatory depreciation accounts – one for old assets and one for new. This is clear in the remaining life of Medium and Low Pressure customer services being set at 107.7 years (see AER Table 4.4 above) while the standard life is much shorter at 50 years.

APT Allgas has calculated remaining asset lives for all asset classes to be consistent with the AER approved standard asset lives. The methodology for calculating the remaining lives is as follows:

1) Based on the remaining lives and opening capital base as at 1 July 2011 from the Roll Forward Model, the annual depreciation on the opening capital base can be calculated.

2) The annual depreciation on the opening capital base is increased or decreased due to the proposed change in the standard life. For example, if the old standard life was 50 years, it would imply a depreciation rate of 2% annually. When the standard life was reduced to 40, it would imply a depreciation rate of 2.5% annually. In this example, based on the calculation as stated in step 1 above the annual depreciation would increase by 25% (2.5%/2.0%).

3) The revised remaining life is determined by dividing the opening capital base as at 1 July 2011 by the revised annual depreciation as calculated in Step 2.

The approach taken to calculating the remaining life of the various asset classes can be best demonstrated with reference to a worked example:

[2] AER 2011 *Draft Decision*, p 41

Table 4-1 Worked example - calculation of remaining depreciable lives

Network Pressure Control Facilities	Ref	Calc	
RAB as at 1 July 2011 ($000)	A		$17,290
Previous weighted asset life (years) (Table 4.4)	B		42.9
Annual depreciation amount under old life ($000)	C	(A / B)	403
Previous standard life (years)	D		50.0
Depreciation rate based on old standard life	E	(1 / D)	2.0%
New AER approved standard life (years)	F		40.0
Depreciation rate based on new standard life	G	(1 / F)	2.5%
Annual depreciation amount under old life ($000)	H	C	403
Change in standard depreciation rate	I	(G / E)	2.5% / 2.0%
Annual depreciation amount under new life ($000)	J	(H x I)	504
RAB as at 1 July 2011 ($000)	K	A	17,290
Years to recover investment at new rate	L	(K / J)	34.3

Following this procedure, APT Allgas proposes the following remaining lives:

Table 4-2 Remaining asset lives

Asset category	Remaining life (years)
Network Pressure Control Facilities	34.3
HP Steel Mains	67.0
Distribution Mains	44.1
Distribution Mains - Steel Unprotected	12.4
Distribution Mains - PVC	21.7
Distribution Mains - Copper	42.9
M/LP Customer Services PE	41.2
M/LP Customer Services ST	44.9
Contract Metering Equipment	11.4
Tariff Metering Equipment	11.9
SCADA & Telemetry	13.6
Equipment & Others	5.0
Buildings	-
IT	1.2

APT Allgas submits that this revision to remaining lives presents an internally consistent suite of standard asset lives, remaining asset lives and depreciation. This change will require a consequential amendment to depreciation allowance, as discussed below.

4.2 Depreciation allowance

Amendment 4.2: make all amendments necessary in the access arrangement proposal and access arrangement information to take account of revised forecast depreciation allowance in table 4.5 of this draft decision.

Table 4.5: AER's draft decision of forecast depreciation for the access arrangement period ($'000, nominal)

	2011–12	2012–13	2013–14	2014–15	2015–16
Straight-line depreciation	8931	12 894	13 447	14 808	15 833
Inflationary gain	10 681	11 398	12 035	12 737	13 442
Regulatory depreciation	-1 750	1 496	1 412	2 071	2 391

The amendments to the depreciable lives as outlined above affects the straight line depreciation calculation, and also has consequential impacts on the indexation of the capital base. The revised forecast depreciation and indexation of the capital base is shown in Table 4-3 below:

Table 4-3: Forecast depreciation

($000) Nominal	2011-12	2012-13	2013-14	2014-15	2015-16
Straight line depreciation	11,084	15,110	15,726	17,151	18,241
Indexation	10,681	11,348	11,932	12,580	13,226
Regulatory depreciation	403	3,762	3,793	4,572	5,015

This amendment to the depreciation allowance will have consequential implications on Amendment 6.3 (Tax) and Amendment 8.1 (Revenue requirement).

5 Return on Capital

Amendment 5.1: make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the rate of return calculated in accordance with the following table.

Table 5.7: WACC parameters for the access arrangement period (units as stated)

Parameter	
Nominal risk–free rate (%)	5.68
Inflation (%)	2.52
Real risk–free rate (%)	3.08
Equity beta	0.8
Market risk premium (%)	6.0
Debt risk premium (%)	3.93
Gearing (%)	60
Cost of debt (%)	9.61
Cost of equity (%)	10.48
Nominal vanilla WACC (%)	**9.96**

APT Allgas accepts this amendment in part, as discussed below.

5.1 Overall rate of return

APT Allgas submitted analysis prepared by Synergies Economic Consulting (Synergies) that was proposed as a 'reasonableness check' based on the difference between the cost of debt and equity. The AER rejected this analysis. Instead, it presents its own analysis based on an examination of recent regulated asset sales and Modigliani and Miller's capital structure theorem. Each of these will be addressed in turn.

5.1.1 Relationship between the return on debt and equity

The AER dismissed the Synergies analysis because the 4.5% difference between the cost of debt and equity that was quoted was "derived using parameters that are not reflective of a regulated utility" and further, it "does not consider there to be an a priori reason to expect a constant difference between the cost of debt and equity through time."[3]

The Synergies analysis used 4.5% as a guide after observing that the average difference between the return on an equity portfolio with an equity beta of one and a debt portfolio comprising a mixture of corporate and government debt was, on average:

- 6.07% between 1990 and 2007;
- 2.85%, if this is extended to include the global financial crisis.

For the reasons that have been previously submitted, APT Allgas does not agree that an equity beta of 0.8 is reflective of the average regulated gas network business. Putting these concerns aside, if the AER's preferred parameters were used to estimate the average difference between the cost of equity and debt through time (being an equity beta of 0.8 and a portfolio of BBB bonds), APT Allgas agrees that it would reduce this difference.

However, even if this difference was estimated based on the AER's preferred approach, APT Allgas questions whether it would support the difference of only 0.81% implied by the AER's draft decision.

The AER has also formed the view that the impact of the global financial crisis on the Australian market is no longer pervasive and hence has proposed to return to its long-term market risk premium (MRP) of 6%. If this assumption is true (which APT Allgas questions, as discussed below), it might be reasonable to expect observed returns to move back towards pre-crisis levels. Synergies' 'pre-crisis' estimate of the difference between the return on debt and equity was 6.07%. The proposed reference point of 4.5% is conservative relative to this estimate. Even if this 6.07% difference was halved based on the AER's preferred parameters, that difference would still be over three times the implied difference between the AER's proposed cost of debt and equity.

APT Allgas agrees that a constant difference between the cost of debt and equity will not be maintained through time, but such an assumption does not need to hold in order to make this a legitimate basis for a 'reasonableness check' (noting that the analysis was not used to estimate parameters). Reliance is placed on longer term averages to estimate parameters such as the MRP. APT Allgas considers that reference to the average difference between the return on debt and equity between

[3] AER 2011 *Draft Decision*, p 49

1990 and 2007, which is a seventeen year period, is a valid reasonableness check. (While a longer period could be used to observe the average return on equity, it is not appropriate for the return on debt, given the major financial sector reforms that were undertaken in the 1980s.)

5.1.2 Examination of recent regulated asset sales

The AER has also presented its own analysis of recent regulated asset sales, observing that regulated assets have generally been sold at a premium to the RAB.[4] It acknowledges that:[5]

> A RAB multiple greater than one is not necessarily conclusive of whether the AER's weighted average cost of capital provides the service provider with an efficient return.

It cites a number of reasons why a RAB multiple higher than one might be justified.

A commonly cited reason for takeover premiums is the synergies that the acquiring firm expects to derive. These synergies can arise from a number of sources, including:[6]

- financial, such as tax effects, increased debt capacity, reduction in agency and bankruptcy costs; and/or
- operational, such as economies of scale, change in management, increased market power or product expansion.

A recent study by Porter and Singh acknowledges that there has been mixed empirical findings on the motives for takeovers, which:[7]

> ...make it difficult to interpret previous evidence and to draw conclusions about the acquiring manager's takeover motives from the perspective of (sic) Australian market.

This study examined the correlation between the abnormal returns of the target firm and the abnormal returns gained by the combined firm, as well as the correlation between the abnormal returns of the target and acquiring firms. It seeks to test three motivations for takeovers, being synergy, agency and hubris (being errors in the evaluation of the potential gains from acquisition). It found that synergy was the primary motive for takeovers in the sample of firms experiencing positive gains and

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[4] AER 2011 *Draft Decision*, p 48

[5] AER 2011 *Draft Decision*, p 48

[6] Based on a study by Finn and Hodgson (2005), cited in: J. Porter and H. Singh (2010). *What Factors Drive Takeovers in Australia?* International Journal of Business and Economics, 9(2), pp.87-103.

[7] J.Porter and H.Singh (2010).

agency was the primary motive in the negative gain sample. There was also some evidence of hubris.

APT Allgas is not proposing to comment on the possible motivations for the acquisitions listed in the AER's sample. It is possible that synergy was a primary motivation. It is possible that there were other factors. What APT Allgas does not propose is to make assumptions about motivations that have not been proven. It is indeed plausible that synergy is a key driver and may – or may not – largely account for the RAB multiples cited.

The AER states that:[8]

> ...the regulated cost of capital has been at least as high as the actual cost of capital faced by the businesses, and *most likely* has been in excess of the actual cost of capital. (emphasis added)

This is a hypothesis that has not been tested. The AER is also assuming that the firm's RAB represents its fair market value (which is the relevant base for interpreting takeover premiums), which may not be the case, particularly if the business is also engaged in non-regulated activities.

The AER's data is cited from a due diligence report prepared by Grant Samuel. In a statement above the table, Grant Samuel states:[9]

> This data should also be treated with caution...

Below the table, Grant Samuel states:[10]

> The transactions show a diversity of RAB multiples and demonstrate a downward trend from the peak levels of 1.5-2.0 times during the restructuring of the Victorian electricity industry in 1999 (although recent transactions have generally been at RAB multiples in excess of 1.4 times). In any event, the evidence is supportive of RAB multiples of at least 1.3 times.

It then goes onto conclude:[11]

> Given the lack of recent transaction evidence in Australia, and the decline in trading multiples of comparable companies compared to multiples at the time of the most recent transaction evidence, in Grant Samuel's view appropriate

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[8] AER 2011 *Draft Decision*, p 48

[9] Grant Samuel & Associates Pty Limited 2009, *Financial Services Guide and Independent Expert Report in Relation to the Recapitalisation and Restructure of Babcock and Brown Infrastructure*, 9 October, p 78

[10] Grant Samuel & Associates Pty Limited 2009, p 78

[11] Grant Samuel & Associates Pty Limited 2009, p 81

> Australian transaction multiples in today's market will be towards the low end and arguably, even lower, than the range of transaction multiples set out above.

It is reasonable to expect to observe positive takeover premiums in acquisitions of Australian companies, including companies that own regulated assets (noting that not all of these companies' assets are regulated). On examination of the Grant Samuel data, a question could reasonably be asked as to why the multiples have been declining. One possible hypothesis is the reduction in the regulated WACC. However, such a hypothesis is unlikely to carry any weight unless there is evidence to support it, noting the burden of proof that the AER typically requires of such arguments.

APT Allgas does not consider it appropriate to draw any conclusions regarding the adequacy or otherwise of the regulated cost of capital from the RAB multiples observed in energy acquisitions. In particular, it is not considered appropriate to assume that it is "most likely" to reflect an assumption that the regulated cost of capital is too high. Such a statement is speculative.

5.1.3 Modigliani and Miller analysis

The AER considers that the Modigliani and Miller framework can be used to explain the relationship between the cost of equity and debt.[12] It then seeks to show that the application of Modigliani and Miller's proposition II, which is that the required rate of return depends on the required rate of return on the firm's assets, its cost of debt, and its level of gearing.

It is well recognised that Modigliani and Miller's theorem was based on simplifying assumptions, including no taxes or bankruptcy costs. Modigliani and Miller themselves recognised that:[13]

> It has been assumed among other things a state of atomistic competition in the capital markets and an ease of access to those markets which only a relatively small (though important) group of firms come even close to possessing. These and other drastic simplifications have been necessary in order to come to grips with the problem at all. Having served their purpose they can now be relaxed in the direction of greater realism and relevance, a task in which we hope others interested in this area will wish to share.

APT Allgas considers that the work of Modigliani and Miller is of fundamental importance in understanding the relationship between risk and return and that it is necessary to continue to have regard to this theory when attempting to explain these relationships today. However, it does not consider that it is appropriate to seek to estimate these relationships using a theorem that relies on assumptions that do not

[12] AER 2011 *Draft Decision*, p 179

[13] F. Modigliani and M. Miller 1958, *The Cost of Capital, Corporation Finance and the Theory of Investment*, The American Economic Review, Volume XLVIII, No.3, p 296

hold in practice. In particular, the AER's assessment uses parameters that have been measured in a world where these assumptions do not hold, that is, taxes and bankruptcy costs do exist and they do affect returns. APT Allgas therefore questions the relevance of this analysis.

5.1.4 Impact on credit metrics

APT Allgas has also undertaken analysis regarding the potential impact that the AER's proposed determination could have on its credit rating. This information is summarised in Confidential Attachment A2.

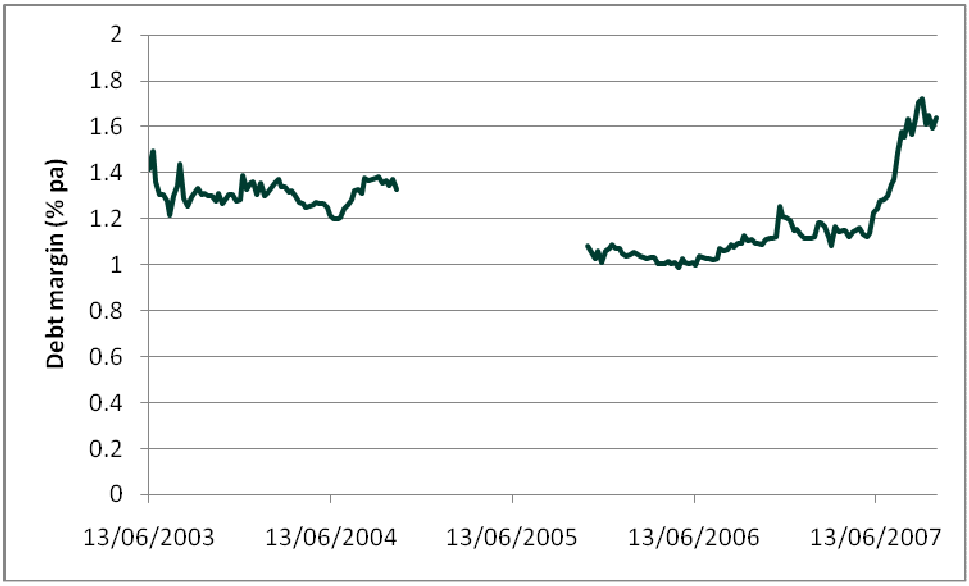
5.1.5 Implications

APT Allgas does not consider that the AER's analysis provides convincing evidence to support the adequacy of its proposed rate of return or that it satisfies the requirements of the NGR.

The AER has also suggested that if the gap between the cost of debt and equity is too low, it may be because the cost of debt is too high. However, as highlighted in the previous submission, the cost of debt is assessed based on current market rates. The cost of equity, on the other hand, is based on long-term averages, acknowledging the volatility in shorter term estimates.

Prior to the deterioration of global financial market conditions that commenced in 2008, regulatory determinations of the debt margin for A and BBB rated energy network businesses were usually well below 200 basis points. For example, APT Allgas' 2005 determination by the Queensland Competition Authority applied a margin of 1.425% (and the difference between the cost of equity and debt is 4.58%). The following figure shows the margin between Bloomberg's ten year BBB yield and the risk-free rate between 1 July 2003 and 12 October 2007 (when the former was published, noting that there was a gap in the data over this period). This also shows that this margin did not exceed 200 basis points over this period.

Figure 5-1 Ten year BBB debt margin (Bloomberg): 1 July 2003 – 12 October 2007



Source: Bloomberg

While APT Allgas recognises the current difficulties in reliably estimating a ten year BBB cost of debt, there is certainly no evidence to suggest that the debt margin has fallen to anywhere near the levels observed in pre-crisis regulatory determinations (that is, well below 200 basis points). In the previous QCA determination made for APT Allgas, the implied difference between the cost of debt and equity was 4.58%. The AER is now proposing a lower cost of equity and higher cost of debt, and the difference has contracted to 0.87%.

The cost of debt is observable whereas the cost of equity needs to be estimated using historical proxies relying upon assumptions of stationarity. In APT Allgas' view, it is considerably more plausible that it is the cost of equity that is too low given the prevailing conditions in the market for funds.

5.2 *Market risk premium*

The AER is proposing to revert to its long-term average MRP of 6%, on the basis that the uncertainty that resulted as a consequence of the global financial crisis appears to have "substantially diminished".[14] There are a number of issues that APT Allgas would like to address in relation to the AER's proposal, being:

- the extent to which the AER's assessment remains valid in light of more recent market events;

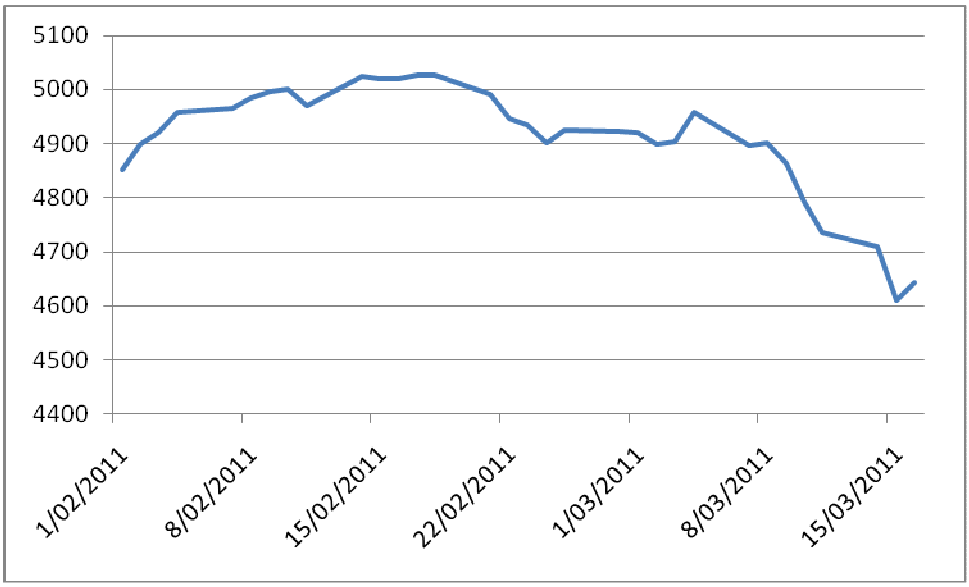
[14] AER 2011 *Draft Decision*, p 61

- the interpretation of its historical estimates; and
- its reliance on survey evidence.

5.2.1 Implications of more recent market developments

The significant events that have been experienced in recent months, including the weather events in Australia, the earthquakes in New Zealand and Japan, and the turmoil in the Middle East and Africa, could all have a potential impact on the Australian economy. For example, the following shows the recent impact of the Japanese earthquake on the All Ordinaries index.

Figure 5-2 All Ordinaries Index 1 February 2011 – 16 March 2011



Source: ASX

It is too early to assess the nature and extent of these impacts. However, they are contributing to uncertainty, and it is this uncertainty that affects investors' expectations of future returns.

APT Allgas considers that it is premature to assume that the uncertainty that has followed the global financial crisis is no longer having an impact on investor expectations. This situation may (or may not) become clearer prior to the Final Decision.

5.2.2 The interpretation of historical evidence

In Table 5.3 of the Draft Decision, the AER cites a number of historical estimates of the MRP, taken over different time periods and ending in different years, before and

after the global financial crisis. These estimates, which assume an imputation credit utilisation rate of 0.65, are reproduced below.

Table 5-1 Historical excess return estimates cited by the AER (%)

Start of period	Ending 2005	Ending 2007	Ending 2008	Ending 2009	Ending 2010
1883-	6.4	6.6	6.1	6.4	6.3
1937-	6.1	6.4	5.7	5.7	6.1
1958-	6.8	7.2	6.2	6.2	6.6

Source: Australian Energy Regulator (2011). Draft Decision, APT Allgas, Access Arrangement Proposal for the QLD Gas Network, 1 July 2011 – 30 June 2016, February, p.54.

There are a number of comments that APT Allgas would like to make in relation to the AER's interpretation of the evidence, which are set out below.

5.2.2.1 *Pre- and post-GFC estimates*

The AER makes the observation that the range of values for the periods ending in 2010, being 6.1% to 6.6%, "are not inconsistent with the estimates prior to the GFC." APT Allgas contends that the range of 6.1% to 6.6% is quite different from the range of 6.1% to 6.8% (period ending 2005) and 6.4% to 7.2% (period ending 2007). The pre-GFC estimates are more consistent with a long-term MRP of at least 6.5%, as submitted by APT Allgas. The subsequent reduction in the MRP estimates in the last three years is not surprising given the impact that the significant compression in returns had on the long-term average.

The pre-GFC estimates are also generally consistent with a range of Australian studies. These studies are summarised in the following table.

Table 5-2 Selected Australian estimates of market risk premium

Author	Year	Period	MRP (%)
Officer	1985	1882-1987	7.9
AGSM	1989	1974-1983 1977-1983	6.3 11.7
AGSM	1998	1964-1995 (incl Oct 1987) 1964-1995 (excl Oct 1987)	6.2 8.1
Hathaway	1995	na	6.6
Davis	1998	na	4.5-7.0
Dimson et al	2002	1900-2000	7.5
Hancock	2005	1974-2003	4.5-5
Hathaway	2005	1875-2005 1960 - 2005	1 year arithmetic: 7 10 year arithmetic: 7.2 10 year geometric (adj): 4.5* *recommended estimate
Gray and Officer	2005	1975-2004 1955-2004 1930-2004 1905-2004 1885-2004	7.7 6.43 6.58 7.15 7.17

Sources: QCA (2000), Draft decision on QR's Draft Undertaking, Working Paper Number 4; Lally, M. (2004), Estimating the Cost of Capital for Regulated Firms; S. Gray & R. Officer (2005), A Review of the Market Risk Premium and Commentary on Two Recent Papers, A Report Prepared for the Energy Networks Association; J. Hancock (2005), The Market Risk Premium for Australian Regulatory Decisions, The South Australian Centre for Economic Studies.

APT Allgas is not necessarily advocating exclusion of the MRP estimates that span the GFC. However, if these more recent estimates are interpreted within the context of longer term averages estimated prior to the GFC, a long-term average of 6.5% would seem reasonable, even if the potential effects of the GFC are ignored.

5.2.2.2 *Use of longer averaging periods*

A naive statistical approach to estimate the market risk premium (MRP) would suggest that the longer the estimation period the better as the estimated MRP would approach the 'true' MRP assuming stationarity. While this is desirable in theory, this

consideration needs to be balanced against the need to ensure that the data is of high quality in order to produce meaningful results and the time periods used are sufficiently relevant to inform forward-looking estimates of the MRP.

The reliability of historical MRP data has always been in question. A recent paper examined the historical MRP and in particular the data that underlie its estimate.[15]

One of the most widely cited MRP estimates in Australia is by Officer for the period from 1882 to 1987.[16] The quality of the market return data in this study has been questioned because:

- for the period from January 1875 to June 1936 the Commercial and Industrial price index suffered from some survivorship bias resulting in an overstatement of the index. Additionally, it did not include the financial sector and therefore is not comparable to the price index that followed. Also there was narrow coverage in the index, for example there were only five stocks included in the index in 1875;

- for the period from July 1936 to December 1957 an All Ordinary Shares price index was available. During this period the Commonwealth Government had share price controls from November 1941 to February 1947. It is questionable if prices during this time were truly market determined; and

- from January 1958, the Sydney Stock Exchange began the calculation of the Sydney All Ordinary Shares price index.

While it is not possible to estimate the precise impact of the above issues on the MRP, it is possible to conclude that the impacts could result in a possible overstatement of equity returns up to December 1957. The AER came to the same conclusion as part of its WACC review concluded in 2009, concluding that:[17]

> Accordingly, Brailsford et al advise, and the AER agrees, that the pre-1958 data should be used with caution.

A long-term average commencing in 1958 still contains over fifty years of data. Gray and Officer have stated:[18]

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[15] T. Brailsford, J. Handley & K. Maheswaran 2008, *Re-examination of the historical equity risk premium in Australia*, Accounting and Finance, 48, pp 73-97

[16] R. Officer 1989, *Rates of return to shares, bond yields and inflation rates: An historical perspective*, in: R. Ball, P. Brown, F. Finn and R. Officer. (eds.), Share Markets and Portfolio Theory, 2nd Edition, University of Queensland Press.

[17] AER 2009, *Electricity Transmission and Distribution Network Service Providers, Statement of the Revised WACC Parameters (Transmission), Statement of Regulatory Intent on the Revised WACC Parameters (Distribution)*, together 'WACC review' p 196

[18] S. Gray & R. Officer 2005, *A Review of the Market Risk Premium and Commentary on Two Recent Papers, A Report Prepared for the Energy Networks Association*, p 21

> A long period of data provides better statistical precision (the mean estimate has a lower standard error), but data from long ago may be less representative of current circumstances. It is generally agreed, however, that the minimum period required to provide sensible estimates is 30 years.

APT Allgas is therefore of the opinion that there is a legitimate case to place more weight on the post-1958 estimate.

5.2.2.3 *Arithmetic versus geometric averages*

A further issue considered by the AER is the use of arithmetic versus geometric averages. The study cited in the table above by Hathaway[19] noted significant differences between averages under each method, with the arithmetic mean producing an estimate of 7.2%, whereas the geometric mean estimate was 6%.

While the geometric return will start off equal to the arithmetic return, it will progressively fall to the continuously compounding rate. Hathaway therefore concludes that the geometric return is more appropriate for historical averaging, although the arithmetic average remains appropriate for future estimates as it provides an unbiased estimator of expected future outcomes.

Gray and Officer support the use of an arithmetic mean in the context of estimating the expected value of the MRP.[20] They note that a geometric mean is appropriate:[21]

> …when estimating the aggregated return from a buy and hold strategy over a long period, but that is not the purpose here. The MRP is to be used in the CAPM to compute the cost of equity expressed in annual terms. Therefore, we require an estimate of the expected return, over the next year, on the market portfolio over and above the risk-free rate. What return do we expect on the market portfolio over the next year, relative to the risk-free rate? The historical data provides us with many observations on what the market returned relative to the risk-free rate over a one-year period. To the extent that each of these observations should be given equal weight, a simple arithmetic average is appropriate.

APT Allgas therefore submits that as a geometric mean is inconsistent with the CAPM and the CAPM is used to estimate the cost of equity, no reference should be made to geometric averages. The arithmetic average is the most appropriate estimate to rely upon if the purpose of the analysis is to estimate the expected value of the MRP.

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[19] N. Hathaway 2005, *Australian Market Risk Premium*, Capital Research Pty Ltd.

[20] S. Gray & R. Officer 2005.

[21] S. Gray & R. Officer 2005, p 21

5.2.3 Use of survey evidence

On face value, surveys have considerable appeal compared to historical estimates of the MRP because they are forward-looking. Properly constructed, they should provide actual forward-looking opinions. However, there are a number of key limitations, including:

- they are likely to be more heavily influenced by recent events;
- they tend to reflect short-term expectations;
- estimates are based largely on opinion, which may not necessarily be founded on sound fundamentals; and
- some respondents may have incentives to produce certain outcomes, which can lead to biased results.

The AER refers to two recent studies by Fernandez and Del Campo from the University of Barcelona.[22] This in turn is used to show that "the market views of the MRP did not significant differ from those expressed prior to the onset of the GFC".[23] Importantly, the authors make it clear that the estimates are of the required MRP, not the expected MRP (noting that the purpose of this regulatory determination is to estimate the expected MRP).

It is also noted that in both studies, the question asked of respondents was what is the required MRP that is used "to calculate the required return on equity"[24]. No horizon has been specified. It is therefore possible that some of the responses reflect the short-term required return, some the medium-term, and some the long-term. The purpose of this regulatory determination is to estimate the long-term expected MRP.

There is also considerable variability underlying the reported averages. For example, in the 2010 study for Australia:[25]

- the responses from analysts ranged from 4.1% to 6%;
- the responses from professors ranged from 4% to 10%.

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[22] AER 2011 *Draft Decision*, p 58

[23] AER 2011 *Draft Decision*, p 58

[24] P. Fernandez and J. del Campo 2009, *Market Risk Premium used in 2008 by Professors: a Survey with 1,400 Answers*, IESE Business School, p 2; P. Fernandez and J. del Campo 2010, *Market Risk Premium used in 2010 by Analysts and Companies: a Survey with 2,400 Answers*, IESE Business School, p 2

[25] P. Fernandez and J. del Campo 2010 , p 8

In the 2008 study, which was limited to professors, the responses ranged from 2% to 7.5%.[26]

The AER concludes that because the averages of different surveys are similar "there is no reason to suspect bias in this type of evidence."[27] APT Allgas does not consider that such an assumption can be made.

The AER considers that a range of evidence should be used to inform the estimate of the expected MRP. APT Allgas concurs that in theory, this is highly desirable. However, this should not encompass evidence that cannot be considered reliable. Survey estimates are not considered reliable.

5.2.4 Conclusion: MRP

Based on the preceding arguments, APT Allgas maintains that 6.5% remains the most appropriate 'long term average' estimate of the MRP, even if the effects of the GFC are ignored. This is considered reasonable in light of the data presented by the AER using an arithmetic averaging method.

If the potential implications of the renewed uncertainty in the market are considered, this estimate would appear to be conservative.

5.3 Debt risk premium

The AER is proposing to estimate the 'benchmark' BBB+ cost of debt for APT Allgas by putting equal weight on:

- Bloomberg's seven year BBB fair value estimate, which is extrapolated to produce a ten year estimate based on the difference between the seven and ten year AAA fair value estimates for the twenty days prior to the cessation of publication of this data in June 2010; and
- the yield on APT's ten year bond issue.

APT Allgas has significant concerns with the AER's proposal, and in particular, its reference to the yield on the APT bond. This section will address:

- the use of Bloomberg's fair value estimates, supported by new evidence from Australia Ratings;
- the AER's proposed extrapolation method; and
- the use of the APT bond.

[26] P. Fernandez and J. del Campo 2009 , p 5

[27] AER 2011 *Draft Decision*, p 57

5.3.1 The use of Bloomberg's fair value estimates

While the precise method Bloomberg currently uses to construct its fair value curves is not known (although we do know something about the methods it has used, as will be discussed further below), it is not appropriate to assume that its fair value estimates are somehow biased or erroneous, particularly if this is being based on comparisons against yields on bonds that are illiquid.

Bloomberg is a respected global data service that has specialist skills and expertise in capital markets. It also has access to sophisticated tools and resources that it would use in analysing market data and trends. The market for the provision of these types of services is estimated to be worth $16 billion of which Bloomberg's share is approximately one third, with an estimated revenue of $6.6 billion.[28]

Bloomberg is considered to be a leader in financial information across industries, and across the world. Importantly, the data is independent and Bloomberg has no specific agenda in constructing its fair value curves other than to interpret the current market data.

Bloomberg's purpose in constructing its fair value curves is to provide market participants with information regarding prevailing capital market prices. Its business depends on having a strong reputation for providing high quality information and related services to its clients. In order to deliver value-add to its customers, Bloomberg's data services synthesise all of the available information that individual market participants do not have the time and resources to access, process and interpret.

In Figure C.1 of the AER's Draft Decision it presents a comparison of changes in Bloomberg's and CBA Spectrum's estimates and the ASX 200.[29] It states:[30]

> In viewing this figure, one should generally observe the DRP moving inversely to returns in the equity market. That is, during a bull market when equity returns are strong, the risk of default on debt should be comparatively low. Conversely, as the equity market falls, and the risk of default across the market increases, the debt risk premium demanded by investors should logically increase.

The AER claims that debt margins are inversely related to equity returns. It suggests that as Bloomberg's reported fair value yields don't conform to that claim then these fair value yields must be questionable. APT Allgas proposes that the AER's claim of the inverse relationship must first be substantiated. There are many factors affecting debt margins and not just the equity market.

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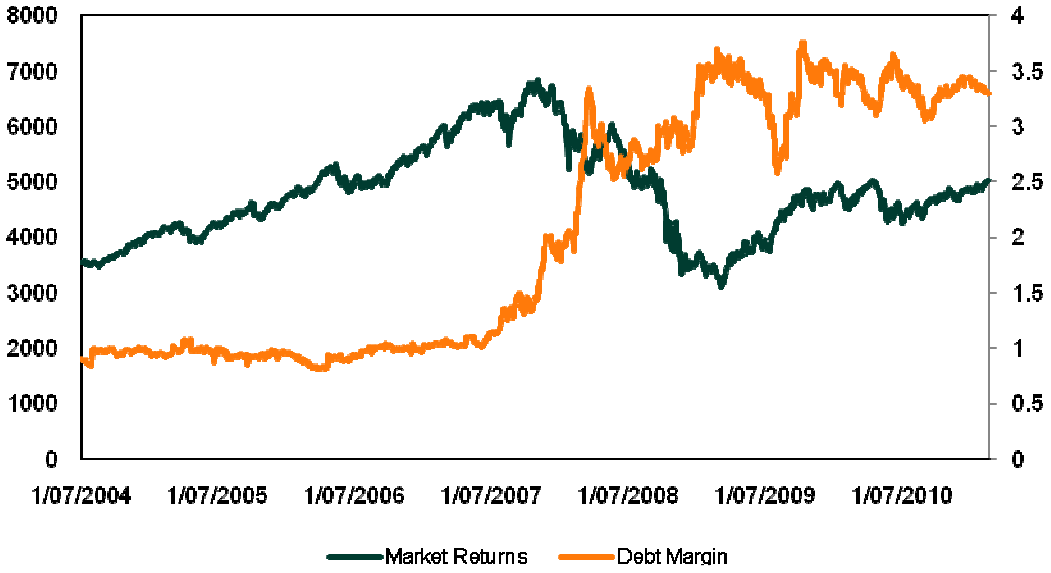
[28] S. Clifford & J. Creswell 2009, *At Bloomberg, Modest Strategy to Rule the World*, New York Times, 14 November, http://www.nytimes.com/2009/11/15/business/media/15bloom.html, accessed 20 December 2010

[29] AER 2011 *Draft Decision*, p 185

[30] AER 2011 *Draft Decision*, p 186

The following analyses the relationship between debt margins and the movement in the market index. Figure 5-3 displays the relationship between BBB debt margin and market returns between 1 July 2004 and 28 February 2011. For simplification purposes (that is, to avoid debates about the implication of extrapolation methods), the BBB debt margin is estimated as the difference between the Bloomberg five year BBB fair value yield and the yield on five year Commonwealth Government bonds. The market returns are the S&P/ASX 200 index. There appears to be some relationship between debt margins or credit spreads and movements in the market.

Figure 5-3 BBB debt margins and market returns



Data source: Bloomberg

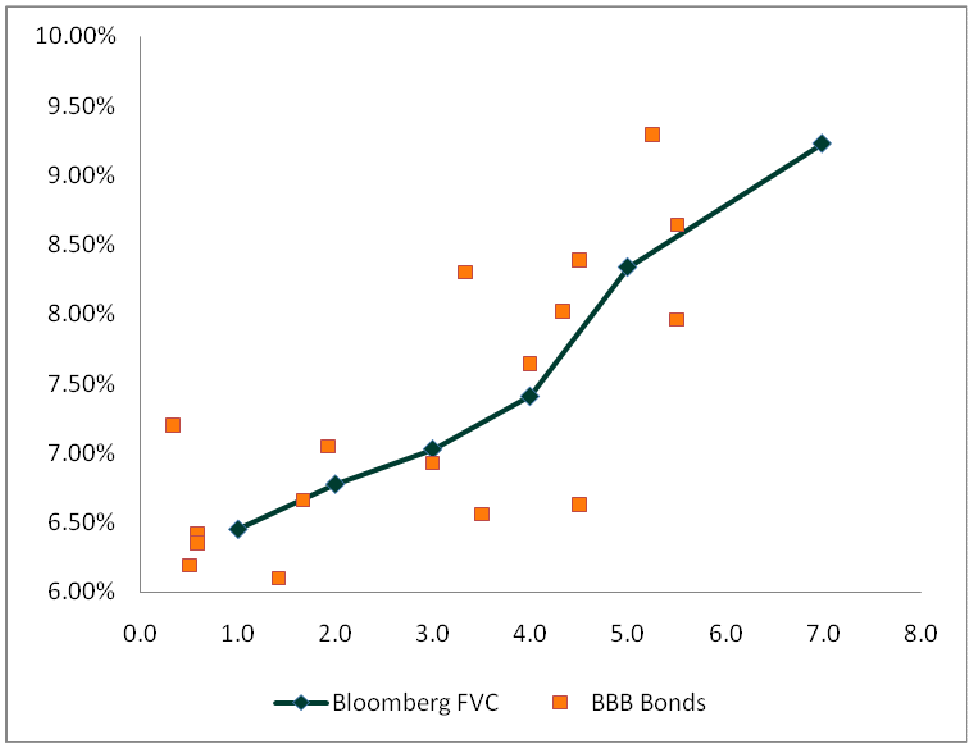
As many different factors affect credit spreads and market returns, the strength of the relationship needs to be estimated. Changes in market returns and changes in spreads were estimated over the observation period. The correlation between changes in the debt margin and changes in market returns was estimated as minus 0.12603, being a small negative correlation. Therefore there is some small negative relationship between changes in debt margins and changes in market returns.

The changes in the debt margin were regressed against changes in market returns and the relationship was found to be statistically significant. The R-squared was 0.0159 indicating that the negative relationship was statistically significant but it only explained 1.6% of the change in the debt margin. This supports the claim that many different factors affect debt margins with the market being only one factor. The market factor accounts for only 1.6% of the change and other factors account for 98.4%.

A suggestion that the Bloomberg debt margin should be ignored if it doesn't move as expected with movements in the market is most probably incorrect. The movement in the debt margin may well be caused by one of the other factors account for 98.4% of the movement in the debt margin.

The Bloomberg BBB fair value curve is estimated from a sample of eighteen bonds that have either traded or have indicative prices that have been examined by Bloomberg and been found to have robust prices and yields. The figure below displays the Bloomberg BBB fair value curve for the 16th of March 2011 and the yields on the eighteen bonds included in that sample.

Figure 5-4 Bloomberg BBB fair value curve and individual BBB yields: 16 March 2011



Source: Bloomberg

As outlined above, Bloomberg uses a form of regression to fit the fair value curve to the data. It can be seen that the individual yields fall randomly around the fair value curve. This random distribution provides strong support for the validity of the fair value curve. The Bloomberg BBB fair value curve is a reasonable estimate of yields for BBB rated securities for a variety of maturities particularly for the range from one to six years. It is difficult to estimate yields to ten years due to the lack of liquidity in the market. However, the Bloomberg BBB fair value curve is considered to be the most reasonable basis for deriving this ten year estimate.

The AER is proposing to rely upon the APT bond. It had a yield of 7.91% on the 16th of March 2011. This yield is well below both the five and seven year BBB fair value yields as reported by Bloomberg.

This observation begs the question 'should the yield on an illiquid bond be weighted equally with the yield derived from a sample of eighteen bonds that provide an estimate that fits the data as expected'.

The large sample of eighteen traded bonds estimates a normal upward sloping yield curve. From Figure 5-4, the five year yield is 8.34%. It is expected that bonds with a maturity of greater than five years would have a yield of greater than 8.34%. The three bonds in the Bloomberg sample that have a term to maturity of greater than five years have an average yield of 8.63%, greater than the five year yield.

In conclusion, this shows that the Bloomberg fair value curve conforms to expectations. The yield on the APT bond does not. It is therefore appropriate to place more reliance on the Bloomberg fair value curve.

5.3.2 Analysis by Australia Ratings

APT Allgas also commissioned an independent report on the cost of debt by Australia Ratings, which is contained in Attachment A.1. Australia Ratings is an independent company that is licensed to provide domestic credit ratings on debt securities, bonds and fixed income products. It is therefore well positioned to provide an informed and unbiased opinion on the current conditions in the Australian financial markets.

Australia Ratings was asked to address three questions and its responses to each question are summarised below.

> *1. What are the appropriate methods to measure the cost of debt "commensurate with the prevailing conditions in the market for funds", particularly focusing on the use of independent indices?*

Australia Ratings concluded that there are a number of advantages in using an independent index. It explains how there are a number of factors that influence liquidity. These risks are idiosyncratic and will affect the price of each bond in the market. The use of an index, such as the Bloomberg fair value curve, averages these risks. Accordingly:[31]

> A complete view of prevailing market conditions is obtained and not a biased one.

[31] Australia Ratings 2010, E*stimating the Debt Risk Premium, Expert Opinion Prepared for APT Allgas Energy Pty Limited*, p 8

It also plots the Bloomberg fair value curve against the yields of all of the BBB bond issues (not just the ones used by Bloomberg to construct its fair value curve) and similarly shows that these yields are distributed around that curve. This in turn shows that this curve:[32]

> The Bloomberg BBB Australian corporate bond spread curve appears consistent with the credit spreads of the bonds that make up the sector.

It also shows how there has been a re-pricing of risk following the global financial crisis.

> *2. Would it be reasonable or appropriate to include bonds outside an index to "refine" the index? Specifically, would it be reasonable to weight an independent index with yield information of a particular bond issue?*

Australia Ratings does not endorse reference to individual bonds that will have idiosyncratic risks that would otherwise be 'averaged out' in an index, even if that bond is seen to be "comparable":[33]

> Nevertheless, refinement of an index when even comparable bonds are selected can introduce bias by using those bonds considered to have desirable features and ignoring those that don't. If this is the purpose of the exercise, it must be considered unreasonable.

And

> *3. In particular, would it be reasonable or appropriate to use the APT 2020 bond to determine the "cost of debt commensurate with the market for funds" in determining a benchmark cost of debt to be applied to APT Allgas in the present case, and other APA Group businesses as similar reviews take place on other APA Group assets?*

For the reasons summarised above (and addressed at length in the report), Australia Ratings does not consider that it is appropriate to use the APT bond because:[34]

> The result will be a biased estimate that is not representative of the market overall, reflecting the particular idiosyncratic risks of the APA Group and the current pricing distortion that exists in the primary market for corporate bonds.

Reference to the APT bond therefore reduces the likelihood that the overall estimate reflects the prevailing conditions in the market for funds.

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[32] Australia Ratings 2010, p 10
[33] Australia Ratings 2010, p 15
[34] Australia Ratings 2010, p 16

5.3.2.1 *Conclusions: the use of Bloomberg's fair value estimates*

APT Allgas submits that it is appropriate to continue to solely rely on Bloomberg's fair value estimates. Supplementing the estimate with the yield on an individual bond with idiosyncratic risks that has not been included by Bloomberg in its sample is not considered an appropriate way of estimating the debt margin using limited market data, particularly if no regard is given to the liquidity of the instrument or whether it is a potential outlier.

The report by Australia Ratings highlights the distorted market conditions that have been experienced following the commencement of the global financial crisis. Indeed, APT Allgas considers that given the significance of these issues and the potential complexities underpinning them, particularly following the commencement of the global financial crisis, reliance should continue to be placed on an independent, reputable data provider that has specialist skills and expertise in this area. At the current time, this means placing sole reliance on Bloomberg's fair value estimates.

5.3.3 The AER's proposed extrapolation method

APT Allgas continues to question the appropriateness of using the difference between the seven and ten year AAA yields from June 2010 to estimate a forward-looking cost of debt. However, it has no additional commentary to submit on this matter.

5.3.4 The use of the APT bond

NT Gas, which is 96% owned by the APA Group, submitted detailed analysis of the use of the APT bond, which was prepared by Synergies Economic Consulting. These same concerns apply here. As this analysis has not been submitted to the AER in the context of the APT Allgas review, it is reproduced in full below.

5.3.4.1 *The yield on the APT bond*

The reported yield on the APT bond has been materially below the Bloomberg fair value curve. One pillar of finance theory is the risk-return relationship. To be consistent with this established theory, the expectation is that the APT BBB bond should have a yield at least equal to the seven year BBB Bloomberg yield. As yield curves are normally upward sloping reflecting the term structure of interest rates, the expectation is that the APT yield would be greater than the seven year BBB yield.

A possible explanation for this anomalous observation is the lack of liquidity in the APT bond (this is discussed further below). The basic premise underlying the risk-return relationship is that the market is efficient in incorporating information into price or that the price discovery process operates efficiently. Thin trading affects the price discovery process as prices do not reflect all available information.

The AER has referred to Merton[35] for justification of this observation, stating:[36]

> …for high credit quality bonds the spread curve is either upward sloping or hump-shaped, while for low credit quality bonds the spread curve is downward sloping.

The AER has interpreted this to mean:[37]

> As a result, it may be the case that yields on bonds with longer maturities will not necessarily be higher than those with shorter maturities, hence further underlining the importance of considering the actual behavior of longer dated bonds when setting the DRP.

The AER uses the observations of both Merton and He[38] and concludes that the BBB yield curve may be hump-shaped or downward sloping and therefore the yield on the APT bond may be less than the seven year BBB yield. Additionally this also provides a justification to the AER for considering the APT bond in estimating the DRP.

As the AER used the He study as justification for the observed low APT yield and also as justification for the inclusion of its yield in the DRP, it is important to consider the full findings of the study. He examined 80,322 US bond observations over a period from 1993 to 1997. The bonds were rated from AAA to CCC and had maturities of up to 30 years.

The figure below displays the findings of He's analysis. It can be seen that the CCC yield (lower credit rating) was downward sloping. First, the significant downward slope in the CCC curve is contrary to what economic and finance theory would predict. That is, particularly for this credit rating category, we would question why an investor would accept a lower yield on an instrument with a high default risk for a longer maturity.

Second, this observation was not the case for BBB yields. The BBB yield was hump-shaped but importantly it was found to be positive to year twenty five[39] and then negatively sloped after that time. If the findings of this study are to be used in drawing inferences about the APT bond, ten year BBB rated bonds should have a positive slope to year ten.

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[35] R.Merton 1974, *On the pricing of corporate debt: the risk structure of interest rates*, Journal of Finance 29, pp 449-470

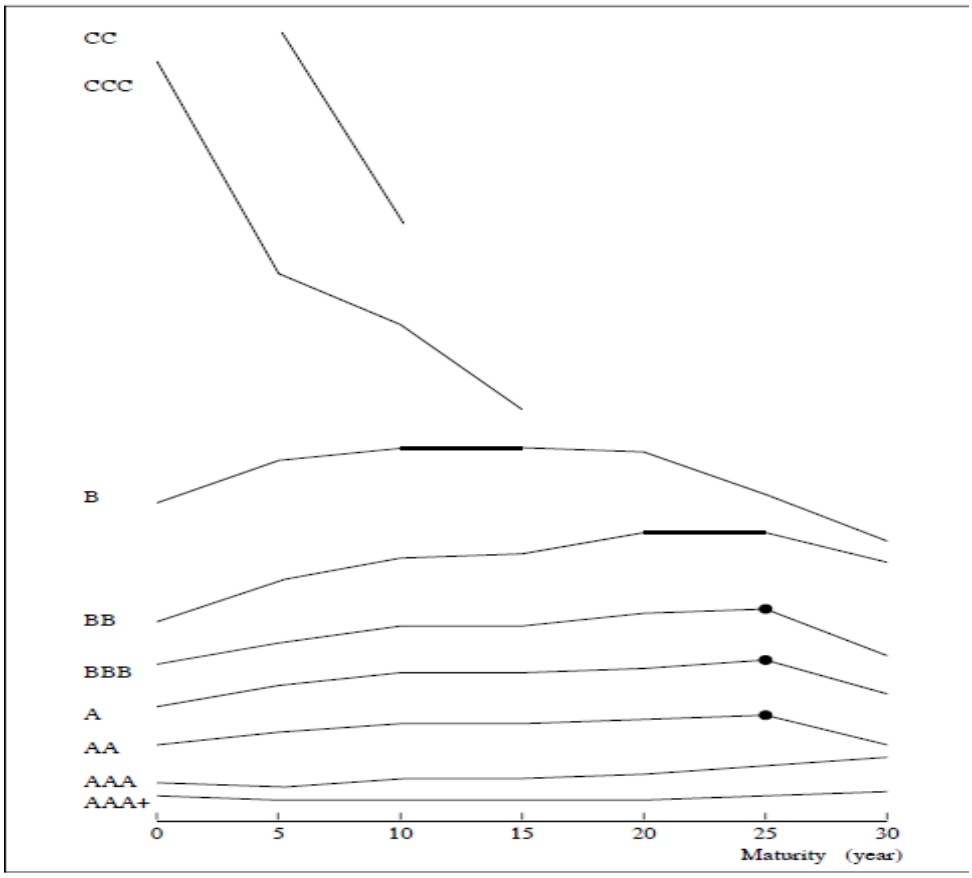
[36] AER 2010a, *Final Decision – Victorian Electricity Distribution Network Service Providers, Distribution Determination 2011-2015,* October, p 506

[37] AER 2010a, p 507

[38] J. He, W. Hu, and L. Lang 2000, *Credit Spread Curves and Credit Rating*, Working Paper Series, August.

[39] The median time to peak was 25.7 years with an average spread at peak of 1.7%

Figure 5-5 Credit spread curves



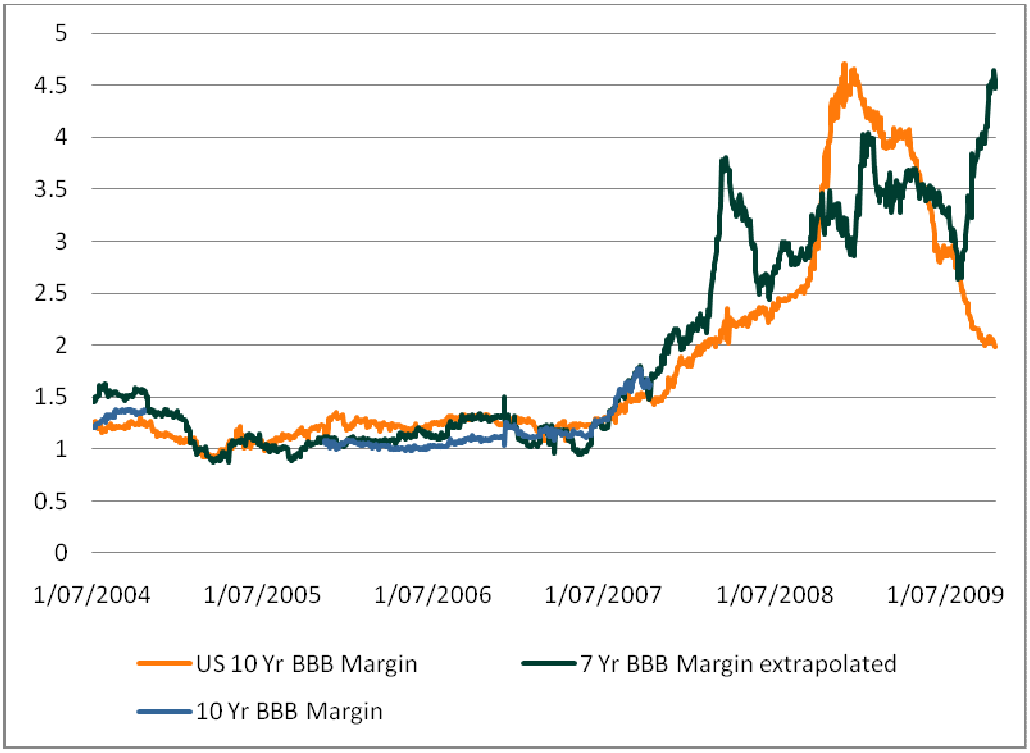
Source: J, He, W. Hu and L. Lang (2000), Credit Spread Curves and Credit Rating, Working Paper Series, August.

While part of the AER's conclusions are true for the whole curve (30 year BBB yield curves are hump shaped), for the relevant section of the curve (up to ten years), the AER is incorrect in assuming that the yield could be expected to be hump shaped. The expectation is that a ten year bond should have a yield greater than a seven year bond and empirical evidence provided by the AER supports this claim. The expectation from the study is that the APT bond should have a yield greater than the yield for the seven year Bloomberg BBB yield.

There are two other observations could be made about this study. The first is that the timeframe was 1993 to 1997. Apart from the fact that this pre-dates the global financial crisis, it is now well out of date. Significant caution should be exercised in drawing any conclusions from data that was sourced in the 1990s in determining a forward-looking estimate of the debt margin that reflects prevailing market conditions. This is particularly important in the capital markets, which are highly dynamic.

The second is that the data is US data. The US market is a liquid and deep market. Further, the drivers in this market are potentially quite different to the drivers domestically, at least since the global financial crisis. For example, the following figure shows the divergence in Australian and US corporate bond yields that occurred around the time of the commencement of the crisis. (The ten year Bloomberg estimate is based on the seven year BBB yield, extrapolated based on the difference between the five and seven year yields.)

Figure 5-6 10 year BBB Margins: US and Australia



Data source: Bloomberg and Synergies analysis

Synergies concluded that the studies by Merton and He, as quoted by the AER, do not provide justification for the anomalous observation of the yield on the ten year APT BBB rated bond being less than the seven year Bloomberg BBB yield. Additionally, as there is no empirical or theoretical support for the anomalous observation, there is no valid reason for using the APT bond in the setting of the DRP.

The question is why the yield on the APT bond would be so low compared to the Bloomberg seven year BBB yield. One possible answer to this question is lack of liquidity.

Reporting of the APT Bond

The APT bond was issued in Australia to thirteen institutional investors on 15th July 2010. The APA Group has advised that this debt has been purchased and held by these investors as part of a long-term 'buy and hold' strategy, presumably as the characteristics of the business meet their specific needs. To the extent that any trades have occurred, they would be on an over-the-counter basis. To the knowledge of APA Group, there has been no subsequent trading in the bond.

It is important to understand how Bloomberg reports bond data.

Bloomberg generates Australian Bloomberg Fair Value (BFV) curves for both sovereign and some credit rated sectors of differing maturities. The BFV curves are used to generate Bloomberg Fair Values for bonds in the different sectors. For example, Bloomberg currently derives a BFV seven year BBB curve and this can be used to estimate BFV prices for BBB rated bonds of similar maturity. Similarly the BFV seven year BBB curve indicates the current cost of debt for BBB rated firms seeking funds from the debt market. The sample includes all BBB rated bonds (that is, it includes the AER's assumed notional credit rating of BBB+).

Only selective bonds are included in the estimation of the BFV curve to ensure that the curve is reliable. For the bond to be included in the estimation, the bond must be 'well priced'.[40] To be well-priced, the bond must be liquid to ensure that the price is reliable.

Prices generally can be either indicative, executable or traded prices:[41]

- Indicative prices comprise approximately 90% of all of the bond prices that are available on the Bloomberg bond database. Indicative prices are provided by bond market participants called market makers. Market makers have no obligation to execute trades at indicative prices so it is therefore not unusual to see indicative prices being very different from actual market/traded prices.

- Executable prices are available only for bonds traded on some electronic trading system. Most bonds are traded over-the-counter (OTC) and in this market counterparties deal directly with each other as opposed to via an exchange in the exchange traded market. As a result of this there is a lack of quality executable prices being reported.

- Traded prices are which trades have been executed and will not include OTC trades.

[40] M.Lee 2007, *Fixed Income Specialist, Bloomberg LP, 'Bloomberg Fair Value Market Curves'* International Bond Market Conference 2007, Taipei

[41] M.Lee 2007

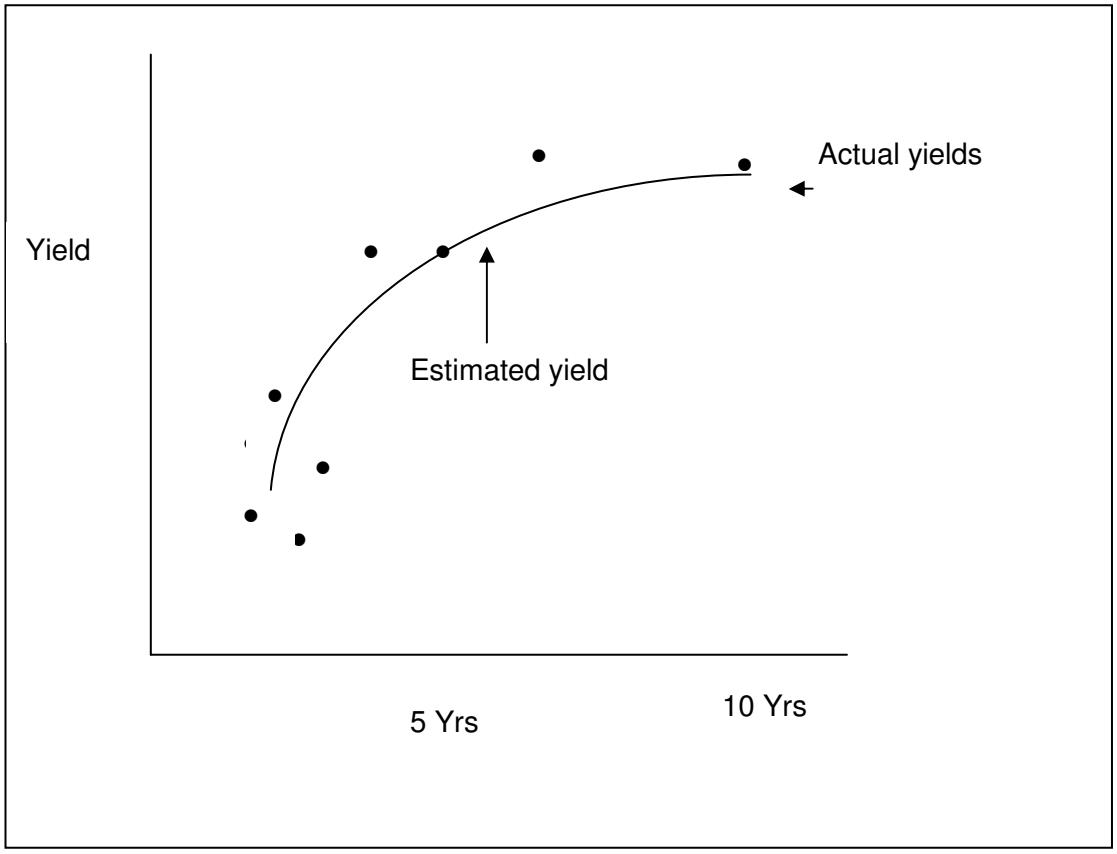
In the estimation of the BFV curve, Bloomberg collects various prices, including indicative prices and executable prices for bonds that have a high level of liquidity. Bloomberg excludes those bonds that are considered to be outliers, that is, have prices that are significantly higher or lower than comparable bonds.

As at the 16th of March 2011, the longest dated BFV BBB curve remains seven years. In the estimation of this curve, Bloomberg used eighteen bonds with maturities out to 2016. It does not include the APT bond.

Bloomberg considered that only eighteen bonds were liquid enough and had prices that were reliable enough to be included in the calculation of the seven year yield estimate. To estimate the representative yield Bloomberg relies on actual reliable observations for a given rating and for a given time to maturity. As depicted below, Bloomberg then fits a line to the data points to estimate the yield. In doing so, Bloomberg's estimation technique minimises the sum of squared deviations between actual observations and estimates of fair yields.[42]

[42] NERA 2005, *Critique of Available Estimates of the Credit Spread on Corporate Bonds: A Report for the Energy Networks Association*, May

Figure 5-7 Estimating yields



Source: Synergies Economic Consulting (2010), Estimating a WACC for the NT Gas Transmission Pipeline, Key Issues in the Current Environment, p.38.

Bloomberg does not currently use the APT bond in its estimation of the yield curve (it has not been possible to confirm whether it has been included in the sample at any point since it was issued, noting that if it had been, the AER's approach would result in double counting). The most likely reason for this is that the price of the APT bond is an indicative price and due to the lack of liquidity in the bond, the price is not considered to be a reliable price.

The APT bond has not traded, nor is the quoted price an executable price. The quoted price must be an indicative price where the market maker is not bound by the indicative price. The indicative price cannot be taken as a market price due to the lack of liquidity in trading. If markets are illiquid as is the case with the APT bond, it is not logical to expect that the indicative price is a reasonable approximation of a market price. The indicative price is not a reasonable expectation of market prices as the price discovery process is not operating.

Price discovery process

Price discovery is one of the most important functions of any Exchange (or organised marketplace, such as the bond market). The most reliable prices in any market are derived from those which emerge when the greatest concentration of trading takes place. There is a direct and strong relationship between number of trades and reliable prices. Importantly if there is little concentration of trading, as in a thin market, prices are not reliable as they do not accurately reflect supply and demand at the time. Even though prices are transparent and are known instantaneously, there is little confidence that the resultant price is one that would be negotiated in an open and unrestricted market between knowledgeable, willing and informed buyers and sellers acting at arm's length.

A necessary prerequisite for an efficient price discovery process is a market which is an efficient mechanism in pricing transactions. The ideal is a market in which prices provide accurate signals for resource allocation, that is, a market in which firms make production and investment decisions and investors choose among the securities that represent ownership of the firms' activities under the assumption that prices at any time "fully reflect" all available information. A market in which prices "fully reflect" all available information is called an "efficient market".[43]

An efficient market adjusts extremely quickly to new information so that that information is impounded into price virtually instantaneously in an unbiased manner. The rationale behind market efficiency is the existence of traders in the market who could profit from any slow market adjustment. If the market took a considerable time to adjust to a piece of information, then an opportunity would exist to buy or sell before the market adjustment was completed. If traders decided to take advantage of those opportunities, then their efforts to buy or sell would force prices up or down immediately. This would remove the slow market adjustment. The adjustment would occur as soon as the analysts perceived it to be slow. Thus, market efficiency is a result of competition among buyers and sellers.

If there were few buyers and sellers operating in the market then the market would not be efficient. The resultant price would not reflect all available information. It would not be a price that would be negotiated in an open and unrestricted market between knowledgeable, willing and informed buyers and sellers acting at arm's length.

In summary, an efficient price discovery process is required so that prices are reliable and they do accurately reflect supply and demand at the time. Conditions at a point in time are reflected in price. In an efficient market, prices would reflect a change in market conditions. This is not the case in an inefficient market. In an inefficient market, prices do not reflect available information or current conditions. The inefficient prices cannot be validly analysed to examine factors affecting either supply or demand.

[43] See E. Fama 1970, *Efficient Capital Markets*, Journal of Finance, 25, pp 383-417

Price discovery involves the process of buyers and sellers arriving at a transaction price for a given quality and quantity of a product at a given time and place. It involves several interrelated concepts, among them:

- market structure (number of participants in the market, size of the market, location of the market, and the competitiveness of buyers and sellers in the market);
- market behaviour (buyer procurement and pricing methods);
- market information and price reporting (amount, timeliness, and reliability of information); and
- markets for risk management instruments and alternatives.

The variation in reported prices (week-to-week or daily), both above and below the market price level results from many factors directly affecting price discovery. A major contributing factor is the frequency of trading in the market. In a situation where there is only a small amount of trading as in the case of a thin market , prices will not be reliable and one should exercise little confidence in the resultant price.

A thinly traded market cannot be an efficient market, nor would prices reflect all available information. The transacted price would not be the same as one that would be negotiated in an open and unrestricted market between a knowledgeable and willing but not anxious buyer and a knowledgeable and willing but not anxious seller acting at arm's length.

There is a plethora of empirical evidence investigating and reporting the effects of thin trading in markets.[44] Empirical research has established that a high volume of liquidity facilitates price discovery. Similarly a low volume of liquidity or thin trading generates inefficient price discovery. The thinner the market the greater the chance of an inefficient price as the price discovery process breaks down so that the resultant price does not correctly reflect supply and demand conditions. The price that is observed in a thinly traded market is far more likely to diverge from the "true price" that would be expected to emerge from a deep market.

This relationship between price discovery and trading has been well researched.[45] For low volume or thinly traded stocks, the efficiency of the price discovery itself is low. The efficiency of price discovery is positively correlated with trading volume.

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[44] R. Banz 1981, *The Relationship between Return and Market Value of Common Stock*, Journal of Financial Economics, 19, pp 41-44; W. Beedles, P. Dodd and R.Officer 1988, *Regularities in Australian Share Returns*, Australian Journal of Management, pp 1-29; M.Reinganum 1981a, *Misspecficication of Capital Asset Pricing: Empirical Anomalies Based on Earnings' Yields and Market Values*, Journal of Financial Economics, 9, pp 19-46

[45] M. Barclay, R. Litzenberger and J.Warner 1990, *Private Information, Trading Volume and Stock Return Variances*, Review of Financial Studies, 3, pp 233-253

The noisiness of prices and the efficiency of price discovery has been estimated in studies. For low volume or thinly traded stocks, the efficiency of the price discovery itself is low. The efficiency of price discovery is positively correlated with trading volume.

A study by Baias et al looks at indicative prices posted at the pre-opening session on the Paris Bourse.[46] It shows that prices posted during the first part of that period are pure noise. As the market opening time gets closer (that is, as we get closer to the time actual trades can be executed), "the evidence is consistent with an increase in the information content and informational efficiency of the indicative prices."

The consequence of this is that an analysis of observed prices to determine a material change in price could result a correct conclusion only by chance. Prices in thin markets are distorted and do not reflect all information pertaining to price. The APT bond cannot be validly used as an indicator of the DRP for a ten year BBB yield. In order to provide relevant and current information regarding lenders' expectations of future returns (in this case, the expected cost of debt), there needs to be sufficient turnover. If there is a lack of turnover the information that is reflected in the latest observed yield is likely to be stale and not reflective of current market conditions.

The AER has itself recognised the concerns regarding liquidity (or lack thereof) in the indexed bond market when considering whether it will revert to estimating inflation based on the Commonwealth Government's indexed bonds (for example, in its 2010 decision for the Queensland electricity distribution network businesses it indicated that it was reviewing the 'functionality' of the market for these securities).[47] Thin trading has also been examined in the context of beta estimates.[48]

As part of the AER's testing methodology (which was used to assess CBA Spectrum and Bloomberg), there is much discussion of the inclusion/exclusion of individual bonds, such as the BBI and DBCT issues. However, at no point does the AER consider applying the same tests to the APT bond. Instead, it appears to be willing to 'take it at face value' and even goes as far to suggest that Bloomberg's seven year fair value yield may be overstated when it is compared to the APT bond.

Sample size

The AER's proposed methodology estimates the DRP by weighting the APT bond yield by 50% and the Bloomberg yield by 50%. Effectively the AER is placing a weight of 50% upon a portfolio of eighteen bonds that are considered to be liquid and indicative of market yields and a 50% weight upon a bond that is illiquid and not considered to be a reliable price.

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[46] B. Biais, P. Hillion and C.Spatt 1999, *Price Discovery and Learning During the Preopening Period in the Paris Bourse*. Journal of Political Economy, 107, pp1218-1248

[47] AER 2010b, *Queensland Distribution Determination 2010-11 to 2014-15*, May, p 254

[48] AER 2009, WACC Review

There is a basic statistical issue in placing reliance upon a sample size of one. Previously the AER has relied upon independent, credible and accessible data providers and has statistically tested their predicted values. Now the AER will average the Bloomberg yield with the yield on a single bond. There does not appear to be any credible reason for placing a 50% weighting on one untested bond yield and averaging this with a portfolio of eleven bonds that have been assessed by a respected data provider.

5.3.4.2 Benchmark versus actual cost of debt

APT Allgas is in a relatively unique situation in that should the AER choose to reference the APT bond when estimating the cost of debt to apply to the network, it is referencing the cost of debt of its majority owner, the APA Group. It has also had regard to this in section C.3.5 of the Draft Decision.

The proposal to use the APT bond to estimate the DRF is therefore referencing APT Allgas' actual cost of debt. Consistent with the practice applied by most Australian regulators, the AER estimates the cost of debt based on the cost that would be incurred by the 'efficient benchmark' service provider.[49] Reference is not made to the regulated firm's actual cost of funds.

The NGR specifies that in setting the return on capital it will be assumed that the service provider "meets benchmark levels of efficiency" and "uses a financing structure that meets benchmark standards". The National Electricity Rules (while not governing gas) prescribe that the cost of debt must be that of the "efficient benchmark" service provider.

The AER has not articulated how it intends to interpret this for gas but it has done so for electricity. While there are some fundamental risk differences between gas and electricity network businesses, in relation to estimating the cost of debt there is no reason why a benchmark approach should not be consistently applied in both cases.

In its 2008 Issues Paper released at the commencement of the development of its WACC Statements, the AER noted that:[50]

> It is common regulatory practice for regulators to use a benchmark approach rather than business specific approach in estimating the WACC parameters, as this:
>
> - is consistent with the general approach of incentive regulation (a view adopted by other regulators and generally accepted by the businesses)

[49] Rule 6.5.3(1)

[50] AER 2008, *Review of the Weighted Average Cost of Capital (WACC) Parameters for Electricity Transmission and Distribution: Issues Paper*, August, p 14

- means that customers are less likely to bear the cost associated with inefficient decisions (e.g. financing structures), and
- improves the comparability of regulatory decisions.

In other words, even though it noted that a benchmark approach was prescribed under the NER, the AER also considers this to be common regulatory practice. It reiterated that position in the final decision regarding its WACC statements:[51]

> The regulatory regime should continue to provide symmetrical outcomes with respect to the benchmark cost of debt, with interest rate risk fairly compensated for via the equity beta. This approach is consistent with most aspects of an incentive-based regulatory regime, whereby the methodology for determining the cost of debt is a benchmark assumption against which incentives are created for a regulated business.

The key rationale provided by the AER is that the benchmark approach is consistent with the principles of incentive regulation. If the regulator references the firm's actual cost of debt, it could reward inefficient financing practices. Similarly, if a firm has put in place a particularly effective financing structure, basing the estimate on that cost of debt removes any benefit that would otherwise accrue to the firm. This in turn provides it with no incentive to implement more efficient strategies to reduce its cost of debt below the benchmark. This is not in the long-term interests of consumers.

As outlined above, the APT bond was issued to thirteen institutional investors. KangaNews awarded the issue the Australian Domestic Corporate Market Deal of the Year.[52] The methodology that is used to determine the awards is cited as follows:[53]

> Issuers, investors and intermediaries are invited to vote for the best houses, deals and intermediaries in the year, on a confidential basis. In 2010 over 100 market participants submitted their votes for the winners of the KangaNews awards. Because of the widescale input from genuine market participants, KangaNews is confident that its annual awards are the best and fairest recognition of excellence that exists in the Australasian debt markets.

It was also recently awarded Finance Asia's Best Local Bond Deal.[54]

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[51] AER 2009, p 20

[52] http://www.kanganews.com/index.php/component/content/article/1555, accessed 15 December 2010

[53] http://www.kanganews.com/index.php/component/content/article/1555, accessed 15 December 2010

[54] http://www.financeasia.com/News/241763,achievement-awards-2010----australia-and-nz-day-1.aspx?refresh=on, accessed 20 December 2010

This suggests that the deal was considered to be particularly innovative and unique (and the APA Group has advised that this is considered to be the case). In our opinion, it could also mean that this deal could not be easily replicated by other Australian corporate (including the 'efficient benchmark firm') and indeed, even the APA Group, at least in the short to medium-term.

The other reason it could be difficult to replicate is the size and scope of the APA Group's balance sheet. The APA Group is funding an asset base of some $5 billion in total. This is likely to well exceed the size of the 'efficient benchmark firm' and the RAB of APT Allgas.

In referencing the yield on the APA Group's own bond issue, the AER is removing any benefit that should accrue to the firm from pursuing more efficient financing arrangements. This in turn significantly dilutes any incentive for the business to implement more efficient strategies to achieve a lower cost of funds than the benchmark, which is one of the main principles underpinning incentive regulation and is in the long-term interests of consumers.

Further, to the extent that this deal was seen as particularly innovative and unique, and difficult to replicate (not only because of the APA Group's size), it is not considered appropriate to use this to set the benchmark cost of funds. This will not provide any regulated business with an incentive to reduce its cost of funds below the benchmark if the benchmark itself is seen as difficult to achieve. That is, the deal may be more of an outlier than a benchmark. As outlined above, Bloomberg may also view the bond to be an outlier given it hasn't included it in the sample used to construct its fair value curve.

Not relying on outliers to establish benchmark parameters has also been addressed in relation to other parameters, such as the establishment of the benchmark notional credit rating. For example, in its 2004 decision in relation to the East Australian Pipeline Limited (EAPL), the Tribunal ruled that the ACCC should have excluded AGL's A credit rating when seeking to establish the notional credit rating for EAPL (the other three pipelines in the sample were rated BBB):[55]

> If attention is directed to the chosen class, the only rational conclusion is that AGL was an 'outrider' out of line with the other members of the class and should properly be ignored. That conclusion is reinforced by the material which shows AGL to be of such a size and its business of such a nature as to be a poor proxy for a pipeline operator.

5.3.4.3 Conclusions: APT Bond

The overarching concern is why the APT bond would not be in Bloomberg's BBB sample. It was not in the Bloomberg BBB sample as at the 16th of March 2011. It is

[55] Australian Competition Tribunal 2004, Application by East Australian Pipeline Limited [2004] ACompT 8, para 66

possible that it has been since it was issued in July 2010. If it has not been included, the question is why.

Normally Bloomberg will not include bonds that are thinly traded. Should the bond become reliable and considered by Bloomberg to be indicative of longer term yields, Bloomberg will include the bond in the estimation of their BFV curve. If the bond is subsequently included, the AER's method will result in double counting. Double counting will result in an erroneous estimate.

The AER observed that the yield on the APT BBB rated ten year bond is less than the Bloomberg seven year BBB yield. It has sought theoretical support by relying upon studies by Merton and He. The empirical evidence in the He study contradicts the observed relationship between the APT bond and the Bloomberg BBB yield. Additionally the He study does not provide support for the inclusion of the APT bond yield to be included in the DRP calculation.

The lack of trading liquidity at least partly explains the APT yield and provides strong justification for not considering the bond in the estimation of the DRP. It appears that Bloomberg has arrived at the same conclusion as they have not included the bond in the estimation of the seven year BBB yield.

The AER should not be placing such a weighting on a single observation regardless of the reliability of the observation. The most logical approach is to ignore the bond given its questionable reliability due to the lack of observed market prices.

Finally, it is not considered appropriate to use the APA Group's actual cost of funds to set the benchmark cost of debt for any of its own regulated pipelines. When compared to the yields on other BBB issues, the yield on the APT bond issue appears low. Apart from the issues raised above regarding liquidity and the impact that this has on the yield, the fact that this deal was recently awarded the Australian Domestic Corporate Market Deal of the Year suggests that the market views this deal as particularly innovative.

Using this bond to set the benchmark removes any benefit that accrues to the regulated firm from achieving a more efficient financing structure. This in turn materially dilutes any future incentive to achieve a lower cost of funds then the benchmark, which is not in the best interests of consumers in the long-term.

Further, to the extent that the deal was considered particularly innovative and difficult for an Australian corporate to replicate, it is questioned whether it is appropriate to use it to inform the estimation of the benchmark cost of debt, not only for APA's regulated pipelines but for any regulated business. That is, this deal may be more of an outlier than indicative of the benchmark cost of funds.

5.3.5 Conclusion: cost of debt

In conclusion, APT Allgas does not consider that it is appropriate for the AER to place any reliance on the APT bond (or any other bond) in estimating the benchmark cost of debt, nor is it appropriate to have any regard to its actual cost of funds. The AER considers that placing equal reliance on the Bloomberg fair value estimates and the APT bond is a "cautious approach"[56]. On the contrary, placing what is significant reliance on a bond that is not trading (and hence cannot contribute to price discovery of the forward-looking cost of debt) materially increases the risk of error.

APT Allgas considers that particularly in such difficult market circumstances, it is appropriate to place reliance on Bloomberg's fair value estimates as this is considered to best meet the requirements of the NGR, including reflecting the prevailing conditions in the market for funds. Bloomberg is a respected, independent organisation with access to the necessary resources, skills and expertise to interpret the paucity of current market data.

5.4 Equity beta

5.4.1 Comparisons against the 'general market'

The AER continues to maintain that an equity beta of 0.8 is appropriate for a regulated energy utility, stating:[57]

> The AER considers that regulated utilities face lower systematic risk than the general market, which is primarily driven by the stable cash flows of regulated utilities.

Analysis by SFG Consulting that was submitted to the AER by the Joint Industry Associations as part of the review of its WACC guidelines, highlighted that:[58]

> The average listed Australian firm has an equity beta of 1.0, leverage of 30% debt finance, and an asset beta of 0.7. Using the AER's framework, the AER's re-levering formula, and the AER's parameter estimates, the risk of the assets (asset beta) of the benchmark firm are considered to be 0.32 whereas the risk of the assets of the average listed firm is 0.7. That is, the business operations of the average listed firm are considered by the AER to be less than half as risky as the average firm.

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[56] AER 2011 *Draft Decision* p 189

[57] AER 2011 *Draft Decision*, p 64

[58] SFG Consulting 2009, *The Reliability of Empirical Beta Estimates: Response to the AER Proposed Revision of WACC Parameters*, Report Prepared for ENA, APIA and Grid Australia, February, para 47

SFG showed how the AER had misconstrued the concept of 'financial risk' and how leverage affects beta.

In comparing the systematic risk of regulated utilities the AER continues to focus on business risk and does not give regard to the fact that the benchmark regulatory gearing level is materially higher than the average gearing level of the market, with 'the market' being the AER's reference point for these comparisons.

APT Allgas agrees that the (systematic) business risk of the average regulated utility is less than the average risk of the market. However, equity beta measures both business and financial risk. Once the higher than average level of gearing is considered, a 'prior belief' of an equity beta of one is considered reasonable.

5.4.2 Impact of market power

In its analysis of beta set out in Attachment C.2 of the Draft Decision the AER questions a number of the risks that had been identified by APT Allgas, and in particular, whether they are systematic or diversifiable. The report prepared by Synergies was very clear on this point and recognised that a number of these risks were not necessarily systematic in their own right. However, the relevant issue was the impact on market power:[59]

> APT Allgas does not have substantial market power. It faces strong competition from substitutes in all of the applications for which gas is used, in particular, the competition that it is exposed to from solar energy (and to a lesser extent, heat pump technology) in the water heating market, which is its largest potential market in the residential sector. Queensland has one of the lowest penetrations of gas in dwellings of any Australian state. While a number of the factors that influence the choice of energy source are not related to the domestic economy (such as government policy initiatives), what is relevant to this assessment is that:
>
> - to the extent that demand has a relationship with domestic economic activity (via income and new dwelling construction activity), gas is exposed to higher market risk because it is a 'fuel of choice' relative to electricity, which increases the sensitivity of the firm's revenues to domestic economic activity (costs are considered separately below);
>
> - more importantly, this significantly reduces its market power...

The AER also states that some of these issues "are not uncommon for other gas distribution service providers" but does not provide any further information to substantiate this. The analysis APT Allgas submitted, on the other hand, was reasonably detailed in this regard.

[59] Synergies Economic Consulting 2010, *Estimating a WACC for the APT Allgas Distribution Network, Key Issues in the Current Environment*, p 73

Market power is a legitimate factor in determining beta as part of a first principles assessment. For example, a study by Lee et al uses a Cobb-Douglas production function to show that market power reduces systematic risk.[60]

The AER also dismisses the example provided of ARTC's interstate network, where the ACCC's assessment of WACC was influenced by the recognition that it was not pricing access at its ceiling price. The main reason ARTC is not pricing at the ceiling on this network is because it faces intermodal competition, which reduces its market power. In making its conclusions in relation to beta is stated:[61]

> ...it should be noted that ARTC operates under some market demand and price constraints due to inter-modal competition. This is the principle reason it operates well below its revenue ceiling on major segments. As such, it bears some market risk and if the economy does badly (or well) ARTC will lose (or gain) business and profits.

5.4.3 Conclusion

APT Allgas maintains its view that an equity beta of 1 is an appropriate assumption for the average regulated energy network business. This is the same as the equity beta of the market, however reflects that the average regulated energy network business has:

- lower business risk compared to the market average
- higher financial risk compared to the market average.

APT Allgas considers that the data that the AER has referenced is not sufficiently reliable to support departure from the 'prior belief' of 1.

APT Allgas also continues to be of the view that it has higher systematic risk than this average network business, because: (1) gas is a fuel of choice compared to electricity; and (2) APT Allgas has lower market power compared to other gas distribution businesses. It therefore considers that an equity beta of 1.1, as previously determined by the QCA, remains the most appropriate value.

5.5 Summary – WACC

Based on the risk free rate prevailing at the time of this submission, the outcomes of the discussion above can be summarised in the following table:

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[60] C.Lee, K. Liaw and S.Rahman 1990*, Impacts of Market Power on Capital-Labour Ratio and Systematic Risk: A Cobb-Douglas Approach*, Journal of Economics and Business, 42(3), pp 237-241

[61] Australian Competition and Consumer Commission 2008, *Australian Rail Track Corporation, Access Undertaking – Interstate Rail Network*: Final Decision, p 155

Table 5-3 APT Allgas WACC parameter values

Parameter	Estimate
Risk-free rate	5.71%
Debt to value	60%
Debt margin	4.69%
Debt raising costs	0 %
MRP	6.5%
Gamma	0.2
Equity beta	1.1
Cost of equity	12.86%
Cost of debt	10.40%
Post tax nominal vanilla WACC	**11.38%**

5.6 Inflation

The AER noted that there was a slight difference between APT Allgas' proposed inflation estimate and its own forecast. This was seen as being due to an "inadvertent error".[62] While the nature of that error is not clear, APT Allgas is prepared to accept the AER's forecast.

5.7 Averaging period for the risk-free rate

APT Allgas has submitted a proposed averaging period for the risk-free rate, which is contained in Confidential Attachment A.3.

5.8 Gamma

APT Allgas does not accept the AER's proposed value for theta, which is 0.65. In particular, APT Allgas does not accept:

- its continued reliance on tax statistics, which it continues to justify because it represents an alternative method (APT Allgas maintains that it is a flawed method);

[62] AER 2011 *Draft Decision*, p 66

- its continued rejection of the SFG study, noting that APT Allgas has proposed reliance on this study along with a number of other reputable market-based studies.

APT Allgas has already submitted in detail on this matter and continues to belies that the appropriate level for Gamma is 0.2.

APT Allgas notes that a final outcome from the current appeal by the Queensland and South Australian electricity distribution network businesses remains pending. As the AER indicated in its draft decision, APT Allgas agrees that the outcome of the ACT decision would be reflected in the final decision on Gamma.

6 Tax

The AER required three changes to the APT Allgas proposal regarding taxation, as discussed below.

Amendment 6.1: make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the treatment of capitalised overheads as described in section 6.4.4.

APT Allgas acknowledges that the AER's treatment of overheads that are expensed for tax purposes is consistent with the process applied to develop the Tax Asset Base. APT Allgas has therefore accepted this amendment and reflected it in the calculation of Reference Tariffs.

Amendment 6.2: make all amendments necessary in the access arrangement proposal and access arrangement information to take account of a gamma of 0.45.

APT Allgas does not accept this amendment.

As discussed in section 5.8, APT Allgas continues to believe that 0.2 is the appropriate value for gamma.

However, APT Allgas notes that the measurement of gamma is currently the subject of appeals before the Australian Competition Tribunal brought by the Queensland and South Australian electricity distributors. As flagged in the AER draft decision, APT Allgas expects the AER's final decision to reflect the ACT decision on this matter.

The tax allowance included in APT Allgas' revenue requirement calculation therefore continues to reflect a gamma of 0.2.

Amendment 6.3: make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the revised tax allowance in table 6.3 of this draft decision.

Table 6.3: AER tax allowance for the access arrangement period ($m, nominal)

	2011–12	2012–13	2013–14	2014–15	2015–16
Tax	0	0	0	0	0

As discussed in sections 4.1 and 4.2, APT Allgas has proposed alignment of its remaining depreciable asset lives with the standard asset lives. This has had a consequential impact on the depreciation building block, on the revenue requirement and therefore on taxation. APT Allgas has also provided commentary on the appropriate value for gamma to recognise the utilisation of imputation credits.

These two amendments cascade through the Post Tax Revenue Model to determine a tax allowance as shown in Table 6-1 below:

Table 6-1: Allowance for tax

($000) nominal	2011-12	2012-13	2013-14	2014-15	2015-16
Tax payable	948	2,773	2,657	2,890	3,342
Less allowance for imputation credits	190	555	531	578	668
Tax allowance	759	2,219	2,126	2.312	2,674

This amendment to the depreciation expense will have consequential implications on Amendment 6.3 (Tax) and Amendment 8.1 (Revenue requirement).

7 Operating expenditure

Amendment 7.1: amend the access arrangement proposal and access arrangement information as necessary to reflect the adjustments made to proposed opex for the access arrangement period set out in table 7.10 and in appendix F.

Table 7.10: AER required amendments to APT Allgas's forecast opex

	2011-12	2012-13	2013-14	2014-15	2015-16	Total
APT Allgas forecast operating expenditure	19.48	19.99	20.50	20.81	21.12	101.90
AER specific amendments						
UAG	-0.60	-0.59	-0.58	-0.60	-0.66	-3.04
Revenue and protection officer	-0.05	-0.05	-0.05	-0.05	-0.05	-0.25
Electricity to gas hot water changeover	-0.40	-0.40	-0.41	-0.41	-0.42	-2.04
Development and deployment of new technology	-0.26	-0.27	-0.27	-0.27	-0.28	-1.33
IT roadmap opex	0.00	-0.15	-0.16	-0.17	-0.18	-0.68
Knowledge management	0.00	-0.15	-0.15	-0.15	-0.16	-0.63
Total AER specific amendments	**-1.31**	**-1.62**	**-1.63**	**-1.66**	**-1.75**	**-7.98**
Forecast operating expenditure less specific amendments	18.17	18.37	18.87	19.15	19.37	93.93
Effect of input cost escalator amendments	-0.10	-0.14	-0.22	-0.19	-0.40	-1.05
Total AER approved operating expenditure	**18.07**	**18.23**	**18.66**	**18.96**	**18.96**	**92.88**

APT Allgas accepts parts of this amendment, as discussed more fully below.

7.1 Unaccounted for gas

In its draft decision, the AER accepted APT Allgas' proposed volumetric level of UAG as efficient. However, the AER considered that APT Allgas' assumption as to the gas price to be applied to this volume was not reasonably based as required Rule 74(2)(a).

The AER asserts that the basis of APT Allgas' assumption for future gas prices by using the forecast prices derived from a report prepared by McLennan Magasanik associates (MMA) for the Queensland Government's annual gas review was reasonable. In determining an appropriate price to use in its submission, APT Allgas sought indicative five year tenders from three retailers for supply of the gas for UAFG. Two of these requested tenderers responded to APT Allgas. Both tender responses indicated prices well in excess of the wholesale gas prices in the MMA report. In order to meet a compromise position which would be agreeable to all parties, APT Allgas decided to add a notional margin of 20% onto the MMA reported prices. This compromise position resulted in notional prices a little under half way between the MMA wholesale prices and the tendered prices from the retailers. In the draft decision the AER asserted that the 20% margin applied by APT Allgas to these prices was unreasonable, and that APT Allgas should have used the wholesale delivered gas prices in the MMA report.

APT Allgas is concerned with the AER's approach as it does not reflect the actual cost of UAG purchase for APT Allgas. The AER's approach does not take account of the retailer margin that is applied to the wholesale gas price, and would mean that the retailer would be supplying what is, in effect, its largest consumer, at cost price.

In response to the AER's draft decision, APT Allgas has sought firm tenders from retailers for provision of the necessary volumes of gas for the 2011-16 access arrangement period. The results of this tender process are tabled in Appendix A4, and the end result summarised in Table 7-1, below.

Table 7-1- Total UAG costs

($000 Nominal)	2011-12	2012-13	2013-14	2014-15	2015-16
Total UAG Cost	4,109	4,211	4,319	4,430	4,540

Section 24(2) of the National Gas Law requires the AER to afford a service provider such as APT Allgas the opportunity to recover at least its efficient costs in providing pipeline services. NGR rule 74 requires:

(1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.

(2) A forecast or estimate:

(a) must be arrived at on a reasonable basis; and

(b) must represent the best forecast or estimate possible in the circumstances.

APT Allgas considers that the tender process used by it to determine the cost of purchased gas for UAG complies with the relevant gas laws and the Rules. APT Allgas has therefore included the cost of UAG, at the lowest of the tendered prices received, as shown in Table 7-1 above, in its revised Access Arrangement Submission.

7.2 Input cost escalation

The AER has identified two real cost escalators used by APT Allgas as requiring modification. These are the general escalator, used to escalate labour and materials costs, and the regulatory escalator, used to escalate government charges incurred by APT Allgas. APT Allgas' actions in response to AER's requirements are described below.

7.2.1 General Escalator

APT Allgas has reviewed the AER's considerations on this matter and wish to submit the following supplementary information for further consideration by the AER.

In its original access arrangement submission, APT Allgas used general cost escalation rates which were based on expected labour escalation rates nominated in a report prepared previously for the AER by Access Economics[63]. The rationale behind the application of these escalators for both labour and materials was a desire not to overcomplicate this issue.

In its draft decision, the AER has indicated that it was unhappy with this approach on two grounds, these being:

- More up to date forecasts have now been produced by Access Economics;
- The application of labour escalators to both labour and materials is inappropriate, and that appropriate escalators should be applied to each of labour and materials.

In Tables 7.4 and 7.5 of its draft decision, the AER nominated general escalators which may be applied to combined labour and materials costs. Rather than apply these nominated general escalation rates which infer relative levels of expenditure for labour and materials components, APT Allgas submits to the AER that an alternative and more reasonable method is to apply three real price escalators, one

[63] Access Economics, *Forecast Growth in Labour Costs*, September 2010

for utilities labour, one for Administration Services labour and one for materials. This method would satisfy the AER's stated concerns, whilst providing a result which is more likely to reflect future movements in cost inputs.

APT Allgas has therefore updated the labour escalators to reflect the Labour Price Indicators in the most recent Access Economics report.[64] Accordingly, the Queensland Utilities real Labour Price Aggregates nominated by Access Economics have been applied to all labour components of APT Allgas' revision proposal except for corporate overheads, to which the Queensland Administration Services real labour price aggregates have been applied.

It should be noted that Queensland real productivity adjusted labour price aggregates were not used, as use of these aggregates would mean that and productivity improvements by APT Allgas would be "double counted". This is because anticipated productivity improvements have been built, where applicable, into the original calculation models of the original submission.

In determining a suitable escalation factor for materials, APT Allgas has reviewed access arrangement submissions by Envestra Qld, Jemena, and ActewAGL, and the AER's responses to these submissions. Consistent with these decisions, APT Allgas has set materials escalators to 0% for all years of the 2011-16 access arrangement period.

The escalators used by APT Allgas in its revised Access Arrangement are shown below.

Table 7-2: General Real Price Escalators

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Utilities labour	1.5	1.4	2.3	2.3	1.5	0.8
Administrative services labour	0.6	0.3	1.5	1.9	1.4	0.8
Materials	0.0	0.0	0.0	0.0	0.0	0.0

Source: Access Economics, Forecast growth in labour costs: Queensland and South Australia, 13 December 2010 Table 10.1

7.2.2 Regulatory Escalator

APT Allgas has reviewed the AER's considerations on this matter and wish to submit the following supplementary information for further consideration by the AER.

[64] Access Economics 2010, *Forecast Growth in Labour Costs (Qld & SA)*, November, Table 10.1

Of all the fees paid to regulatory bodies in Queensland and NSW, the Safety and Health fee paid by APT Allgas to DEEDI is by far the largest, being over 90% of all fees incurred from government bodies. It is these fees which have, and are expected to continue to increase disproportionally to CPI.

APT Allgas has received the following advice from DEEDI on this Safety & Health fee as below: [65]

> For the fees to be billed in the 2nd half 2010 (based on 09/10 data) there will be a significant rise in fees:
>
> - 2010/11 planned Petroleum and Gas Inspectorate budget is $5.82m (this is based on initial additional resources only being in place for ¾ of 2010/11 year).
>
> - 2011/12 planned Petroleum and Gas Inspectorate budget is $7.48m (all additional resources in place).

DEEDI have also advised APT Allgas that the combined contribution from all gas distribution authorities in Queensland will be 15% of the total Petroleum and Gas Inspectorate budgets. This amount is to be split between the Queensland gas distribution authorities in proportion to the total length of mains of each.

Assuming that the length of mains of each distribution authority remains roughly proportional to present, and that the 15% contribution level nominated by DEEDI does not change, then APT Allgas' fee will be proportional to the DEEDI Gas and Petroleum Inspectorate budget going forward.

APT Allgas accepts the AER's observation that the initial 30% increase in fees for the 2010-11 Inspectorate budget is reflected in the accounts for the 2009-10 financial year. This error in APT Allgas' forecast appears to have arisen as a result of DEEDI changing from retrospective billing to prospective billing, without advising APT Allgas of this change.

APT Allgas submits to the AER that the regulatory escalator nominated in Table 7.4 of the AER's Draft Determination is inadequate to reflect the expected increased cost in 2011-12. APT Allgas' view is that this Regulatory Escalator should be 28.5%, as calculated below.

$$\frac{7.48 - 5.82}{5.82} * 100 = 28.5$$

[65] DEEDI, *Proposed Audit and Inspection Fee Review Summary*, Chief Inspector of Petroleum and Gas, 30 March 2010

APT Allgas considers that the regulatory cost escalator for subsequent (2012-13 to 2015-16) years should reflect the Queensland Administrative Services real labour price aggregates from the Access Economics labour costs report to the AER.[66]

APT Allgas therefore submits that the real cost input cost escalators for government charges be amended to those shown below.

Table 7-3: General Regulatory Escalators

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Regulatory	30.0	28.5	0.3	1.5	1.9	1.4	0.8

7.3 Step and scope changes

In its draft decision, the AER rejected five of APT Allgas' proposed step and scope changes, namely:

- Revenue and Protection officer;
- Electricity to gas hot water changeover;
- Development & deployment of new technology;
- IT roadmap; and
- Knowledge management.

APT Allgas accepts the AER's amendments for four of the rejected step and scope changes and has amended its access arrangement proposal accordingly. APT Allgas does not accept the AER's amendments in respect of the electricity to gas hot water changeover program, and submits the following additional information.

7.3.1 Electricity to gas hot water changeover program

APT Allgas proposed an Electricity to Gas Hot Water Changeover program as part of its forecast operating expenditure. The effect of the proposed program is to increase the volume of gas transported on the gas network, without increasing the amount of capital expended. Everything else being equal, this will result in a fall in tariffs at the next access arrangement review. That is, the full benefit of the program will flow through to gas consumers rather than to the network owner at the next access arrangement review. As such, APT Allgas is unlikely to proceed with the

[66] Access Economics, *Forecast Growth in Labour Costs (Qld & SA)*, November 2010, Table 10.1

proposed program unless it is included in the operating expenditure forecast approved by the AER.

In its draft decision, the AER noted that "APT Allgas rationale for this program is to mitigate falling average residential consumption in Queensland." And that "the demand forecasts proposed by APT Allgas, don't appear to the AER to show evidence of sufficient linkage between this program and demand in the access arrangement period."

APT Allgas has subsequently presented two views of its demand forecast. The first view illustrates the demand forecast in the absence of the Electricity to Gas Hot Water Changeover program. The second view illustrates the demand forecast to reflect the benefits of the program.

The AER considered that "insufficient evidence has been submitted to demonstrate that the expenditure is indeed efficient." The AER also states that APT Allgas has not provided a substantiated estimate or forecast of likely uptake over the period to warrant the overall expenditure of $2.0 million, nor information suggesting that the proposed $500 incentive has been based on an economically efficient level and reflects the lowest as required under r. 91 of the NGR.

APT Allgas has undertaken a detailed economic analysis to demonstrate that the level of incentive proposed is prudent, as set out below.

Figure 7-1 Economic analysis of E2G changeover program

			Year 1	Year 2	Year 3	Year 4	Year 5	Year 10	Year 15
No of Customers		0	1	1	1	1	1	1	1
Ave GJ / Customer	per Annum	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Revenue	Existing (@ 2 GJ pa)	$0	$174	$178	$182	$187	$192	$217	$245
	New (@ 12 GJ pa)	$0	$256	$263	$269	$276	$283	$320	$362
	Incremental	$0	$83	$85	$87	$89	$91	$103	$117
Operating Costs	O&M	$0	$0	$0	$0	$0	$0	$0	$0
	Network Marketing / Incentive	$500	$0	$0	$0	$0	$0	$0	$0
Total Operating Costs		$500	$0	$0	$0	$0	$0	$0	$0
Operating Cash Flow		$500	$83	$85	$87	$89	$91	$103	$117
Net Cash Flow before Tax		$500	$83	$85	$87	$89	$91	$103	$117
Cash Tax Paid		$0	$0	$0	$0	$0	$0	$31	$35
Net Cash Flow post tax		($500)	$83	$85	$87	$89	$91	$72	$82
Cum. NPV @ 10.30% post tax		($500)	($425)	($355)	($291)	($231)	($175)	($6)	$103

	10 Years	15 Years	20 Years
NPV after Tax at 10.30% ($)	**(6)**	**103**	**179**

This analysis indicates a discounted payback of approximately ten years. Over an evaluation period of 15 years, in line with current expectations of appliance life, the net present value of the incremental revenue associated with securing the connection of a single gas hot water unit in has been determined to exceed the level of the proposed incentive of $500. Over the shorter evaluation period of 10 years, below the expected life of current appliances, the net present value of incremental revenue breaks even with the proposed incentive. To the extent that net present value exceeds to cost of incentive the network is better off. Arguably, in the event that everything else remains constant, this translates directly to lower tariffs at the time of the next access arrangement.

APT Allgas is clearly motivated to minimise the amount of incentive offered to customers to maximise the benefit of the available funds. However, assessing the level of incentive required is not an exact science, but rather a matter for judgement taking into account available facts. From APT Allgas' experience, indications are that:

- An incentive of $500 for the conversion of electric to gas hot water systems has been found to be effective in South Australia, where APA Group operates the gas network for Envestra. This level has been determined through iterative processes that considers the performance of a number of campaigns, undertaken at least as far back as 2005;

- The amount of rebate needs to be material. A rebate of $100 or $200 is insufficient to affect the consumer's decision;

- There has been no advertising in support of natural gas in Queensland. By comparison, solar promoters have advertised aggressively and in doing so have influenced the consumers preference towards solar as a greener alternative. Against this, any incentive needs to be sufficient to affect the consumer's decision;

- In the second half of 2010, recognising the low level of available discretionary network development expenditure, a trial program over a period of weeks was undertaken where a $300 incentive was offered for a gas-to-electricity conversion in an existing home already connected to gas. A total of 29 incentive payments were made. It is judged that a higher level of incentive, supported by advertising, is required to accelerate the rate of uptake;

- The effect of federal and state rebates and the availability of Renewable Energy Certificates for heat pump and solar hot water appliances has been to offset any capital cost advantage that natural gas hot water appliances previously held. Whilst these costs vary significantly depending upon appliance selection and configuration of the house, they may be summarised as follows.

Table 7-4: Capital cost of Hot Water Appliances considering Rebates and RECS

	Instantaneous Gas Hot Water Unit	Heat Pump Unit	Electric Solar Unit
Appliance Cost	$1000	$3800	$3800
Gas Piping	$500		
Total Rebates and RECS		-$2500	-$2900
Sub-total	$1500	$1300	$900
Incentive	-$500		
Final Cost	**$1000**	**$1300**	**$900**

Assumptions:
1 All three appliance types require water piping and electricity supply modifications at similar cost.
2. Federal rebate for solar hot water is $1000, federal rebate for heat pump is $600, state rebate for both is $600, and value of RECS is $1000 (ie 33 RECS at $40 each)

It can be seen that an incentive of $500 is required to maintain the cost competitiveness of instantaneous gas hot water units.

Based on the above, it is judged that an incentive of $500 is the minimum required to be effective.

Again, it is not an exact science estimating the level of uptake, especially as there has been little incentive based campaign activity previously undertaken in Queensland. However, based on the trial campaign undertaken in late 2010, where a short campaign led to 29 electric to gas conversions in already connected homes, it is judged that extending this campaign throughout the year, and increasing the incentive from $300 to $500 will increase the uptake to around 400 units.

Further APT Allgas has around 80,000 residential gas connections. It is estimated that around 16,750 of these dwellings are currently using electricity for hot water production.[67] Given a hot water system life of 15 years, approximately 1100 of these electric hot water systems in gas connected properties on APA's network will require replacement each year. On this basis it is reasonable to expect a continuous program incorporating an incentive of $500 per electric to gas conversion will achieve an uptake of around 400 units per annum.

[67] Wilkenfeld, G 2009, Phasing out greenhouse-intensive water heaters in Australian homes: Consultation Regulatory Impact Statement, December, access at http://www.ret.gov.au/Documents/mce/quicklinks/bulletins-archive.html

The AER also noted that the program was described as an existing program undertaken in an earlier access arrangement period. As such it is not evident to the AER that the proposed expenditure is actually a step change on expenditure currently in the base year.

As has been set out in the APT Allgas submission, the vast majority of the allowed Network Development funding has been consumed by connection processing activities. This has allowed little discretionary expenditure to be directed to program activity, especially as much of that discretionary expenditure is directed to business-as-usual activities such as maintaining relationships with plumbers, builders and developers. In 2010/11 some minor incentive based activities have been run. These have taken the nature of a trial, have involved a low level of incentives and have been run for short periods, without any supporting advertising. For example as described above, a program where a $300 incentive for a gas-to-electricity conversion in an existing home already connected to gas was run for a period of weeks. A total of 29 incentive payments were made. Given the limited funding involved, the only communication with consumers was via the plumber. This activity has been used to inform the development of the Electric to Gas Hot Water Step Change, as proposed.

In assessing the prudence of this program, the AER may well ask why the business has not undertaken such a program commercially, in the absence of a regulator-approved funding mechanism. The answer to this lies in the truncation of returns attributing to the network owner resulting from the term of the Access Arrangement period. Given that all benefit of the load growth will be delivered to customers at each access arrangement review, there is no mechanism for the business to retain the positive cash flows beyond the next access arrangement review. Within this regulatory framework, the business only has an incentive to undertake projects with a payback period that can be realised within the regulatory period.

7.4 Forecast Operating Expenditure

APT Allgas' forecast Opex for the 2011-16 access arrangement period is set out in Table 7-5 below.

Table 7-5 - Proposed Forecast Opex for the 2011-16 AA Period

($000, Nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Controllable Costs					
Network Operations & Maintenance	10,841	11,151	11,540	11,902	12,213
Marketing	1,086	1,136	1,189	1,235	1,275
Admin & Strategic Planning	765	801	840	1,080	1,116
Total Controllable Costs	**12,692**	**13,089**	**13,569**	**14,217**	**14,603**
Non-Controllable Costs					
Customer Services	925	1,003	1,086	1,168	1,246
UAG	4,109	4,211	4,319	4,430	4,540
Government Charges	530	551	576	599	619
Metering & Billing	1,239	1,311	1,387	1,459	1,525
Corporate Costs	1,469	1,528	1,596	1,660	1,715
Total Non-Controllable Costs	**8,271**	**8,604**	**8,964**	**9,314**	**9,645**
Debt Raising Costs	275	292	307	323	340
Total Operating Costs	21,238	21,985	22,840	23,855	24,588

It should be noted that when the effect of UAG is removed, the total operating costs as shown in Table 7-5 represent a reduction of $3.3 million (2010-11) in total operating costs over the 2011-16 access arrangement period, from APT Allgas' original access arrangement submission.

Debt raising costs have been added in accordance with Required Amendment F.1.

8 Annual revenue requirement

Amendment 8.1: make all amendments necessary in the access arrangement proposal and access arrangement information in order to incorporate the values noted in table 8.2 of this draft decision.

Table 8.2: AER's conclusion on APT Allgas's annual revenue requirement and X factors ($m, nominal)[a]

	2011–12	2012–13	2013–14	2014–15	2015–16
Return on capital	42.2	45.0	47.6	50.3	53.1
plus regulatory depreciation[b]	-1.8	1.5	1.4	2.1	2.4
plus operating and maintenance	18.8	19.5	20.4	21.3	21.8
plus corporate income tax	0	0	0	0	0
Total revenue	**59.3**	**66.0**	**69.4**	**73.7**	**77.3**
less forecast capital contributions	0.6	0.6	0.6	0.7	0.7
less ancillary services revenue	0.6	0.6	0.7	0.7	0.7
Total haulage services revenue	**58.0**	**64.7**	**68.1**	**72.3**	**75.9**
Smoothed haulage services revenue	**57.4**	**62.7**	**67.8**	**73.4**	**78.6**
X factors[c]					
Haulage reference services (%)	-7.89	-4.00	-3.00	-3.00	-2.00
Ancillary service fees (%)	0	0	0	0	0

(a) Numbers may not add due to rounding.
(b) Regulatory depreciation includes the negative depreciation impact of inflation on the capital base.
(c) Negative values for X indicate real price increases under the CPI–X formula.

8.1 Test of AER revenue requirement

APT Allgas has undertaken a test of the reasonableness of the AER's revenue requirements as outlined in Required Amendment 8.2. As discussed in Appendix

A.2, the revenue requirement proposed by the AER, and the cash flows resulting from the AER's choice of X Factors, would be insufficient to sustain the BBB+ credit rating assumed in estimating the cost of debt.

APT Allgas considers that the internal consistency and cash flow implications of the AER's draft decision is a threshold consideration that must be reflected in the calculation of the revenue requirement and in the tariff calculations (particularly the pattern of X Factors, as discussed below).

8.2 Annual revenue requirement

The total revenue requirement to be derived from pipeline services over the access arrangement period is shown in Table 8-1 below.

Table 8-1 – Total revenue to be derived from pipeline services over the access arrangement period

($000 nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Return on capital	48,250	51,266	53,904	56,828	59,748
Return of capital	403	3,762	3,793	4,572	5,015
O&M	21,238	21,985	22,840	23,855	24,588
Benchmark tax liability	759	2,219	2,126	2,312	2,674
Carry-over amounts	-	-	-	-	-
APT Allgas Building Block Revenue Requirement	**70,650**	**79,231**	**82,664**	**87,566**	**92,026**
Less: Ancillary Services revenue	686	727	770	816	864
Less: Capital contributions	583	611	642	674	712
Total haulage services Revenue Requirement	69,381	77,893	81,252	86,076	90,449

8.3 X Factors

The AER has amended the X Factors proposed by APT Allgas, changing the pattern of price changes and deferring price increases to years later in the access arrangement period.

APT Allgas accepts that a change in X Factors is necessary consequential on changes in the total revenue requirement. The only Rule requirement in this regard is that the Total Revenues as calculated reflecting the X Factors must be NPV neutral to the annual revenue requirements – see Rule 92(2).

But the AER has changed the *pattern* of tariff changes relative to that proposed by APT Allgas. APT Allgas proposed a sharper P_0 increase with flatter increases towards the later end of the arrangement period (indeed a zero increase in the last year of the arrangement period). There is no discussion in the draft decision as to why the pattern of X Factors has been changed, or why the pattern as proposed was not acceptable.

As discussed above, the pattern of X Factors has significant implications for the cash flows of the business. Importantly, this is critical to maintaining the level of credit rating as assumed by the AER in estimating the cost of debt. This is discussed in Appendix A2.

APT Allgas also considers that the AER's imposition of a flatter price path reduces the incentive features of the regulatory regime. One of the foundation incentive mechanisms inherent in the price cap regime is the incentive to increase throughput and utilisation of the system. This increased usage, over largely fixed infrastructure costs will translate to lower tariffs to customers over time.

The AER's flattening of the price path acts to weaken that incentive mechanism, as revenues are more weighted to the end of the access arrangement period. APT Allgas submits that the incentive mechanism inherent in the National Gas Access Regime is better served by increases weighted towards the front end of the access arrangement period rather than the rear.

It is not clear from the Rules that the AER has discretion to modify the pattern of price increases proposed by the business. APT Allgas submits that while the change in pattern of price increases is NPV neutral, there are cash flow implications associated with the change in pattern.

APT Allgas demonstrated that the 2006-11 access arrangement period was characterised by higher operating expenditure costs than allowed in the QCA-approved forecast forming the basis of tariffs. APT Allgas has absorbed those revenue shortfalls in the previous access arrangement period, and is now required to demonstrate to investors that the business can earn a sustainable revenue stream.

The tariffs resulting from this pattern of X Factors has been tested against the requirements of Rule 94, and has been confirmed to lie between the bounds of stand alone and avoidable costs as required under that Rule. APT Allgas notes that Rule 94 is a limited discretion Rule.

The levels of annual tariff variation (X Factors) are derived through a combination of the building block revenue requirement, adjustments for revenues associated with Ancillary Service and capital contributions revenue, the load forecast (section 9), and a “sculpting” of the price path.

In deriving the proposed X Factors below, APT Allgas has balanced the cash flow needs of the business against the scope for tariff impacts to customers. APT Allgas submits that the X Factors shown below achieve such a balance.

The X Factors are derived in section 11.

9 Load forecast

Amendment 9.1: amend the access arrangement information to delete Table 4.1 and replace it with the following table:

Table 9.10: AER draft decision on APT Allgas's demand forecasts

	2011–12	2012–13	2013–14	2014–15	2015–16
Volume class customer numbers	87 213	90 178	93 215	96 327	99 533
Demand class customer numbers	102	103	104	105	106
Volume class consumption – TJ	2945	3036	3129	3225	3323
Demand class consumption – TJ	6970	6985	7000	7015	7030

APT Allgas accepts this amendment in part.

In its review of the 1999 AGL Gas Networks access arrangement revision, IPART accepted the advice of ACIL on the correct approach to forecasting the load for a gas distribution network. In summary, this approach involved:

- micro-analysis, informed by survey of customers, market analysis (including major changes such as contestability in the retail market) and plans to extend the network; and
- macro-analysis, driven by historical trends and relationships between drivers of gas demand, including population growth and weather.

In particular, the micro-analysis is the main source of information where there are a small number of large identified customers and there is good knowledge about their demand over the forecast period. The macro-analysis forms the foundation for forecasting demand from groups of homogeneous customers for which it is not practical to survey.

The macro approach applied to the APT Allgas Volume customers load forecast involved:

- forecasting the number of customers to be connected to the network, based on historical growth rates, forecast levels of economic activity and housing starts, etc;
- forecasting the average use per customer by reference to historical meter data, appliance inventory, etc; and

- multiplying these together to estimate the total load on the network. The average use per customer therefore drives the total load forecast.

Acil Tasman's assessment of the reasonableness of the APT Allgas load forecast reflected this approach.

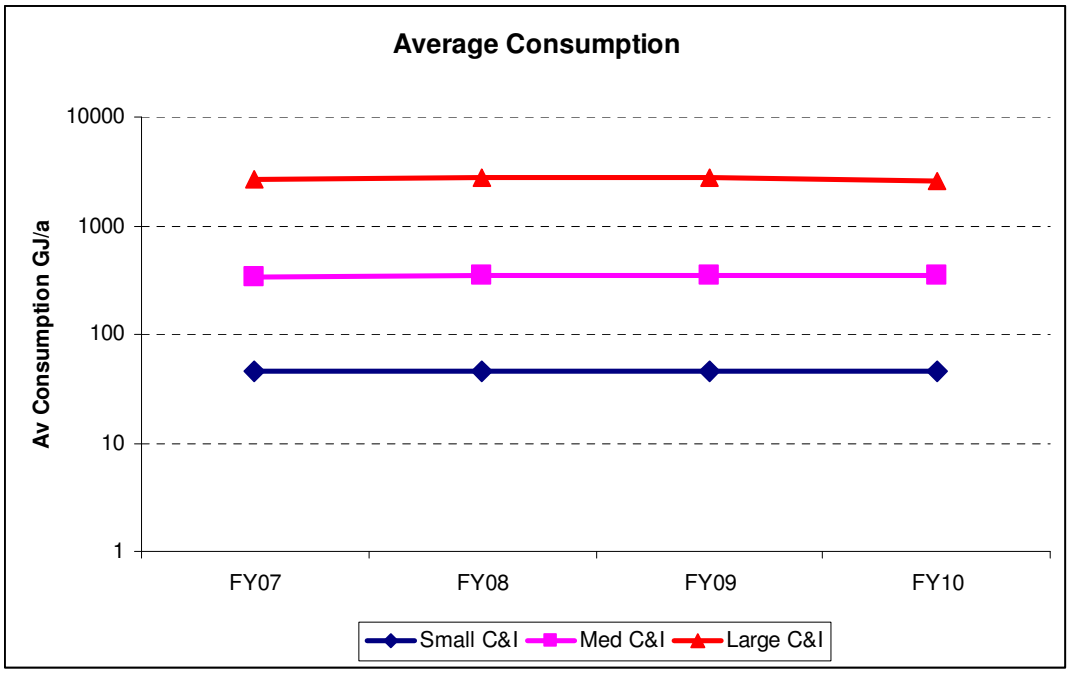
9.1 Volume Business Customer Forecast

Acil Tasman recommended a reduction in the forecast number of Volume business customers, and commented that the usage per business customer appeared reasonable (p13). The revised load forecast for volume business customer class then, should reflect a smaller number of customers with the same average consumption per customer as proposed by APT Allgas. The total forecast consumption for volume business customers should therefore be lower than that originally proposed by APT Allgas.

Volume business consumption would generally not be expected to trend either up or down over time given the aggregate nature of businesses included in this grouping. It would be more reasonable to expect that the consumption for each given customer in this grouping to generally remain stable. That is, it would be unreasonable to forecast that the consumption of each business would on average grow over time.

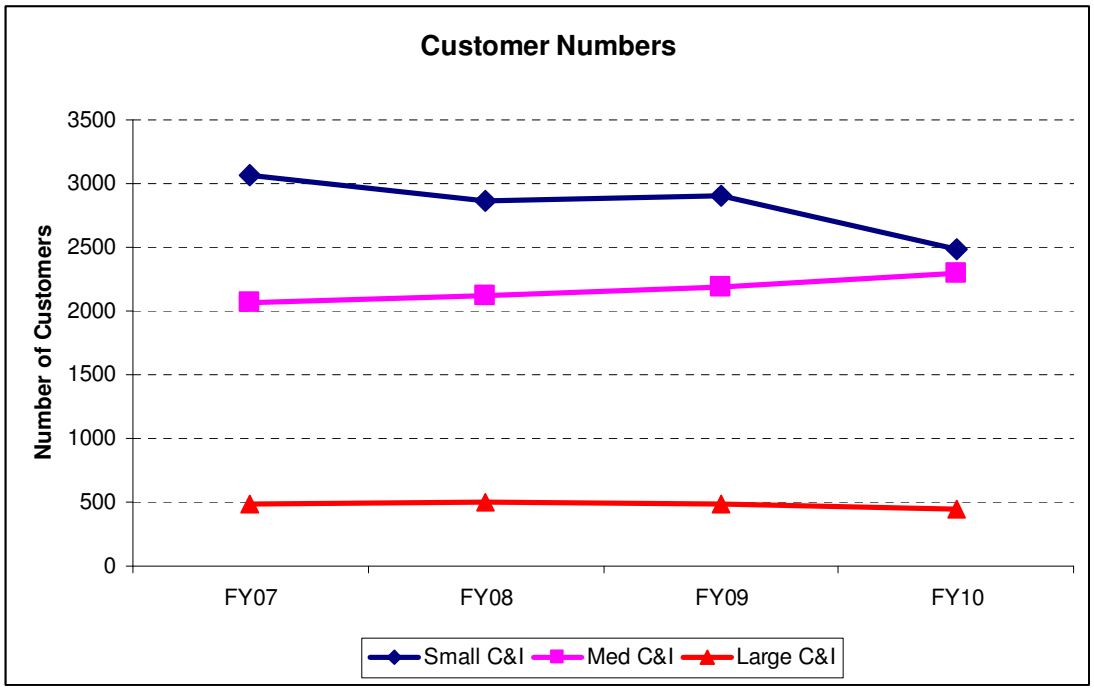
APT Allgas has assessed the consumption trends for various consumption bands over the last four years of actual data and based on that analysis it can be demonstrated the average consumption for customers in each band has remained relatively constant over that period. This analysis is summarised in Figure 9-1 below. Consumption bands were classified as small (30 to 100 GJ/a consumption), medium (100 to 1,000 GJ/a) and large (1,000 to 10,000 GJ/a). These consumption bands would generally be classified as making up the Volume class business customer base. For the purpose of this analysis meter size or customer class were ignored with the aim of the exercise being to demonstrate that forecasting business class customer average consumptions as being flat is a reasonable assumption.

Figure 9-1 Average consumptions by consumption band



This analysis excludes any distortions to average volumes that may have occurred due to classification of business class customers as those having a meter installed capacity of greater than 10 cubic metres per hour or issues surrounding upgrades or downgrades to customer class that may have occurred over the period. Figure 9-2 shows the relative numbers of customers in each of the consumption bands over the same period.

Figure 9-2 Customer numbers by consumption band



APT Allgas proposes that the revised forecast should be amended to reflect the customer numbers recommended by Acil Tasman, as required by the AER amendment 9.1, however the resulting consumption for the Volume class business customer group be calculated using average volumes for the past 3 years as per the original proposal.

Table 9-1 Volume class business customer numbers

	FY12	FY13	FY14	FY15	FY16
Volume business customer numbers – APT Allgas Proposal	*5,026*	*5,182*	*5,341*	*5,505*	*5,674*
Volume business customer numbers – AER Draft Decision	*4,857*	*4,917*	*4,976*	*5,035*	*5,094*

Table 9-2 Volume class business customer consumption

	FY12	FY13	FY14	FY15	FY16
Total Volume business customer consumption – APT Allgas Proposal (TJ)	*2,121*	*2,190*	*2,261*	*2,334*	*2,408*
Total Volume business customer consumption – AER Draft Decision (TJ)	*2,121*	*2,190*	*2,261*	*2,334*	*2,408*
Total Volume business customer consumption – corrected (TJ)	***2,081***	***2,107***	***2,134***	***2,161***	***2,187***

9.2 Western Region Residential Customer Average Volumes

9.2.1 Weather adjustment

In its draft decision the AER has reassessed the average residential consumption for the Western Region the take into account the effects of weather on consumption by assessing consumption trends against average minimum temperatures. This is not an industry recognised method of assessing temperature sensitive load demand and APT Allgas proposes that further analysis be considered using Heating Degree Day (HDD) data for Toowoomba. This method of forecasting is the global standard used to predict gas consumption in other networks.

In summary, a Heating Degree Day (or Heating Degree Day deficiency) is the extent to which the average of the daily minimum and maximum temperatures is less than 18 degrees Celsius. The number of Heating Degree Days for a particular day is calculated as:

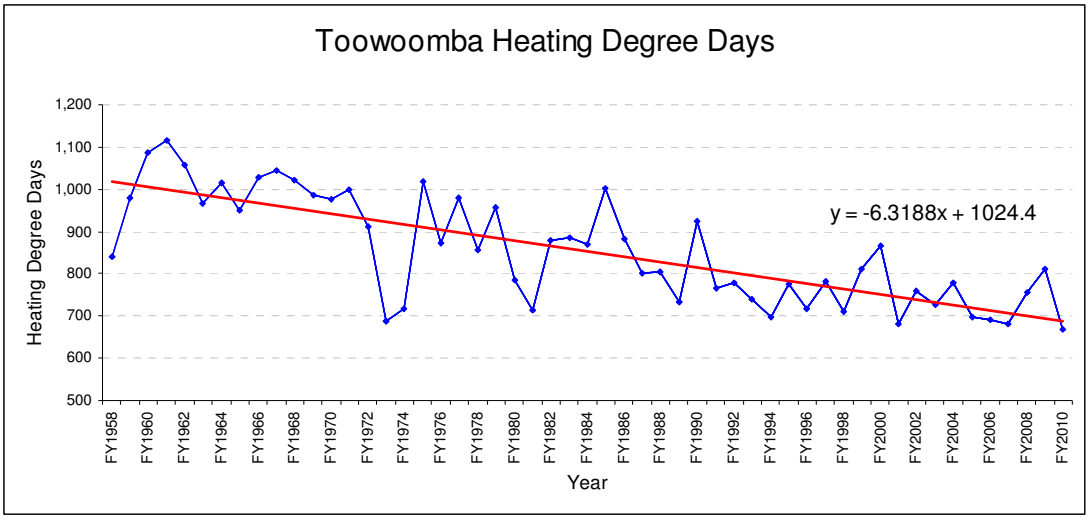
MAX (18 - (Maximum temperature + minimum temperature)/2, 0)

Heating Degree Days are always positive or zero. A circumstance giving rise to a negative HDD (where the average of the minimum and maximum temperatures is greater than 18) would be classified as a Cooling Degree Day, a measure widely used to calculate energy use for air conditioning load.

APT Allgas has analysed available HDD data for Toowoomba for the period from 1958 to 2010 and applied linear regression analysis to forecast the number of HDDs for the access arrangement period. The following graph shows the results of this

analysis and clearly indicates the downward trend of HDD, driving a reduction in temperature sensitive load over the period.

Figure 9-3 Toowoomba Heating Degree Day Data

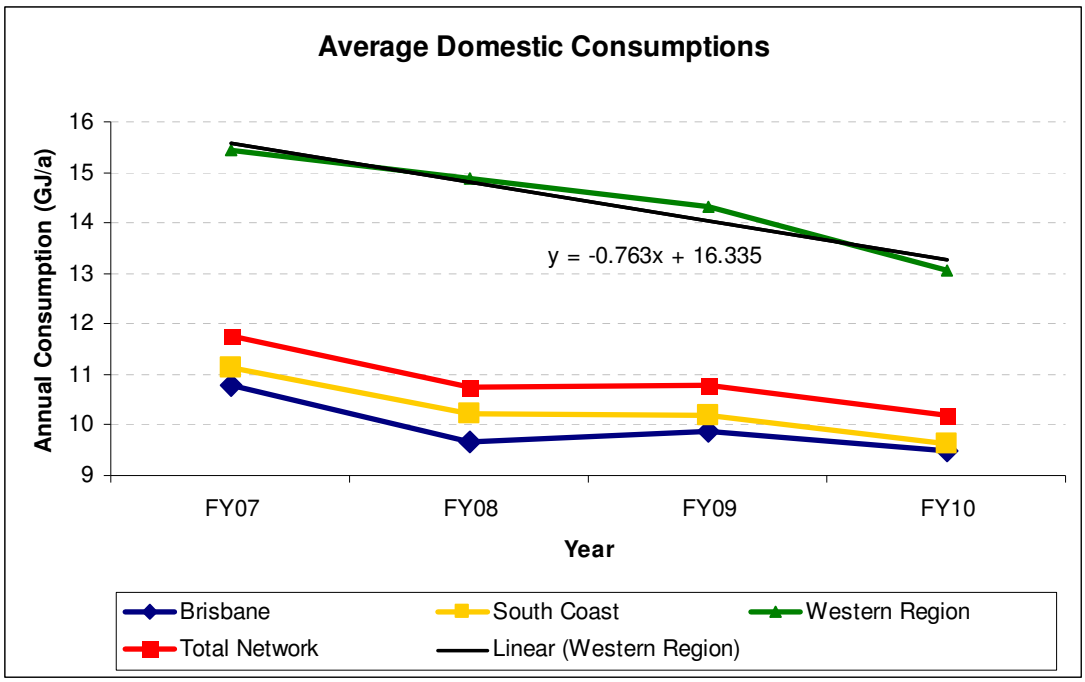


9.2.2 Reduction of temperature sensitive load

APT Allgas also notes that the AER has not fully addressed APT Allgas' submission of an observed reduction in average consumption in the Western region due to loss of market share to other heating methods, primarily reverse cycle air conditioning. This is the major cause of the reduction in annual usage in the Western region (see APT Allgas load forecast Attachment 3.1, s2.6.5). It is noteworthy that the AER did discuss the increased penetration of reverse cycle air conditioning in assessing the reasonableness of the load forecast for Ergon Energy, the electricity distribution business covering the same region. It is noted however that the AER's analysis does provide a slight downward trend in consumption over the next access arrangement period.

The reduction in temperature sensitivity can be gleaned from the relationship between the HDD record and Toowoomba consumption per customer. The HDD data shown above indicates that the 2008 and 2009 years were relatively colder than the surrounding 2007 and 2010 years. Were the load per customer temperature sensitive, we would expect to see increased consumption per customer in these relatively colder years. However, this is not the case as shown in Figure 3.2 of the September 2010 APT Allgas submission, reproduced below:

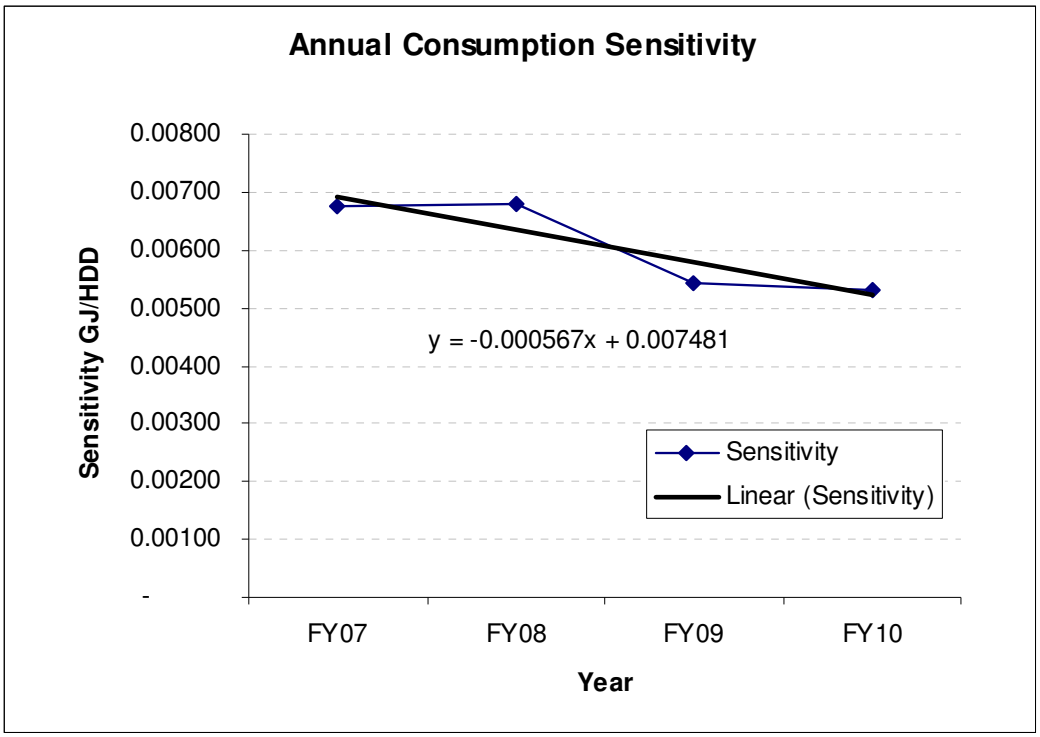
Figure 3-2 Average domestic consumption per customer, by region



APT Allgas has analysed the actual consumption data for the last 4 years against the actual HDD for those years and using the weighted average of the Brisbane and South Coast residential customers as a non-temperature affected base load, calculated the sensitivity factor for the previous four year period using the formula:

Consumption = Base Load + (HDD * Sensitivity Factor)

Figure 9-4 Temperature sensitivity factor for Toowoomba



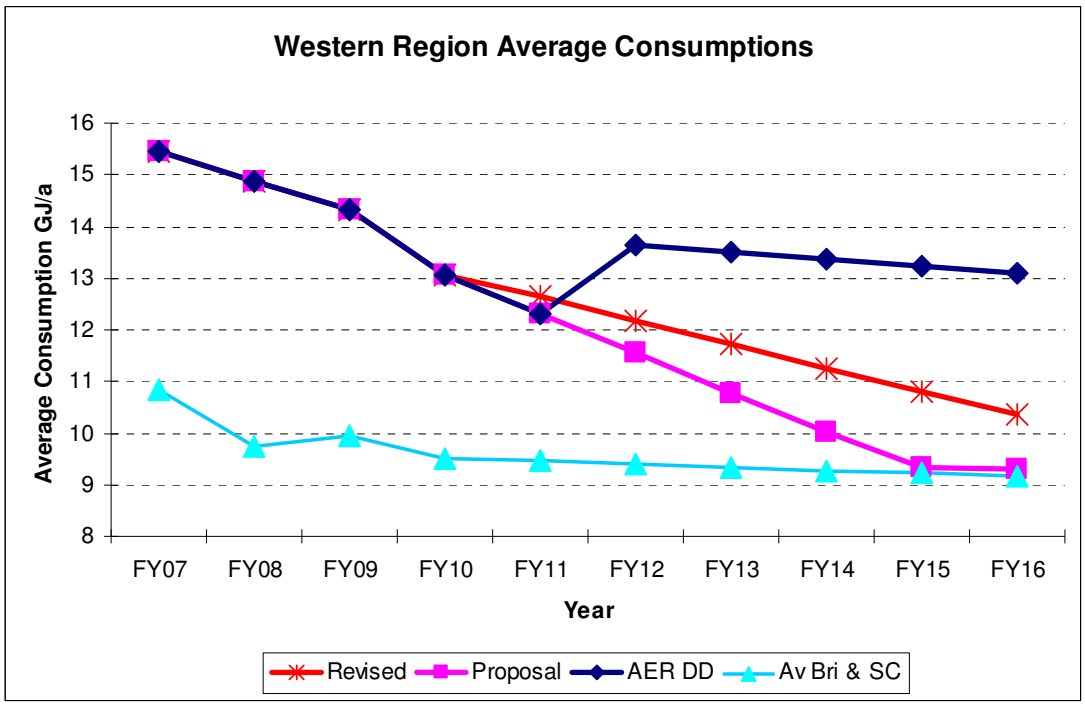
As can be seen there is a relatively good correlation between the calculated sensitivity factor based on actual HDD and calculated temperature sensitive load data. This data clearly demonstrates the downward trend in temperature sensitive load caused by the migration to electric space heating appliances. The sensitivity factors for the previous period were then extrapolated using regression analysis to forecast the sensitivity factor applicable for each year of the access arrangement period. Results of this analysis are detailed in *Table 9-3* below.

Table 9-3: Results of HDD analysis on western region average residential volumes

Year	HDD	Base Consumption (Av Bris & SC) GJ/a	Sensitivity GJ/a/HDD	Temp Sensitive Load GJ/a	Revised Forecast GJ/a
FY07	682.60	10.84	0.00674	4.60	15.44
FY08	755.80	9.75	0.00678	5.12	14.87
FY09	810.10	9.93	0.00543	4.40	14.33
FY10	669.55	9.52	0.00530	3.55	13.07
FY11	689.50	9.46	0.00465	3.20	12.66
FY12	683.18	9.39	0.00408	2.79	12.18
FY13	676.87	9.34	0.00351	2.38	11.71
FY14	670.55	9.28	0.00295	1.98	11.25
FY15	664.23	9.22	0.00238	1.58	10.80
FY16	657.91	9.17	0.00181	1.19	10.36

The results of this analysis are plotted on the following graph:

Figure 9-5 Western region average residential consumption



As demonstrated the revised forecast continues the downward trend of consumption forecast in the original proposal, however the slope of trend has been revised slightly upward using recognised methods for estimating temperature sensitive loads, as opposed to the original forecasting based on continuation of historical rates. This is consistent with the expectation of Acil Tasman in its review report, that temperature sensitivity was unlikely to materially affect the Volume customers forecast (p13).

APT Allgas submits that this method satisfies the AER's requirement of assessing consumption against climatic effects and also recognises the observed loss of load in the region due to other factors such as penetration of reverse cycle air conditioners. Based on this analysis APT Allgas submits that the forecast should be amended to reflect the following consumption for western region residential customers:

Table 9-4 Residential consumption forecasts – western region

	FY12	FY13	FY14	FY15	FY16
Total consumption (Western residential) TJ – APT Allgas Proposal	*173.41*	*164.40*	*155.10*	*146.81*	*148.23*
Total consumption (Western residential) TJ – AER Draft Decision	*204.9*	*205.8*	*206.8*	*207.8*	*208.9*
Total consumption (Western residential) TJ – APT Allgas revised	***182.94***	***178.57***	***174.19***	***169.79***	***165.39***

9.3 Summary

The following table details APT Allgas' revised proposal in respect to customer number and consumption forecasts for the access arrangement period in response to Required Amendment 9.1. Customer numbers for both Volume and Demand class are as per the AER's Draft Decision as is the consumption forecast for Demand customers. Consumption forecasts for Volume class customers have been revised to account for the reduction business class connections and average residential consumptions in the western region as detailed above.

Table 9-5: APT Allgas revised demand forecast

	FY12	FY13	FY14	FY15	FY16
Volume Class Numbers	*87 213*	*90 178*	*93 215*	*96 327*	*99 533*
Demand Class Numbers	*102*	*103*	*104*	*105*	*106*
Volume Class Consumption - TJ (APT Allgas revised position)	***2 883***	***2 926***	***2 969***	***3 013***	***3 058***
Demand Class Consumption - TJ	*6 970*	*6 985*	*7 000*	*7 015*	*7 030*

10 Reference tariffs

10.1 Basis of reference tariffs

Amendment 10.1: amend the access arrangement information to:

- include all discussion of the basis for tariffs required under r. 72 of the NGR
- include discussion of ancillary services and capital contributions in the cost allocation description
- demonstrate the relationship between costs and tariffs, including for ancillary services, and to address the treatment of capital contributions.

APT Allgas has revised its Access Arrangement Information to include discussion on the basis of tariffs including cost allocation as previously submitted in its access arrangement submission. This information has been expanded to include discussion on reference ancillary services and capital contributions.

APT Allgas has proposed tariffs for Reference Ancillary Services that reflect the cost to provide the service based on a building block cost methodology. The tariff unit costs have been built up from contractor costs, internal processing labour and overhead allowances. Contractor costs are based on rates tendered from suitable contractors through competitive tender processes as discussed in the original access arrangement proposal submission. Quantities have been based on historical actuals, and forecast to allow for changes in total customer base. In the absence of more detailed information being available, APT Allgas considers this methodology provides the best available forecast.

Capital Contributions have been forecast utilising actual FY10 contributions adjusted for CPI and customer connection numbers over each year of the access arrangement period. Given the variability of new connection requirements this methodology utilises the most recent information available and appropriately adjusts for future customer growth. Again given the variability in individual customer connection requirements, APT Allgas considers this methodology provides the best available forecast.

Amendment 10.2: amend the access arrangement submission to

- demonstrate that APT Allgas has had regard to economic efficiency and transaction costs in proposing the new basis for categorising volume and demand customers
- demonstrate that revenue is allocated between reference and other services in the ratio in which costs are allocated between reference and other services

- demonstrate that costs are allocated between reference and other services according to r. 93(2) of the NGR
- clarify the relationship between expected revenue and stand alone costs for demand customers
- include consideration of transaction costs and customer responses for ancillary services
- address how tariffs and charging parameters for demand tariffs take account of long run marginal costs.

APT Allgas has revised its categorisation of demand and volume class customers to be consistent with its 2006-11 access arrangement and therefore has not included a discussion of the new basis for categorising demand and volume class customers.

With respect to the relationship between expected revenue and stand alone costs for demand customers, APT Allgas has largely relied on the analysis and cost allocation process adopted for the 2006-11 access arrangement submission. This process allocated revenue from Demand customers based on all standalone costs for Demand class customers.

APT Allgas assessed the revenue requirement from Demand class customers and Volume class customers based on stand alone and avoidable costs and found that utilising the tariff structure developed under the current access arrangement and escalating both tariffs by a common X factor the resultant revenue streams lay reasonably between the stand alone and avoidable costs for each class. Based on this analysis APT Allgas decided to adopt a common tariff increase for both classes for the coming access arrangement period.

It should also be noted that the forecast revenue for Demand customers in 2011-12 does not fully reflect the change in WACC due to smoothing and X factor adjustments in subsequent years; hence it is not valid to compare forecast 2011-12 revenue directly with stand alone costs.

The AAI now includes commentary on ancillary service transaction costs and customer responses.

The AAI now includes analysis of LRMC for demand customers.

10.2 Categorisation of volume class and demand class customers

Amendment 10.3: amend the access arrangement proposal to:

- exclude all references to MDQ as a basis for categorising customers as volume or demand customers.

APT Allgas accepts this required amendment and has removed the requirement for Volume Class customers to have an MDQ of less than 50 GJ. Changes have been made in clauses 2.1.1 and 2.1.2 of the Access Arrangement and AAI to reflect this amendment.

The intent of this requirement was to ensure customers with a high daily demand but low annual consumption were charged appropriately for the portion of network capacity that they required to meet their MDQ. APT Allgas accepts that the administrative issues for managing these customers would be of concern given the relatively small number of customers affected.

11 Tariffs and tariff variation

11.1 Tariffs

Amendment 11.1: amend the access arrangement proposal to delete tables 1–6 of the tariff schedule 2011–12 and replace with the following updated tables:

The initial reference tariffs are expressed in nominal terms and first annual tariff variation is made for the year commencing 1 July 2012.

Table 1: Volume Tariffs for 2011-12 - GST exclusive dollars

Network Charges		
Base Charge	*($/day)*	*0.5410*
Up to 1.7 GJ of gas delivered per day	*($/GJ/day)*	*8.8990*
Next 8.3 GJ of gas delivered per day	*($/GJ/day)*	*6.5252*
All gas delivered over 10 GJ per day	*($/GJ/day)*	*4.8580*

Table 2: Demand Tariffs for 2011-12 – Brisbane Region - GST exclusive dollars

Network Charges		***Zone 1***	***Zone 2***	***Zone 3***
		DZ01	***DZ02***	***DZ03***
Base Charge (MHQ	*($/GJ of MHQ/day)*	*2.1140*	*3.0076*	*2.5112*
MDQ of 50GJ or less	*($/day)*	*1.5530*	*2.2479*	*2.5377*
Greater than 50GJ but not greater than125 GJ of MDQ	*($/day)*	*0.8612*	*1.6009*	*2.5726*
Greater than 125GJ but not greater than 275 GJ of MDQ	*($/day)*	*0.6073*	*1.3249*	*1.9101*
Greater than 275GJ but not greater than 525 GJ of MDQ	*($/day)*	*0.2650*	*0.6183*	*1.0489*
Greater than 525GJ of MDQ	*($/day)*	*0.2319*	*0.2429*	*0.2871*

Table 3: Demand Tariffs for 2011-12 – South Coast Region -GST exclusive dollars

Network Charges		*Zone 4*	*Zone 5*	*Zone 6*
		DZ04	*DZ05*	*DZ06*
Base Charge (MHQ	*($/GJ of MHQ/day)*	*1.8728*	*3.7928*	*3.7979*
MDQ of 50GJ or less	*($/day)*	*3.1211*	*3.1195*	*3.2708*
Greater than 50GJ but not greater than125 GJ of MDQ	*($/day)*	*2.8265*	*2.9811*	*3.1467*
Greater than 125GJ but not greater than275 GJ of MDQ	*($/day)*	*2.4290*	*2.5726*	*2.6940*
Greater than 275GJ but not greater than 525 GJ of MDQ	*($/day)*	*2.0426*	*2.2082*	*2.3076*
Greater than 525GJ of MDQ	*($/day)*	*1.7776*	*1.9211*	*2.0095*

Table 4: Demand Tariffs for 2011-12 – Toowoomba Region - GST exclusive dollars

Network Charges		*Zone 7*	*Zone 8*
(Exclusive of GST)		*DZ07*	*DZ08*
Base Charge (MHQ	*($/GJ of MHQ/day)*	*2.1219*	*3.9041*
MDQ of 50GJ or less	*($/day)*	*1.2015*	*1.5568*
Greater than 50GJ but not greater than125 GJ of MDQ	*($/day)*	*0.3975*	*0.8391*
Greater than 125GJ but not greater than275 GJ of MDQ	*($/day)*	*0.3202*	*0.6514*
Greater than 275GJ but not greater than 525 GJ of MDQ	*($/day)*	*0.2650*	*0.4416*
Greater than 525GJ of MDQ	*($/day)*	*0.2429*	*0.2539*

Table 5: Demand Tariffs for 2011-12 – Oakey Region - GST exclusive dollars

Network Charges		*Zone 9*	*Zone 10*
(Exclusive of GST)		*DZ09*	*DZ10*
Base Charge (MHQ	*($/GJ of MHQ/day)*	*1.9338*	*2.0647*
MDQ of 50GJ or less	*($/day)*	*1.2655*	*2.7649*
Greater than 50GJ but not greater than125 GJ of MDQ	*($/day)*	*0.5079*	*2.5946*
Greater than 125GJ but not greater than275 GJ of MDQ	*($/day)*	*0.4196*	*2.0867*
Greater than 275GJ but not greater than 525 GJ of MDQ	*($/day)*	*0.2981*	*1.2808*
Greater than 525GJ of MDQ	*($/day)*	*0.2429*	*0.5521*

Table 6: Reference Ancillary Services charges for 2011-12 - GST exclusive dollars

Reference Ancillary Service		*Charges*
Special Meter Read	*($/each)*	*18.96*
Inlet Disconnection	*($/day)*	*52.05*
Inlet Reconnection	*($/day)*	*66.14*

APT Allgas notes that there have been a number of circumstances in this response in which APT Allgas has provided additional information in response to the AER's draft decision, as envisioned in Rule 60. Each of the cases in which APT Allgas has not accepted the AER's required amendment as outlined in the draft decision, but has otherwise addressed the required amendment will have some consequential impact on the outturn tariffs resulting from application of the Post Tax Revenue Model, X Factors and load forecasts to derive tariffs.

APT Allgas has provided the revised proposed tariffs in Appendix B to the revised proposed Access Arrangement.

APT Allgas also notes the following required corrections to the AER's schedule of tariffs in Required Amendment 11.1:

- Table 1: Volume customer tariffs should be specified in units of $/GJ rather than $/GJ/day;
- Table 6: Ancillary Service tariffs for Inlet Disconnection and Inlet Reconnection should be specified as $/each rather than $/day.

11.2 Annual tariff variation mechanism

Amendment 11.2: amend the access arrangement proposal to delete section 4.5.2 and replace it with the following:

The Service Provider will implement its CPI-X price path for the Financial Years commencing on or after 1 July 2012 using the Annual Tariff Variation Mechanism specified as the following formula:

Tariff Control Formula

$$(CPI_t)((1-X_t) \geq \frac{\sum_{i=1}^{n}\sum_{j=1}^{m} p_t^{ij} \bullet q_{t-2}^{ij}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{t-1}^{ij} \bullet q_{t-2}^{ij}}$$

where:

CPI_t *is calculated as the CPI for the year ending 31 March immediately preceding the start of year t, divided by the CPI for the year ending 31 March immediately preceding the start of year t-1;*

X_t *is defined by the alignment of the Service Provider's building block revenue requirement with the NPV of its forecast revenues and is determined to be:*

X_t *is -0.04 for 2012–13*

X_t *is -0.03 for 2013–14*

X_t *is -0.03 for 2014–15*

X_t *is -0.02 for 2015–16*

n *is the number of different Reference Tariffs*

m	*is the different components, elements or variables ('components') comprised within a Reference Tariff*
p_t^{ij}	*is the proposed component* j *of Reference Tariff* i *in year* t
p_{t-1}^{ij}	*is the prevailing component* j *of Reference Tariff* j *in year* t–1*, and*
q_{t-2}^{ij}	*is the quantity of component* j *of Reference Tariff* j *that was sold in year* t–2

Amendment 11.2(a): amend the access arrangement proposal to delete section 4.5.2 and replace it with the following:

Rebalancing Control Formula

$$(CPI_t)((1-X_t)(1+Y_t) \geq \frac{\sum_{j=1}^{m} p_t^j \bullet q_{t-2}^j}{\sum_{j=1}^{m} p_{t-1}^j \bullet q_{t-2}^j}, i = 1,....n$$

where:

CPI_t *is calculated as the CPI for the year ending 31 March immediately preceding the start of year t, divided by the CPI for the year ending 31 March immediately preceding the start of year* t-1*;*

X_t *is defined by the alignment of the Service Provider's building block revenue requirement with the NPV of its forecast revenues and is determined to be:*

X_t	*is -0.04 for 2012–13*
X_t	*is -0.03 for 2013–14*
X_t	*is -0.03 for 2014–15*
X_t	*is -0.02 for 2015–16*

Y_t	*is 0.02*
n	*is the number of different Reference Tariffs*
m	*is the different components, elements or variables ('components') comprised within a Reference Tariff*
p_t^{ij}	*is the proposed component* j *of Reference Tariff* i *in year* t
p_{t-1}^{ij}	*is the prevailing component* j *of Reference Tariff* j *in year* t–1*, and*
q_{t-2}^{ij}	*is the quantity of component* j *of Reference Tariff* j *that was sold in year* t–2

Price Adjustments for Reference Ancillary Services

The charge for the Reference Ancillary Services will be adjusted in accordance with CPI.

Revised Rate = Rate * (1+ CPI%)

All revised Reference Tariffs will be rounded to the same number of decimal places for that Reference Tariff as provided in Appendix B of this Access Arrangement.

11.2.1 Threshold discussion

In this discussion, it should be noted that the tariff variation mechanism applies not to the first year of the access arrangement period (the P_0 adjustment), but to subsequent changes to the Reference Tariffs. APT Allgas proposed a simple price path approach, which the AER requires it to replace with a Weighted Average Price Cap (WAPC).

In this respect the AER appears to have discretion to require a different reference tariff variation than that proposed by the business. Under Rule 97, the exercise of that discretion should be made on the basis of:

> (3) In deciding whether a particular *reference tariff variation mechanism* is appropriate to a particular access arrangement, the AER must have regard to:
>
> (a) the need for efficient tariff structures; and

(b) the possible effects of the reference tariff variation mechanism on administrative costs of the AER, the service provider, and users or potential users; and

(c) the regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed reference tariff variation mechanism; and

(d) the desirability of consistency between regulatory arrangements for similar services (both within and beyond the relevant jurisdiction); and

(e) any other relevant factor.

But the AER's reasoning for imposing the WAPC approach, as discussed in the draft decision, does not address the criteria in Rule 97. Rather, the AER's grounds for requiring these changes is that the proposed tariff variation mechanism "is not what the AER considers was intended by APT Allgas."[68] It should be noted that the AER's consideration of the business' intention is not a valid consideration under Rule 97.

Considering the AER's powers in this area, and the basis of the AER's decision, APT Allgas does not consider these to be *required* amendments but rather *recommended* amendments.

Having said all that, APT Allgas notes that adopting Recommended Amendments 11.2 and 11.2(a) would not financially disadvantage APT Allgas. It is possible to achieve the same results as would be achieved by the formula proposed by APT Allgas simply by adopting a zero constant for variable Y_t in the Rebalancing Control Formula. Accordingly, were APT Allgas to attempt to appeal this misuse of power to the Australian Competition Tribunal, the grounds of this appeal, on its own, would not meet the materiality threshold required under subsection 249(2) of the National Gas Law.

APT Allgas therefore does not object to the AER's imposition of a WAPC in place of the price path proposed by APT Allgas.

11.2.2 Removal of UAG price adjustment mechanism

APT Allgas originally proposed an "A" factor in its tariff adjustment mechanism to allow for refund or recovery of differences between the actual cost of gas acquired for UAG and the forecast included in the opex forecast. Notwithstanding that the proposed mechanism was consistent with that approved for ActewAGL, one aspect of the AER's recommended amendment in this regard was to remove this "A" factor.

[68] AER *Draft Decision*, p 133

Accordingly, APT Allgas has undertaken a tender process to contract for UAG for the duration of the access arrangement period. The opex forecast now includes the tendered per-GJ cost of UAG, multiplied by the UAG volumes assessed by Wilson Cook as being reasonable. APT Allgas advises that this requirement increases tariffs relative to the UAG adjustment mechanism proposed by APT Allgas.

APT Allgas advises that, the contracts having been signed, it is now not possible to revert to the previously proposed price pass through arrangement.

Provided the AER accepts APT Allgas' locked in UAG costs, APT Allgas accepts the removal of the UAG price adjustment mechanism in the Tariff Adjustment Mechanism.

11.2.3 Imposition of reporting requirements

In the context of APT Allgas' intention, APT Allgas notes that part of the appeal of the proposed tariff adjustment formula is that it did not require detailed information on historical delivered volumes.

The AER now requires APT Allgas to provide audited consumption information as part of the annual tariff adjustment filing. This requirement is not included in the amendments relating to the tariff adjustment mechanism, but rather in amendment 11.3(ii).

APT Allgas considers that this additional information requirement imposes additional costs on APT Allgas, which, being imposed by the AER, must ultimately be recovered through charges to customers.

APT Allgas also notes the absence of a lower cost mechanism that was offered to the NSW and ACT electricity DNSPs in the AER's Final Decision on the 2009 NSE.ACT Electricity Distribution Price Review: [69]

> The AER notes ActewAGL's concern regarding the increased cost of regulation that auditing requirements impose. The AER has decided to request ACT and NSW DNSPs to provide audited quantity data. However it will allow some flexibility, so that if DNSPs are able to satisfy the AER as to the quality of unaudited quantity data, then the AER may accept this unaudited data in assessing their compliance with side constraints.

APT Allgas notes that the AER's concern regarding the need for audited data was expressed in the context of any proposed changes to the weighting of the fixed, variable or demand components in the current tariff structure. It is only in this circumstance that the relative volumes would have any impact on the application of the tariff adjustment mechanism.

[69] AER, *Final Decision - Control mechanisms for direct control services for the ACT and NSW 2009 distribution determinations*, February 2008, p 11

APT Allgas submits that it would be reasonable for the AER to limit the requirement for audited data to circumstances in which APT Allgas proposes to change the relative weighting of the tariff components.

11.2.4 Minor corrections to tariff variation formula

APT Allgas also noted two typographical errors in the WAPC formula proposed by the AER in Recommended Amendment 11.2 and 11.2(a).

The last two lines of the formula definition in the draft decision's Recommended Amendments 11.2 and 11.2(a) included an index "*j*" where it should have included an index "*i*". The corrected definition lines to accompany the WAPC formula are shown below:

p_{t-1}^{ij} *is the prevailing component* j *of Reference Tariff* i *in year* t–1*, and*

q_{t-2}^{ij} *is the quantity of component* j *of Reference Tariff* i *that was sold in year* t–2

This correction applies equally to the Rebalancing Control Formula required in Amendment 11.2(a).

The AER have also included an additional parenthesis in both the Tariff control and Rebalancing control formulae which APT Allgas has corrected in the revised access arrangement.

11.2.5 X Factors

The levels of annual tariff variation (X Factors) are derived through a combination of the building block revenue requirement, adjustments for revenues associated with Ancillary Service and capital contributions revenue, and a "sculpting" of the price path.

In deriving the proposed X Factors below, APT Allgas has balanced the cash flow needs of the business against the scope for tariff impacts to customers. APT Allgas submits that the X Factors shown below achieve such a balance.

Table 11-1 X Factors

($000 Nominal)	2011-12	2012-13	2013-14	2014-15	2015-16
APT Allgas Building Block Revenue Requirement	**70,650**	**79,231**	**82,664**	**87,566**	**92,026**
Less Forecast Reference Ancillary Service Revenue	686	727	770	816	864
Less Forecast Capital Contribution Revenue	583	611	642	674	712
Reference Tariff Revenue Requirement	**69,381**	**77,893**	**81,252**	**86,076**	**90,449**
Proposed Reference Tariff Revenue	**61,670**	**72,397**	**82,851**	**93,136**	**100,064**
X Factors	**X_0 -17.75%**	**X_1 -13.0%**	**X_2 -10.0%**	**X_3 -8.0%**	**X_4 -3.0%**

The net present value of both the Reference Tariff Revenue Requirement and the Reference Tariff revenue stream, when discounted at the nominal vanilla WACC of 11.38%, is $292.6 million.

11.2.6 Process for annual Reference Tariff adjustment

Amendment 11.3: remove references to 'Cost Pass-through events' from section 4.5.4 in the access arrangement proposal and amend this section as follows:

(i) delete section 4.5.4 and replace it with following:

> APT Allgas will notify the Regulator in respect of any Reference Tariff variations, such that variations occur on the first of July of any year. The notification will be made at least 50 business days before the date of implementation and include:
>
> (a) the proposed variations to the Reference Tariffs; and
>
> (b) an explanation and details of how the proposed variations have been calculated.

If APT Allgas proposes variations to the Reference Tariffs (otherwise than as a result of a Cost pass through event) and those various have not been approved by the next 1 July then the Reference Tariffs will be varied with effect from that next 1 July by the same percentage increment or decrement as occurred on the previous 1 July, until such time as variations to Reference Tariffs are approved by the Regulator.

If it appears that any past tariff variation contains a material error or deficiency because of a clerical mistake, accidental slip or omission, miscalculation or misdescription, the AER may change subsequent tariffs to account for these past issues.

Within 30 Business Days of receiving the Service Provider's Variation Notice, the AER will inform the Service Provider in writing of whether or not it has verified the proposed Haulage Reference Tariff and/or Haulage Reference Tariff Components in the Service Provider's Variation Notice as compliant with the Annual Tariff Variation Mechanism.

The 30 Business Day periods may be extended for the time taken by the AER to obtain information from the Service Provider, obtain expert advice or consult about the notification. However, the AER must assess a cost pass through application within 90 Business Days, including any extension of the decision making time.

(ii) APT Allgas will include a statement to support the Gas Quantity inputs in the tariff variation formula. The statement will be independently audited or verified and the Quantity input must reflect the most recent actual annual quantities available at the time of tariff variation assessment. The actual Quantity will be provided as four quarters of Gas Quantity data reconciling to an annual total Quantity of Gas.

The AER's required amendments separate the processes for submission and approval of tariff variation proposals related to cost pass-through events and the application of the tariff variation formula. This amendment relates to the tariff variation process for the application of the tariff variation formula.

The AER's amendment 11.3(i) changes the date on which APT Allgas must notify the AER of its tariff variation proposal (from 40 business days before 1 July to 50 business days before 1 July), as well as changing the process and implications of the AER not making a decision in respect of a tariff variation proposal before 1 July.

APT Allgas partially accepts this amendment.

APT Allgas accepts the change in process for managing 'late' decisions by the AER which allows tariffs to be changed on 1 July by the previous CPI amount, and for that variation to be subsequently corrected by actual values once these are approved by the regulator. APT Allgas notes, however, that any subsequent

amendment should take account of the time value of money associated with any delay in the recovery or return of revenue from or to customers associated from a delayed decision. APT Allgas has therefore made an additional change to the AER's amendment to note that subsequent amendments should take account of the time value of money associated with a delay in the recovery or return of revenue to customers.

APT Allgas does not accept the change in the date for submission of tariff variation proposals. The annual tariff variation mechanism varies tariffs by CPI and is reliant on the availability of March CPI figures. The AER amendment to require notification of each tariff variation proposal 50 business days before 1 July does not allow March CPI data to be used as the tariff variation submission date is prior to the publication of these figures. APT Allgas has therefore retained its original proposal of submitting variation notifications 40 business days before each 1 July. APT Allgas notes that this submission dates allows only 4 days for APT Allgas to prepare its variation proposal following the release of March CPI data.

A variation to the AER's amendment 11.3 clarifies that an error in a past tariff variation must be within the current access arrangement period and must be an actual error rather than an apparent error.

As noted above, the AER's revisions to the tariff variation formula require APT Allgas to file information on historical delivered volumes with its tariff variation proposal (AER amendment 11.3(ii)). In accordance with the discussion above, APT Allgas has included a statement in the revised access arrangement regarding the filing of this information, and refined the requirement such that an independent audit report or verification is only required where APT Allgas proposes to change the relative weighting of the tariff components.

11.3 Cost pass-through tariff variation mechanism

Amendment 11.4: insert a new section after section 4.5.3 before what is currently section 4.5.4 in the access arrangement as follows:

> **4.5.X Procedure for Cost Pass through Event Variation in Reference Tariffs**
>
> APT Allgas will notify the AER of Cost Pass-through Events within 90 business days of those costs being incurred, whether the costs would lead to an increase or decrease in Reference Tariffs.
>
> When making a notification to the AER, APT Allgas will provide the AER with a statement, signed by an authorised officer of APT Allgas, 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 will endeavour to make its decision on whether APT Allgas should vary Reference Tariffs due to the occurrence of a Cost Pass-through within 90 business days of receiving a notification from APT Allgas. However, if the AER determines the difficulty of assessing or quantifying the effect of the relevant Cost Pass-through requires further consideration, the AER may require an extension of a specified duration. The AER will notify APT Allgas of the extension, and its duration, within 90 business days of receiving a notification from APT Allgas.

11.3.1 Process for cost pass-through event Reference Tariff adjustment

APT Allgas accepts the AER's amendment to change the process for managing cost pass-through event variation proposals.

APT Allgas considers, however that the AER should also have discretion to extend the date on which APT Allgas must submit a cost pass-through variation proposal beyond 90 business days where it considers this is appropriate. For example, an extension may be appropriate where 90 business days does not allow sufficient time for APT Allgas to verify and take account of any insurer or third party payments which may take longer than 90 business days to settle. The AER's amendment has been varied to provide the AER with this discretion.

Amendment 11.5: amend the access arrangement proposal to delete section 4.5.3 in the access arrangement and replace it with the following:

Subject to the approval of the regulator under the NGR, Reference Tariffs may be varied after one or more Cost 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 July.

In making its decision on whether to approve the proposed Cost Pass-through Event variation, the AER must take into account the following:

- the costs to be passed through are for the delivery of pipeline services
- the costs are incremental to costs already allowed for in reference tariffs
- the total costs to be passed through are building block components of total revenue

- 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
- any other factors the AER considers relevant and consistent with the NGR and NGL.

For the purpose of any defined event, an event is considered to materially increase or decrease costs where that individual event has an impact of one per cent of the smoothed forecast revenue specified in the final decision, in the years of the regulatory control period that the costs are incurred.

Cost Pass-through Events are:

- a regulatory change event
- a service standard event
- a tax change event
- a terrorism event
- a network user failure event
- an insurer credit risk event
- an insurance cap event
- a natural disaster event

Where

'**Regulatory change event**' means:

A change in a regulatory obligation or requirement that:

(a) occurs during the course of a regulatory control period; and

(b) substantially affects the manner in which APT Allgas provides reference services (as the case requires); and

(c) materially increases or materially decreases the costs of providing those services.

'**Service standard event**' means:

A legislative or administrative act or decision that:

(a) has the effect of:

(i) substantially varying, during the course of a regulatory control period, the manner in which APT Allgas is required to provide a reference service; or

(ii) imposing, removing or varying, during the course of a regulatory control period, minimum service standards applicable to prescribed reference services; or

(iii) altering, during the course of a regulatory control period, the nature or scope of the prescribed reference services, provided by APT Allgas; and

(b) materially increases or materially decreases the costs to APT Allgas of providing prescribed reference services.

'**Tax change event**' means:

A tax change event occurs if any of the following occurs during the course of a regulatory control period for APT Allgas:

(a) a change in a relevant tax, in the application or official interpretation of a relevant tax, in the rate of a relevant tax, or in the way a relevant tax is calculated;

(b) the removal of a relevant tax;

(c) the imposition of a relevant tax; and

In consequence, the costs to APT Allgas of providing prescribed reference services are materially increased or decreased.

'**Terrorism event**' means:

An act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of in connection with any organisation or government), which from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear) and which materially increases the costs to APT Allgas of providing a reference service.

'**Network user failure event**' means:

A network user failure event means the occurrence of an event whereby an existing network user is unable to continue to supply gas to its customers, and those customers are transferred to another network user, and which materially increases the costs of APT Allgas providing reference services.

'**Insurer credit risk event**' means:

An event where the insolvency of the nominated insurers of APT Allgas occurs, as a result of which APT Allgas:

(a) incurs materially higher or lower costs for insurance premiums than those allowed for in the access arrangement; or

(b) in respect of a claim for a risk that would have been insured by APT Allgas's insurers, is subject to a materially higher or lower claim limit or a materially higher or lower deductible than would have applied under that policy.

'**Insurance cap event**' means:

An event that would be covered by an insurance policy but for the amount that materially exceeds the policy limit, and as a result APT Allgas must bear the amount of that excess loss. For the purposes of this Cost Pass-through Event, the relevant policy limit is the greater of the actual limit from time to time and the limit under the APT Allgas's insurance cover at the time of making this access arrangement. This event excludes all costs incurred beyond an insurance cap that are due to APT Allgas's negligence, fault, or lack of care. This also excludes all liability arising from the APT Allgas's unlawful conduct, and excludes all liability and damages arising from actions or conduct expected or intended by APT Allgas.

'**Natural disaster event**' means:

Any major fire, flood, earthquake, or other natural disaster beyond the control of APT Allgas (but excluding those events for which external insurance or self insurance has been included within APT Allgas's forecast operating expenditure) that occurs during the forthcoming regulatory control period and materially increases the costs to APT Allgas of providing reference services.

Materiality threshold is defined as:

For the purpose of any defined event, an event is considered to materially increase or decrease costs where that event has an impact of one per cent of the smoothed forecast revenue specified in the final decision, in the years of the regulatory control period that the costs are incurred.

11.3.2 Application of cost pass through event tariff changes

APT Allgas accepts the AER's amendment that defers tariff changes associated with an approved cost pass-through event to the following 1 July. APT Allgas considers, however, that the approved cost pass-through amount should take account of the time value of money associated with any delay in the recovery or return of revenue from or to customers associated from a delayed application of approved tariff changes. APT Allgas has therefore made an additional change to the AER's amendment to note that cost pass-through amounts should take account of the time value of money associated with a delay in the recovery or return of revenue to customers.

APT Allgas also considers that there may be circumstances where it is inappropriate to delay the recovery or return of revenue to customers associated with a cost pass-through event. For example, costs associated with a major natural disaster could impact a service provider's ability to deliver reference services if there is a delay in the recovery of costs and the service provider suffers significant cash flow shortfalls. APT Allgas considers that the AER should have the discretion to allow the immediate pass-through of approved costs associated with a cost pass-through event (rather than waiting until the following 1 July) where it considers this is appropriate. The AER's amendment has been varied to provide the AER with this discretion.

11.3.3 Pass-through of costs in subsequent access arrangement period

As currently drafted, the tariff variation mechanism leaves APT Allgas open to the risk that, where a cost pass-through event occurs late in the access arrangement period, APT Allgas may not be able to recover otherwise legitimate costs associated with that cost pass-through event. This may occur where:

- a cost pass-through event occurs after the last 1 July in the access arrangement period (where costs associated with cost pass-through events are only reflected in tariffs from the following 1 July), or
- where there is no absolute limit on recovery to the following 1 July exists (as proposed by APT Allgas),
  - the cost pass through event occurs so late in the period that a cost pass through event notification cannot be prepared and/or approved before the end of the period such that the cost pass through amount can be reflected in tariffs for the remainder of the period; or
  - the cost pass through amount is significant and it is inappropriate to reflect those costs in tariffs over the remainder of the period because of the price shock this would impose on users.

Under these circumstances, APT Allgas considers that it may not be able to recover its efficient costs associated with an approved cost pass-through event. APT Allgas considers that this outcome would be inconsistent with the National Gas Law revenue and pricing principles which provide that a service provider be provided with a reasonable opportunity to recover at least the efficient costs of providing reference services and complying with a regulatory obligation.

Limiting the ability of a business to recover costs associated with a cost pass-through event because of the timing of that event is an arbitrary outcome, and leaves the business open to inconsistent risk levels across the access arrangement period, and APT Allgas considers that this outcome would not be in the long term interests of consumers.

To address this risk, APT Allgas has drafted an additional clause 4.5.6 in the revised access arrangement to make clear that where a cost pass-through event occurs in the access arrangement period that cannot be reflected in reference tariff during the access arrangement period, these costs can be recovered in the subsequent access arrangement period. This subsequent recovery is limited to costs that would otherwise be approved under the tariff variation mechanism in place at the time of the event.

Consistent with the intent of the NGR that provides that some aspects of the access arrangement can apply in subsequent access arrangement periods, APT Allgas has declared clause 4.5.6 as a fixed principle, ensuring that relevant cost pass-through amounts can be reflected in subsequent access arrangement periods.

11.3.4 Inclusion of specific cost pass-through events in APT Allgas access arrangement

APT Allgas accepts in principle the AER's amendment replacing APT Allgas' proposed 'generic' cost pass-through mechanism with a mechanism that specifies individual cost pass-through events. APT Allgas does, however, seek further amendments to the AER's revised text to take account of circumstances specific to the gas industry and to deliver greater consistency with the National Gas Rules.

APT Allgas accepts the AER's cost pass-through events, but seeks the following changes to the definitions of these events:

- Regulatory change event

  APT Allgas has amended this cost pass-through event to clarify that it also applies to the imposition of new regulatory obligations or requirements.

  APT Allgas does not consider that exposure to material cost impacts from new regulatory obligations that are beyond the control of the business is consistent with the National Gas Objective and Pricing Principles which require that a service provider be 'provided with a reasonable opportunity to recover at least

the efficient costs the provider incurs in providing reference services and complying with a regulatory obligation or requirement or making a regulatory payment'.

APT Allgas considers that the long term interests of consumers are best met by ensuring that the costs associated with the imposition of material new regulatory obligations or requirements can be recovered by the business, and this consideration outweighs any unspecified benefits derived from consistency with the regulatory arrangements applying to electricity network businesses.

Further, APT Allgas does not consider that the limitation of the regulatory change event to those events that both substantially affect the manner in which APT Allgas provides reference services and materially increases or decreases costs is appropriate. The revenue and pricing principles requires that the service provider be given reasonable opportunity to recover efficient costs of providing reference services and complying with a regulatory obligation. It does not specify that this recovery be limited to regulatory obligations that substantially impact how a service provider conducts its business.

A new or changed regulatory obligation can simply impose additional costs without substantially changing the way the service provider provides reference services. For example, the imposition of a government reporting requirement may not change how a service provider delivers reference services, but may materially increase its costs of operation.

APT Allgas has revised the Regulatory change event definition included in the access arrangement to reflect these comments.

- Tax change event

  APT Allgas accepts the AER's imposition of a tax change event and the drafting of that event. APT Allgas has made consequential amendments to the access arrangement to include a definition of a Tax and an Authority to support this definition. These definitions are derived from the National Electricity Rules.

- Insurer credit risk event

  APT Allgas accepts the AER's imposition of an insurer credit risk event, however has revised the drafting of the event to remove reference to a nominated insurer of APT Allgas.

  APT Allgas is unclear as to how an insurer becomes a nominated insurer, and considers this limitation to the cost pass through event unnecessary. Instead, any insolvency event involving any of APT Allgas' insurers that leads to a material change in costs for APT Allgas should be covered by this event. In verifying the cost pass through amount, it is expected that APT Allgas would be required to demonstrate that the relevant insurer was an insurer of APT Allgas.

An upfront process to nominate APT Allgas' insurers appears an unnecessary administrative burden for what is expected to be a relatively uncommon event.

- Major natural disaster event

  APT Allgas accepts the inclusion of a major natural disaster event in its access arrangement. APT Allgas has amended the drafting of this event to be consistent with the other cost pass-through events by referring to 'an access arrangement period' rather than 'the forthcoming regulatory control period' which will not have meaning once the access arrangement is in place and the access arrangement period has commenced.

  APT Allgas has also revised the drafting of this clause to refer to APT Allgas' approved revenue requirement, rather than forecast operating expenditure. This clarifies that excluded costs are costs that have been approved by the AER for inclusion in regulated revenues, rather than those costs forecast by the business, which may not have been approved by the AER in its final decision.

APT Allgas further considers that a specific cost pass through event should be added to the access arrangement for the imposition of a price on carbon. The Prime Minister Julia Gillard announced on 24 February 2011 the intention of the Australian Government to introduce a carbon price mechanism to apply from 1 July 2012. The exact nature of that mechanism, however, is still to be determined and is expected to change over time.[70]

Due to uncertainty over the form of the carbon price mechanism, APT Allgas considers it appropriate to include a specific cost pass through event in the access arrangement to address this expected policy change, as it is unclear whether this new obligation will be addressed through other cost pass through events. This uncertainty was noted during the Victorian electricity price review process, in particular that it was unclear that a carbon pricing scheme would satisfy the definition of a regulatory change event.[71] This uncertainty was not clarified by the AER in its final decision.[72]

APT Allgas considers that it would be unacceptable for APT Allgas to be exposed to material cost risk associated with the introduction of a price on carbon, whatever form such a pricing mechanism takes. An outcome where APT Allgas experiences material costs associated with this new regulatory obligation that it is not able to recover from customers would not be consistent with the NGL pricing principles. Due to the uncertainty associated with the form of scheme, it is unclear whether it

[70] Prime Minister, Minister for Climate Change and Energy 2011, Climate Change Framework announced, 24 February, accessed on 1 March 2011 at http://www.pm.gov.au/press-office/climate-change-framework-announced

[71] Citipower Pty Ltd 2010, *Revised Regulatory Proposal, 2011 to 2015*, 21 July, pp 404-5

[72] Australian Energy Regulator 2010, *Victorian electricity distribution network service providers distribution determination 2011-15*, October , p 782

would be covered under the definition of a regulatory change event or a tax change event, and is therefore appropriate to be addressed separately through a specific pass through event.

11.3.5 Materiality threshold

APT Allgas accepts the AER's materiality threshold in principle, but considers that it should apply to the annualised impact of a cost pass through event. This addresses the circumstance where an ongoing cost is incurred late in a regulatory year such that the costs incurred in that year do not meet the 1 per cent of smoothed revenue materiality threshold, but if those costs continue into later years and do meet the threshold. It would be inconsistent not to approve the full costs of a material cost pass through event simply due to the timing of the imposition of an obligation.

11.3.6 Amendments to the AAI

Amendment 11.6: Amend the access arrangement information to reflect amendments to reflect amendments **11.1–11.5** as appropriate.

APT Allgas has updated the access arrangement information to reflect the discussion above.

APT Allgas also notes there are consequential amendments to definitions arising from the amendments discussed above that are reflected in the revised access arrangement proposal accompanying this submission.

12 Terms and conditions

12.1 Access Arrangement terms and conditions - Appendix 3

Amendment 12.1: amend clause 2.2 of the terms and conditions of the access arrangement proposal by inserting the words 'in accordance with clauses 2.1.1 and 2.1.2 of the access arrangement' after the words 'Demand Customer'.

Amendment 12.2: amend the terms and conditions of the access arrangement proposal by changing existing clause 3.3.7 to clause 3.3.7(a).

Amendment 12.3: amend the terms and conditions of the access arrangement proposal by inserting new clause 3.3.7(b):

'Nothing in this clause 3.3 prevents a new MDQ for a Demand Customer Delivery Point to be agreed on when the Demand Customer at the Demand Customer Delivery Point changes.'

Amendment 12.4: amend clause 3.3.8 and clause 3.3.9 of the terms and conditions of the access arrangement proposal by inserting the words 'for the same Demand Customer' between the words 'further request' and 'to APT Allgas'.

Amendment 12.5: amend the terms and conditions of the access arrangement proposal by inserting the words 'as soon as practicable' at the end of clause 3.3.6.

Amendment 12.6: amend clause 5.2.1 of the terms and conditions of the access arrangement proposal by inserting the words 'or in accordance with any pressure range prescribed by law, if applicable,' between the words 'specified by APT Allgas' and 'from time to time'.

APT Allgas accepts these amendments.

Amendment 12.7: amend the terms of conditions of the access arrangement proposal by inserting the words 'and the failure is not due to the negligent act or omission on the part of APT Allgas (or any officer, servant, agent, contractor or other person for whom APT Allgas is liable)' at the end of clause 5.2.2.

APT Allgas accepts this amendment in part.

As the events set out in clauses 5.2.2(b) and 5.2.2(c) are wholly outside the control of APT Allgas, APT Allgas' acts or omissions are irrelevant. APT Allgas' negligence is only relevant in circumstances where APT Allgas may have some control, such as

in clause 5.2.2(a). For this reason, the AER's suggested amendment has been limited to apply to clause 5.2.2(a) only.

Amendment 12.8: amend clause 8.7 of the terms and conditions of the access arrangement proposal by inserting the words 'except for any claims that the User is required to pursue by law on behalf of a customer of the User' at the end of the paragraph that commences with the words 'The User may not claim'.

APT Allgas accepts this amendment.

Amendment 12.9: amend the terms and conditions of the access arrangement proposal by deleting clause 9.1 and replacing it with the following:

'If a Cost Pass-through Event occurs that increases APT Allgas's costs, APT Allgas is entitled to recover an amount from the User, according to a mechanism reasonably determined by APT Allgas and approved by the AER which is equitable and is designed to ensure APT Allgas will not enjoy a windfall benefit. Any proposed increase must be material and must be approved by the AER in accordance with clause 4.5.3 of the Access Arrangement.'

Amendment 12.10: amend the terms and conditions of the access arrangement proposal by deleting clause 9.2 and replacing it with the following:

If a Cost Pass-through Event occurs that decreases APT Allgas's costs, APT Allgas shall pay the User an amount, according to a mechanism reasonably determined by APT Allgas and approved by the AER which is equitable and is designed to ensure APT Allgas will not enjoy a windfall benefit. Any proposed decrease must be material and must be approved by the AER in accordance with clause 4.5.3 of the Access Arrangement.

APT Allgas does not accept Amendments 12.9 and 12.10. The terms and conditions apply to all pipeline services, not just reference services. It is therefore important for this clause allow for the variation of all tariffs, not just in accordance with the reference tariff variation mechanism approved by the AER.

APT Allgas has revised Part 9 of the terms and conditions to clarify that reference tariffs will be varied in accordance with the tariff variation mechanism, which is set out in clause 4.5 of the access arrangement. APT Allgas has also included a mechanism for variation of all other tariffs that addresses the imposition of new imposts, as well as the potential application of a carbon pricing scheme. It also escalates tariffs annually by CPI.

Amendment 12.11: amend the terms and conditions of the access arrangement proposal by deleting clause 10 and replacing it with the following:

'Each party will provide to the other party at no cost and in a timely manner whatever information, assistance and co-operation the other party might reasonably require from time to time in connection with this Access Agreement.

The User will procure the User's End Users, or Transmission Pipeline Operator, to provide to APT Allgas at no cost and in a timely manner whatever information, assistance and co-operation APT Allgas might reasonably require from time to time in connection with this Access Agreement.'

APT Allgas accepts this amendment in part.

Some information requests may be onerous and costly to meet. An example may be historical metering data. Information provision may also constitute a Special Ancillary Service for which a fee may be charged. APT Allgas has therefore removed the requirement that information provided between the parties will be provided at no charge, and included a provision that any fee be cost reflective and reasonable.

Amendment 12.12: amend the terms and conditions of the access arrangement proposal by deleting clause 13.1(b), clause 13.1(c)(i) and clause 13.1(c)(iii) of the terms and conditions of the access arrangement proposal.

Amendment 12.13: amend clause 13.2 of the terms and conditions of the access arrangement proposal by inserting the words 'arising from an event in relation to the Network' between the words 'against the insurance policy' and 'maintained by the User' and deleting clause 13.2(c).

Amendment 12.14: amend the glossary in the access arrangement by including a definition of the term 'Consequential Loss', which appears in clause 14.1 of the terms and conditions of the access arrangement proposal, or alternatively revise the term 'Consequential Loss' to lower case 'consequential loss'.

APT Allgas accepts these amendments.

Amendment 12.15: amend the terms and conditions of the access arrangement proposal by deleting clause 14.3 and replacing it with the following:

'Notwithstanding any other provision of this Access Agreement, any claim or claims by one party against the other party arising out of or in connection with this Access Agreement shall be limited to $100 000 in total in any one calendar Year during the Term.'

APT Allgas does not accept this amendment.

APT Allgas does not consider that it is appropriate for the liability cap to be reciprocal. It is important to note that APT Allgas' liability cap will apply in respect of each User so that it will be exposed to a total liability per event of the aggregate of all the liability caps under all of its contracts. In contrast, under the AER's proposal, the User will only be exposed to a single liability cap. As such, in practice, the liability exposure for APT Allgas would be significantly higher than for the User in respect of any event.

Further, the User's primary obligations under the Agreement include:

- **Payment of money** – This should never be the subject of a liability cap. The amount owed as a debt should be the amount payable.

- **Gas receipt** – The user is obliged to provide Gas within the required specification and pressure. Failure to do so may result in significant damage not just to the network but also to APT Allgas' other Users, each of which may potentially claim against APT Allgas under their respective contracts. Other third parties (such as end users) may also claim against APT Allgas at common law (eg. for negligence). As such, APT Allgas' exposure to losses is disproportionately high in relation to an event over which it has no control. As such, a cap on liability for the User is not justified.

- **Indemnity** – Under clause 14.5, the User indemnifies APT Allgas in respect of its breach of obligations and damage caused by certain of its acts/omissions. A liability cap would significantly reduce the protection that this indemnity provides APT Allgas.

APT Allgas has therefore reinstated its former liability clause under 14.3.

Amendment 12.16: amend clause 14.4(c) of the terms and conditions of the access arrangement proposal by deleting the words '*Trade Practices Act 1974*' and replacing them with the words '*Competition and Consumer Act 2010*'.

Amendment 12.17: amend the terms and conditions of the access arrangement proposal by inserting new clause 15.4:

'This Part 15 will survive the termination or expiration of the Access Agreement.'

Amendment 12.18: amend clause 18.3(a) of the terms and conditions of the access arrangement proposal by inserting the number '15' between the words 'Parts 8, 14' and 'and clause 18.6.

Amendment 12.19: amend clause 18.2 of the terms and conditions of the access arrangement proposal by inserting the words 'suffers an Insolvency Event or' between the words 'If APT Allgas' and 'defaults in the performance'.

Amendment 12.20: amend clause 18.4 of the terms and conditions of the access arrangement proposal by deleting the words 'this Part 18' and replacing them with the words 'clause 18.1'.

Amendment 12.21: amend clause 18.5 of the terms and conditions of the access arrangement proposal by deleting the word 'APT Allgas' and replacing it with the words 'each party'.

Amendment 12.22: amend the terms and conditions of the access arrangement proposal by deleting clause 22.3 and replacing it with the following:

'Each right, power and remedy of each party under this Access Agreement is in addition to any other right, power and remedy of each party under this Access Agreement or at law. The exercise by a party of any one right, power or remedy will not preclude the simultaneous or subsequent exercise of any other right, power or remedy.'

APT Allgas accepts these amendments.

12.2 Warranty of title to gas

APT Allgas has included an additional revision to its access arrangement to address circumstances that may arise under the operation of the STTM. Clause 7.1 of the terms and conditions has been revised to include an additional subclause (c) clarifying that the user must actually have the right (contractual and otherwise) to have gas transported. This supplements subclause 7.1(b) and is intended to provide further clarity on the obligation.

12.3 Capacity trading requirements

Amendment 12.23: amend section 5 of the access arrangement proposal as follows:

Insert the sentence 'An example might be, if APT Allgas would not receive at least the same amount of revenue it would have received before the change', at the end of the first paragraph in section 5.3.

Insert the sentence 'An example might be, if a reduction in the amount of the service provided to the initial delivery point will not result in a corresponding increase in APT Allgas's ability to provide that service to the alternative delivery point', at the end of the first paragraph in section 5.4.

APT Allgas accepts this amendment.

12.4 Extensions and expansion requirements

Amendment 12.24: amend section 6.1 of the access arrangement proposal as follows:

If APT Allgas proposes a high pressure pipeline extension of the covered pipeline, it must apply to the AER in writing to decide whether the proposed extension will be taken to form part of the covered pipeline and will be covered by this access arrangement.

For the purposes of this section 6, a high pressure pipeline extension means a pipeline that exceeds one kilometre in length and is proposed to be built to a postcode area previously not serviced by reticulated gas.

A notification given by APT Allgas under this clause 6.1 must:

a) be in writing

b) state whether APT Allgas intends for the proposed high pressure pipeline extension to be covered by this Access Arrangement

c) describe the proposed high pressure pipeline extension and describe why the proposed Extension is being undertaken and

d) be given to the AER before the proposed high pressure pipeline extension comes into service.

APT Allgas is not required to notify the AER under this clause 6.1 to the extent that the cost of the proposed high pressure pipeline extension has already been included and approved by the AER in the calculation of Reference Tariffs.

After considering APT Allgas's application, and undertaking such consultation as the AER considers appropriate, the AER will inform APT Allgas of its decision on APT Allgas's proposed coverage approach for the high pressure pipeline extension.

The AER's decision referred to above, may be made on such reasonable conditions as determined by the AER and will have the effect stated in the decision.

Amendment 12.25: amend section 6.2 of the access arrangement proposal as follows:

Any extensions to and expansions of the capacity of the Network which are not high pressure pipeline extensions within the meaning of clause 6.1 will be treated as part of the Network and covered by this Access Arrangement.

All extensions of low or medium pressure pipelines and expansions of the capacity of the Network carried out by the Service Provider will be treated as covered under this Access Arrangement. No later than 20 Business Days following the expiration of its financial year, APT Allgas must notify the AER of all extensions of low or medium pressure pipelines and expansions of the capacity of the Network during that financial year, including all expansions commenced, in progress and completed. The notice must describe each extension and expansion and set out why this was necessary.

APT Allgas accepts these amendments in part.

APT Allgas accepts the first aspect of this required amendment, that medium and low pressure extensions or expansions of the gas distribution network will be considered to be part of the distribution network and covered by the access arrangement. This is consistent with APT Allgas' original proposal. However, APT Allgas does not accept aspects of the amendments relating to high pressure extensions, and does not accept the imposition of additional reporting requirements.

12.4.1 The extensions and expansions policy and coverage

Rule 104 states:

> 104 Extension and expansion requirements
>
> (1) Extension and expansion requirements may state whether the applicable access arrangement will apply to incremental services to be provided as a result of a particular extension to, or expansion of the capacity of, the pipeline or may allow for later resolution of that question on a basis stated in the requirements.
>
> (2) Extension and expansion requirements included in a full access arrangement must, if they provide that an applicable access arrangement is to apply to incremental services, deal with the effect of the extension or expansion on tariffs.
>
> (3) The extension and expansion requirements cannot require the service provider to provide funds for work involved in making an extension or expansion unless the service provider agrees.

It is important to note that Rule 104 does not address the question as to whether the extension or expansion is "covered" – only whether the access arrangement applies to services provided by that extension or expansion.

The question of coverage under the National Access Regime is dealt with in the National Gas Law, section 18:

> 18 — Certain extensions to, or expansion of the capacity of, pipelines to be taken to be part of a covered pipeline
>
> For the purposes of this Law—
>
> (a) an extension to, or expansion of the capacity of, a covered pipeline must be taken to be part of the covered pipeline; and
>
> (b) the pipeline as extended or expanded must be taken to be a covered pipeline,
>
> if, by operation of the extension and expansion requirements under an applicable access arrangement, the applicable access arrangement will apply to pipeline services provided by means of the covered pipeline as extended or expanded.

Under the Rules, the extensions and expansions policy (EEP) specifies whether the access arrangement is to apply to any services provided by the extension or expansion, and if so, then the extension or expansion becomes part of the covered pipeline under NGL section 18.

Purpose of the EEP

Under the National Gas Access Regime, there is a clear process for a pipeline to become covered, as specified in the National Gas Law, starting at section 92. This process requires an application to the National Competition Council (NCC), an assessment against clear coverage criteria, and a recommendation to the relevant Minister for ultimate decision.

The purpose of the EEP is to provide an administrative "shortcut", to allow the service provider the option to voluntarily elect for any extensions or expansions to a covered pipeline to also be covered under the National Gas Access Regime.

In the construct of the Rules, the process is that if the Service Provider's EEP specifies whether the access arrangement will apply to services provided by the extension or expansion, and then it is included as part of the covered pipeline under the administrative shortcut provisions in section 18 of the NGL.

The process then, is for the service provider to elect that the access arrangement will apply, and that election leads to coverage.

Where the EEP does not provide for the access arrangement to apply to services provided by the extension or expansion, then the provisions of NGL s18 do not become operative. In this case, a decision on coverage must be made by the relevant Minister following a recommendation from the NCC under NGL s95.

APT Allgas considers that, within the framework of the National Gas Law and the Australian Energy Market Agreement, matters relating to coverage of natural monopoly infrastructure rests squarely with the NCC. It is therefore beyond powers for the AER to place itself in the position of deciding whether an asset should be covered or not.

APT Allgas' proposed EEP

APT Allgas considers that the access arrangement should apply, and therefore coverage should be extended to, the "business as usual" organic growth of the gas distribution network. A key underlying assumption to this view is that the organic extensions and expansions are incremental to the existing network. To this end, APT Allgas proposes that medium and low pressure extensions or expansions should be part of the covered pipeline for both access arrangement and coverage purposes.

Consistent with the requirements of Rule 104(2), APT Allgas has stated in clause 6.3 of its proposed EEP that service provided by means of the extension or expansion will be provided at the Reference Tariff and there will be no change to the Reference Tariff arising from the extensions or expansion.

However, high pressure extensions and expansions are not necessarily "business as usual" activities. It is possible for some high pressure extensions to be significant relative to the rest of the network. In this case, the "incremental development" assumption no longer holds, and it would not necessarily be prudent to adopt the administrative shortcut approach offered in the EEP and section 18 of the NGL. In this respect, APT Allgas agrees with the AER that it also does not consider that all high pressure extensions should be covered by default.

There are some extensions to the high pressure system that do reasonably form part of the covered pipeline, and these identified projects have been proposed by APT Allgas, reviewed by Wilson Cook and approved by the AER for inclusion in forecast Reference Tariffs. In this circumstance, APT Allgas elects in advance that the access arrangement will apply to these extensions, and that these extensions will be part of the covered pipeline. Accordingly, APT Allgas' EEP provides that it is not required to notify the AER of any significant extension that has already been reviewed and included in the calculation of Reference Tariffs.

12.4.2 Imposition of reporting requirements

APT Allgas does not accept the second aspect of the required amendment, relating to the imposition of new and extensive reporting requirements.

APT Allgas submits that gas distribution network businesses grow organically as part of its normal business operations; medium and low pressure extensions and expansions are part of its "business as usual" operations. The same applies to electricity and water businesses, road networks, etc. To impose detailed reporting requirements on such "business as usual" operations imposes a micromanagement burden that is completely inappropriate for an economic regulator in an incentive based regime. APT Allgas objects to this imposition on the following grounds:

- Duplication of existing reporting requirement

  APT Allgas currently submits information of a technical nature, including length of mains, new extensions, etc to the Department of Employment, Economic Development and Innovation (DEEDI) as part of its normal licensing requirements. To the extent the AER requires APT Allgas to report similar information, it is imposing a cost, for no clear benefit. APT Allgas submits that this is not in the long term interest of consumers.

- Unclear objectives for information gathering

  The AER states that the information reporting requirements provide the 'level of transparency …necessary to satisfy the national gas objective'.[73] The AER do not specify how this information satisfies the national gas objective, in particular the benefits to be achieved from the reporting of this information. APT Allgas is unclear as to the purpose this information could be put in the course of an access arrangement period such that the benefits of gathering this information would exceed the considerable costs associated with the detailed information requirements.

- Inconsistent application of requirement between businesses

  APT Allgas notes that the AER had proposed to include a similar reporting requirement on the proposed access arrangement revisions for ActewAGL. However, on ActewAGL advising the AER that similar information, albeit at a slightly higher level, was reported to its jurisdictional regulator and expressed its willingness to provide a copy of that report to the AER, the AER removed the requirement for the additional reporting in the Final Decision.[74]

[73] AER *Draft Decision*, p 166

[74] AER, *Final decision–Public - Access arrangement proposal ACT, Queanbeyan and Palerang gas distribution network 1 July 2010–30 June 2015 March 2010* p129

As discussed above, APT Allgas currently reports similar information to DEEDI, and would be prepared to provide a copy of that report to the AER on request.

- Unreasonable deadline for information to be filed

  The AER proposed a deadline for filing this information of 20 business days following the end of the fiscal year. APT Allgas considers that such a deadline may be appropriate where the underlying information is time critical and on which significant decisions will be undertaken; however, it is not clear that the information being required is time sensitive.

  The end of the financial year is a peak reporting time for any business; APT Allgas submits that it is not reasonable for a regulator to require additional resources to be devoted to peak period reporting of non time critical information.

- Duplication of existing information previously provided

  APT Allgas submits that some of the information, particularly the requirement to report on the necessity for the particular medium and low pressure extensions or expansions, has already been addressed in the context of the Wilson Cook review of the reasonableness of the capital expenditure program. This review would have addressed whether the forecast level of expenditure on reticulating new subdivisions was unreasonable in light of the forecast level of new development expected to be undertaken.

- *Ad hoc* imposition of reporting requirements

  APT Allgas submits that the imposition of reporting requirements through applicable access arrangements is not consistent with the national gas objective as it risks inconsistent information gathering across regulated service providers without clear assessment of the reflective costs and benefits of information gathering, as is required under the formal information provision under the National Gas Law.

APT Allgas is willing to work with the AER and other regulators to develop such a framework in the future.

12.4.3 Surcharges

Amendment 12.26: insert the following new paragraph at the end of section 6.3 of the access arrangement proposal:

APT Allgas will notify the AER to seek approval of any proposed surcharge to be levied on users of incremental services, and designed to recover non-conforming capital expenditure or a specified portion of non-confirming capital expenditure (non-conforming capital expenditure which is recovered by means of a surcharge

will not be rolled into the capital base). Surcharges will only be approved subject to rule 84(4) of the NGR.

APT Allgas may charge Users a Surcharge where permitted by the National Gas Rules. APT Allgas will notify the AER of any proposed Surcharge to be levied on users of incremental services and designed to recover non-conforming capital expenditure or a specified portion of non-conforming capital expenditure. Non-conforming capital expenditure which is recovered by means of a Surcharge will not be rolled into the Capital Base.

In response to a submission by AGL, the AER proposes to require an amendment to the APT Allgas proposed access arrangement to give the AER oversight on surcharges applicable to non-covered extensions.[75] While the AER refers to Rule 83(4), APT Allgas notes that the AER has no pricing oversight jurisdiction on uncovered pipelines. However, APT Allgas notes that the related amendment (Amendment 12.26) states this requirement in terms of giving the AER approval powers on surcharges relating to non-conforming capital expenditure.

APT Allgas submits that "coverage" and "non-conforming capital expenditure" are quite different concepts. In particular, APT Allgas notes that, under the NGL and NGR framework, the AER has no scope to assess the capital expenditure of a non-covered pipeline to determine whether it would have been conforming capital expenditure or not; the AER only has jurisdiction to make this assessment in the context of an access arrangement review on a covered pipeline.

APT Allgas further observes that its access arrangement already includes a clause on the application of surcharges at clause 3.3, in the context of the determination of total revenue. This clause contains the key elements of the AER's amendment by noting the need for AER approval of any surcharge levied in accordance with the Rules, and that capital expenditure recovered by means of the surcharge will not be rolled in the capital base.

APT Allgas considers that Part 3 of the access arrangement is the most appropriate place to situate the clause regarding surcharges. The application of surcharges is not necessarily limited to extensions or expansions of the network. APT Allgas has therefore not moved its clause to Part 6 of the access arrangement, but has instead included cross reference to the surcharge clause at the end of clause 6.3 of the access arrangement. APT Allgas has also inserted a cross reference to the capital contributions clause in Part 3 in this section as capital contributions may also be levied on extensions or expansions.

[75] AER *Draft Decision*, p 166

12.5 Revisions submission date

Amendment 12.27: amend the access arrangement proposal to

1) delete the first paragraph of clause 1.4 and replace it with the following:

APT Allgas will submit revisions to this Access Arrangement to the AER on or before 1 July 2015.

2) include the following new clause 1.5:

The AER may require APT Allgas to revise its access arrangement for inconsistencies between the proposed terms and conditions and the NGL or NGR.

The revisions submission date stated in clause 1.4 of the access arrangement proposal will advance on the occurrence of a trigger event described below. For the purposes of this clause, a 'trigger event' occurs if:

(a) there is an amendment to the National Gas Law or the National Gas Rules, or the National Energy Retail Law or National Energy Retail Rules commence operation in Queensland; or

(b) the STTM does not operate as anticipated and the access arrangement does not effectively accommodate the STTM; and

(c) the AER provides APT Allgas with a notice stating that the circumstances described in (a) or (b) are significant. An amendment or the commencement in Queensland of the National Energy Retail Law or National Energy Retail Rules is significant if it affects reference tariffs. The new review submission date will be the date 6 months from the date of the notice provided by the AER under this clause.

(c) the AER provides APT Allgas with a notice stating that the circumstances described in (a) or (b) are significant. An amendment or the commencement in Queensland of the National Energy Retail Law or National Energy Retail Rules is significant if it affects reference tariffs. The new review submission date will be the date 6 months from the date of the notice provided by the AER under this clause.

APT Allgas accepts AER amendment 12.27(1) revising its revision submission date to 1 July 2015.

APT Allgas does not accept AER amendment 12.27(2).

AER's amendment includes a provision in the access arrangement whereby the AER can require APT Allgas to revise its access arrangement for inconsistencies

between the proposed terms and conditions and the NGL or NGR. APT Allgas considers that this amendment is outside of the AER's powers to vary or revoke an access arrangement, or require a service provider submit a revised access arrangement.

The NGR contain specific provisions setting out the circumstances under which the service provider or the AER can revise an access arrangement. These are:

- By the service provider:
  - At the end of an access arrangement period in accordance with the revision submission date and revision commencement date included in a current access arrangement (Rule 52);
  - During an access arrangement period where the service provider submits an access arrangement variation proposal (Rule 65); and
- By the AER:
  - During an access arrangement period it the determination is affected by a material error or deficiency of a specified kind (Rule 68); and
  - During an access arrangement period on the occurrence of a trigger event specified in the relevant access arrangement (Rule 51).

Under the NGR these are the only circumstances whereby an access arrangement can be revised or varied. It should also be noted that revisions under Rules 51 and 52 automatically trigger a full access arrangement revision process (NGR Division 8). Revisions under Rule 65 can be made, where appropriate, with only limited consultation, and do not necessarily trigger a full access arrangement revision process. A revision under Rule 68 is limited to the correction of errors or deficiencies and does not trigger the full access arrangement revision process.

The AER's amendment 12.27(2) seeks to include in the access arrangement an additional condition under which the AER may require a service provider to revise an access arrangement. To the extent that an identified inconsistency between the proposed terms and conditions and the NGL or NGR satisfies the requirements under Rule 68, the AER may seek to revise the access arrangement under this Rule. Any inconsistency arising from another source, for example a change to the NGL or NGR, would not satisfy the conditions under Rule 68 and the AER could not vary or revoke the access arrangement to correct for such an inconsistency. In any case, under no circumstances except in accordance with Rules 51 and 52 could the AER require APT Allgas to submit a revised access arrangement proposal.

APT Allgas therefore considers that the AER's proposed amendment to include an additional condition under which it can require a service provider to submit revisions to the access arrangement is not consistent with the NGL and NGR and is outside of

the AER's powers. This amendment has not been included APT Allgas' access arrangement.

A further part of the AER's amendment 12.27(2) involves the inclusion of two trigger events in the access arrangement:

- there is an amendment to the National Gas Law or the National Gas Rules, or the National Energy Retail Law or National Energy Retail Rules commence operation in Queensland; and

- the STTM does not operate as anticipated and the access arrangement does not effectively accommodate the STTM.

These events are only 'triggered' where the AER subsequently provides a notice to APT Allgas stating that the circumstances associated with the trigger events are significant.

APT Allgas does not consider that this trigger event is consistent with the NGR or NGL.

Rule 51 specifies that a trigger event may consist of any significant circumstance or conjunction of circumstances. It provides examples of potential circumstances, all of which relate to a substantial change to the physical operation of the pipeline.

APT Allgas consider that this requires that a trigger event be an external event rather than one initiated by the regulator or the service provider. APT Allgas considers that a trigger event that comprises a discretionary decision by the AER does not comply with the requirements of the NGR for a 'circumstance or conjunction of circumstances'.

Further APT Allgas does not consider that the STTM trigger is sufficiently specified to be an identifiable trigger event. The STTM trigger requires there to be a specification of the anticipated operation of the STTM, such that deviation from that specification can be identified. APT Allgas is unclear as to how to determine whether the STTM ultimately operates as anticipated, as it is has not specified how it believes it will operate in documents provided with the access arrangement.

APT Allgas further submits that including in the access arrangement a trigger event for the National Energy Customer Framework (NECF) or the Short Term Trading Market (STTM) is unnecessary and imposes considerable additional risk and cost on the service provider that is unnecessary in the circumstances.

To the extent that the introduction of either of the NECF or STTM lead to materially increased costs for APT Allgas (or led to a reduction in costs), APT Allgas would expect to be able to recover (or return) these costs as a cost pass-through event under the tariff variation mechanism.

The AER states that the trigger mechanism will "enable the AER to review the approved terms and conditions of access for consistency with the arrangements under these new frameworks".[76] This shows a misunderstanding as to the scope of review triggered under Rule 51. As the trigger event mechanism brings forward the revision submission date, it requires that the resulting revision proposal be made in accordance with Part 9, and be assessed under the requirements Part 8 Division 8. This imposes considerable additional costs and risks on the service provider, and additional costs on the AER, users and prospective users.

APT Allgas considers that a full revision of the access arrangement is unnecessary in the circumstances, and that there are other, more efficient mechanisms to address necessary changes to access arrangement terms and conditions.

In general, new laws are applied with transitional arrangements that address how those laws will impact on existing arrangements. This is anticipated for the application of the NECF in Queensland, where the Queensland Government may grandfather some provisions until the commencement of the next access arrangement period. To the extent this occurs, the access arrangement will not require amendment.

In the event that some provisions will apply to the access arrangement during the access arrangement period, APT Allgas is able to submit a revision to the AER under Rule 65 to make any necessary amendments. APT Allgas notes that it is in its the interest to ensure that its access arrangement is compliant with applicable law, and therefore it can be expected to submit revisions as necessary to the AER once the form of either or both the NECF or STTM become known. APT Allgas further notes that the AER either has or will soon have the power to enforce the STTM rules and the National Energy Retail Law, and can therefore ensure the compliance of service providers to these provisions.

Under the Rule 65 process the AER need not undertake a complete review of the access arrangement under Part 9, but can limit its assessment to the variation proposal and conduct consultation on the variation proposal as appropriate. APT Allgas considers that this is more in accordance with the AER's intent to "review the approved terms and conditions of access for consistency with the arrangements under these new frameworks".

APT Allgas does not consider that a full access arrangement revision process is necessary or warranted upon the application of the STTM or NECF to APT Allgas. Simpler and less costly options are available to ensure that the access arrangement is consistent with applicable law which APT Allgas considers are more consistent with the National Gas Objective. APT Allgas has therefore not included the AER's trigger event in its access arrangement.

[76] AER *Draft Decision*, p 170

13 Debt raising costs

Amendment F.1: make all necessary amendments to the access arrangement proposal and access arrangement information in order to be consistent with table F.2.

Table F.2: AER's conclusion on debt raising costs ($m, 2010–11)

Description	Unit rate	Form of allowance	2011–12	2012–13	2013–14	2014–15	2015–16	Total
APT Allgas proposal	10.8 bppa	Implicit in WACC	(no explicit allowance)					
AER draft decision	**10.9 bppa**	**Opex line item**	**0.27**	**0.27**	**0.28**	**0.28**	**0.28**	**1.38**

Source: APT Allgas, *Access arrangement information - PTRM*, AER analysis
Note: Numbers may not add due to rounding

APT Allgas has made this amendment as shown in the opex table in section 7.

14 Concluding comments

APT Allgas submits that the responses to the AER's required amendments, as discussed in this submission and reflected in the accompanying Access Arrangement and Access Arrangement Information, adequately address the AER's concerns in accordance with Rule 60.

APT Allgas looks forward to maintaining an open dialogue with the AER should any further matters arise.

A Attachments

A.1 Australia Ratings – debt risk premium

A.2 Impact of Draft Decision on Credit Rating Metrics (Confidential)

A.3 Nominated averaging period for Risk Free Rate and Debt Risk Premium (Confidential)

A.4 Unaccounted for gas tender information (Confidential)