



# **N.T. Gas Pty. Limited**

**In trust for the Amadeus Gas Trust**

ABN 68 348 460 818

ACN 050 221 415

## **Amadeus Gas Pipeline**

### **Access Arrangement Revision Proposal**

**Submission**

**May 2011**

**Public**





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## Executive Summary

On 23 December 2010, NT Gas filed its access arrangement revision proposal for the Amadeus Gas Pipeline (AGP), 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 (AER) issued, on 21 April 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 NT Gas' access arrangement revision proposal. In all, the AER required 32 amendments before it would be prepared to approve the proposed revisions. Many of these amendments were summary in nature and constituted several required changes to NT Gas' proposal in a single amendment.

This submission provides supporting information for NT Gas' proposed revision of the access arrangement for the AGP to apply for five years from 1 July 2011. This submission accompanies NT Gas' proposed revised access arrangement and access arrangement information, and should be read in conjunction with those documents.

### Demand

The AER has accepted NT Gas' demand, capacity and utilisation forecasts as submitted in December 2010. NT Gas has made no further revisions to these forecasts in this revised proposal.

### Building block revenue proposal

NT Gas' revised forecast capital and operating expenditure over the access arrangement period are set out in Table 0.1 and in chapters 3 and chapter 7 of this submission.

**Table 0.1 – Forecast capital and operating expenditures over the access arrangement period**

\$ '000 (2010/11)	2011/12	2012/13	2013/14	2014/15	2015/16	Total
Capital expenditure	19,444	12,589	4,455	2,046	2,200	<b>40,735</b>
Operating expenditure	13,310	15,050	13,549	14,278	15,727	<b>71,914</b>

NT Gas' revised forecast for **capital expenditure** reflects in full revisions made to its enhanced integrity program, advised to the AER in February 2011. Forecast capital expenditure over the access arrangement period is \$40.7 million (2010/11). NT Gas has made no revisions to expansion and non-system capital expenditure.

Total revised forecast **operating expenditure** for the access arrangement period is \$71.9 million. This forecast includes revisions to the operating and maintenance expenditure category, responding to AER revisions relating to step changes, and a



reduction in the sales and marketing expenditure forecast. The overheads category has been revised to reflect an updated insurance estimate.

Other elements of the building blocks proposal include:

- A nominal vanilla weighted average cost of capital of 10.9 per cent based on current market parameters;
- A capital base reflecting revisions to the enhanced integrity program, rolled forward in accordance with the roll forward model provided at Attachment A, yielding an opening capital base for the access arrangement period of \$102.7 million;
- A tax asset base (TAB) derived using the opening TAB in the earlier access arrangement period, and rolling it forward using the actual capital expenditure; and
- Depreciation calculated by applying the remaining economic life of assets over the opening capital base value as at 1 July 2011, and forecast expenditure using straight line depreciation.

## Revenue requirement

NT Gas' revised proposed revenue requirement and X-factors are shown in Table 0.2. The revenue requirement is translated into a price path in a CPI-X format. X-factors set at zero translate into tariff changes by CPI only over the access arrangement period.

**Table 0.2 – Forecast revenue requirement and X-factors**

\$ '000 (2010/11)	2011/12	2012/13	2013/14	2014/15	2015/16
AGP Building block revenue requirement	34,869	33,109	33,341	35,063	33,880
Smoothed revenue requirement	32,520	33,356	34,213	35,092	35,994
X Factors	NA	0	0	0	0

## Services

The AER has accepted NT Gas' pipeline services, reference service, revenue allocation and tariff structure. NT Gas has made no further revisions to these aspects of its proposal.

NT Gas has revised aspects of its access arrangement terms and conditions in response to AER revisions.

A summary table of NT Gas' response to AER amendments is provided in the following section.



## NT Gas response to AER amendments

Matter	Amendment reference in AER draft decision	Treatment	Discussion
Amend opening capital base to take account of revised capital expenditure figures for 2010/11	3.1, 3.2	Accepted in part. NT Gas has adopted AER revised enhanced integrity program expenditure, with the exception of AER adjustments to project management costs and escalators.	3.1.2
Correctly adjust depreciation amounts making up the opening capital base for the difference between actual and forecast inflation.	3.1	Not accepted. NT Gas considers that its calculation of depreciation making up the opening capital base is correct.	3.1.3
Use March to March inflation figures to adjust the capital base	3.1	Accept amendment	3.1.4
Apply revised labour escalator to capital expenditure	3.1, 3.3, 3.4	Not accepted. NT Gas has applied its proposed labour escalator to revised expenditure	3.1.2, 3.2.1, 7.4
Remove project management costs from forecast expenditure	3.3, 3.4	Not accepted. NT Gas has provided additional detail on the basis of project management costs and revised its methodology used to allocate this amount to each project	3.1.2, 3.2.1, Attachment C
Revise inflation forecast	3.3, 3.4	Accepted	3.2.4 and chapter 5
Correct methodology applied to calculate remaining lives	4.2	Accepted in part. Methodology corrected, calculations revised.	4.2.2
Revise the opening value for buildings on 1 July 2011 to include building assets in this class at this date.	4.1	Accepted	4.2.3
Revise WACC parameters as per AER draft decision	5.1	Not accepted. NT Gas response to AER revised parameters as per chapter 5.	5
Adjust tax depreciation rates for new assets	6.2	Accepted. Correct tax depreciation rates applied to new capital expenditure.	6.1
Adjust remaining tax asset lives	6.2	Accepted in part. Remaining tax lives adjusted to reflect opening	6.2



		balance.	
Apply a tax loss carry forward	6.2	Accepted in part. Tax loss carry forward calculation corrected and tax loss applied.	6.3
Apply a gamma value of 0.45	6.1	Not accepted. NT Gas has applied gamma value arising from recent ACT decision.	6.4
Apply revised labour escalators to operating expenditure	7.1	Not accepted. NT Gas has applied its proposed labour escalator to revised expenditure.	7.4
Reduce corporate overheads forecast by the amount of local overheads	7.1	Not accepted. NT Gas has provided evidence that there is no double counting between local and corporate overheads.	7.1
Remove insurance from overheads forecast	7.1	Not accepted. NT Gas provided additional information on the basis of this estimate.	7.1
Adjust sales and marketing expenditure to 2010/11 expenditure levels	7.1	Accepted	7.3
Remove additional DCVG dig-up expenditure step changes from O&M forecast	7.1	Accepted	7.2.2
Remove above ground station recoating expenditure from O&M forecast	7.1	Not accepted. NT Gas has confirmed that recoating expenditure was not included in the base year.	7.2.2
Revise revenue to take account of AER required amendments	8.1	Accepted in part. Revised revenue takes account of NT Gas' response to AER amendments.	8.4
Revise reference tariff to take account of AER required amendments	10.1	Accepted in part. Revised tariff takes account of NT Gas' response to AER amendments.	10.4
Specify that March CPI data will be used in tariff variation mechanism	11.1	Accepted	11.1.1
Amend AA to require annual tariff variation notifications to be made at least 50 business days before 1 July	11.3	Not accepted. NT Gas has included a 40 business day tariff variation process.	11.1.2
Amend AA to require tariff variations must be submitted each year	11.3	Accepted	11.1.2



Amend AA to include AER ability to extend deadline for consideration of tariff variation notification	11.3	Accepted	11.1.2
Amend AA to include specific cost pass through event definitions in the access arrangement as defined by the AER	11.2	Accepted in part. NT Gas has included specific cost pass through events, but amended the definition of some to better reflect the nature of costs.	11.2.1
Amend AA to require cost pass through events to be notified to the AER within 90 days of them occurring	11.4	Accepted	11.2.2
Amend AA to include assessment criteria for cost pass through events specified by the AER	11.2	Accepted	11.2.1
Amend materiality threshold in line with other AER decisions	11.2	Accepted in part. NT Gas has revised definition to be more in line with requirements under the NGR	11.2.1
Update AAI to reflect changes to tariff variation mechanism	11.5	Accepted	11.3
Amend AA terms and conditions in line with AER amendments	Appendix C	Accepted in part. Detailed response to AER amendments at Attachment H	Attachment H
Amend AA to include a definition of reasonable technical and commercial grounds	12.3	Accepted	12.2
Delete 'without limitation' from clause 5.3(a) of the AA	12.1	Accepted	12.2
Remove restriction on trading capacity where party is in default		Not accepted. NT Gas has limited clause to where the party is in material default.	12.2
Replace reference to 5 Feb 2003 with commencement date of the AA in relation to existing contractual rights in the queue	12.4	Accepted	12.3
Amend EEP in relation to extensions to the pipeline	12.5	Not accepted. AER's amendment is not consistent with the NGR and does not reflect the discussion in the text.	12.4.3
Amend EEP in relation to expansions of the pipeline	12.7	Not accepted. AER's amendment is not consistent with the NGR and does not reflect the discussion in the text.	12.4.2,12.4.4



Amend EEP to include reporting requirements for extensions and expansions undertaken each year	12.6, 12.8	Not accepted. AER's amendment is not consistent with the purpose of the access arrangement and information gathering powers under the NGL.	12.4.5
Removed specification of fixed principle	12.9	Not accepted. AER's reasons for rejecting fixed principle do not address the basis for the fixed principle.	12.4.6
Amend access arrangement to refer to commencement of access arrangement only following AER-imposed revisions	12.10	Not accepted. Limiting the possible commencement of the access arrangement to the commencement of an AER-imposed access arrangement is pre-judging the AER's response to NT Gas' revision proposal.	12.5.1
Revise the revisions submission date to 1 July 2015	12.11	Accepted	12.5.2
Delete reference to service provider's ability to submit revisions at any time	12.12	Not accepted. This clause conveys important information to users about the potential for revision to the access arrangement, and is consistent with the Rules.	12.5.3



## Abbreviations

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACN	Australian Company Number
ACT	Australian Capital Territory
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGP	Amadeus Gas Pipeline
AMP	Asset Management Plan
APIA	Australian Pipeline Industry Association
AS	Australian Standard
CAPM	Capital Asset Pricing Model
CGS	Commonwealth Government Securities
CP	Cathodic Protection
CPI	Consumer Price Index
Cth	Commonwealth
DCVG	Direct Current Voltage Gradient
DRP	Debt Risk Premium
GIS	Geographic Information System
HAZOP	Hazard and Operability
HSE	Health, Safety and Environment
ICB	Initial Capital Base
IP	Intelligent Pigging
IT	Information Technology
km	kilometre
LNG	Liquefied Natural Gas
MAOP	Maximum Allowable Operating Pressure
MDQ	Maximum Daily Quantity
mm	millimetre
MRP	Market Risk Premium
Mt	Mount
NGL	National Gas Law
NGR	National Gas Rules



NT	Northern Territory
O&M	Operation and Management
ORC	Optimised Replacement Cost
PMP	Pipeline Management Plan
PTRM	Post Tax Revenue Model
PWC	Power Water Corporation
RIN	Regulatory Information Notice
ROW	Right of Way
SA	South Australia
SCADA	Supervisory Control and Data Acquisition
TAB	Tax Asset Base
TJ	Terajoule
UAG	Unaccounted for Gas
WACC	Weighted Average Cost of Capital





# 1 Introduction

## 1.1 Background

On 23 December 2010, NT Gas filed its access arrangement revision proposal for the Amadeus Gas Pipeline (AGP), 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 (AER) issued, on 21 April 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 NT Gas' access arrangement revision proposal. In all, the AER required some 32 amendments before it would be prepared to approve the proposed revisions. Many of these amendments were summary in nature and constituted several required changes to NT Gas' proposal in a single amendment.

In accordance with Rule 59(3), the AER's draft decision established a deadline of 27 May 2011 for NT Gas to revise the proposal, and 24 June 2011 for comments from interested parties.

## 1.2 Purpose of this submission

Rule 60 of the National Gas Rules outlines the process for NT Gas to respond to the AER's 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 NT Gas' access arrangement revision proposal. In many cases, NT Gas has accepted the amendments as specified in the draft decision. In others, NT Gas has proposed revised wording to achieve substantially the same result. In a few cases, NT Gas 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. Together these documents make NT Gas' access arrangement revision proposal.

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.

### 1.2.1 Limitations in ability of NT Gas to respond to some amendments

Rule 59(4) states that an access arrangement draft decision must include a statement of the reasons for the decision. NT Gas has identified a number of areas in the draft decision where the AER has not provided reasons for its required amendments, or where the AER has not engaged with the information provided by NT Gas to support its original proposal. These issues particularly arise in respect of the AER's treatment of NT Gas' revised enhanced integrity program capital expenditure forecast (discussed in section 3.2.1) and the AER's discussion of its amendments to NT Gas' proposed extensions and expansions policy (discussed in section 12.4).

The lack of AER engagement on NT Gas' revised project numbers means that NT Gas will not have opportunity to respond to any concerns or questions that the AER may have on the revised proposal, or to respond to stakeholder comments. This was a key reason why NT Gas submitted its revised project expenditure to the AER as a public submission in March 2011. NT Gas is therefore concerned that it has been denied the opportunity to respond to AER and stakeholder comments.

In respect of the extensions and expansions policy, NT Gas considers that there is a significant disconnect between the discussion in the draft decision which largely supports NT Gas' proposed policy, and amendments 12.5 and 12.7 which replace NT Gas' proposed policy with the AER's preferred drafting. To the extent that the AER intends to maintain its amendments included in its draft decision in its final decision, NT Gas seeks from the AER reasons for its decisions and an opportunity to respond to those reasons. In the absence of this opportunity (such as would happen if the AER only provided reasons in its Final Decision) NT Gas considers that it will have been denied the opportunity to respond to the AER on the basis of the reasons of its amendments.

### 1.2.2 Basis of information in the access arrangement revision proposal

Rule 73 states that:

- (a) Financial information must be provided on:
  - (i) a nominal basis
  - (ii) a real basis



- (iii) some other recognised basis for dealing with the effects of inflation.
- (b) The basis on which financial information is provided must be stated in the access arrangement information.
- (c) All financial information must be provided, and all calculations made, consistently on the same basis.

Unless otherwise stated, all information in the access arrangement revision proposal is provided in real 2010/11 dollars. Past values are brought to this basis using the Consumer Price Index (CPI) all groups, eight capital cities average March over March published by the Australian Bureau of Statistics (ABS).

This is different to the basis of numbers in the NT Gas December 2010 submission. The move from using June over June CPI figures to March over March CPI figures arises from AER amendment 3.1, discussed further in section 3.1.4 of this submission.

Units used in the access arrangement revision proposal are noted throughout and described in the abbreviation list at page xiii of this submission.

The access arrangement revision proposal uses the convention established in the NGR of referring to the *access arrangement period*, being for the AGP the period in which the revised access arrangement will apply (proposed to be the period between 1 July 2011 and 30 June 2016), and the *earlier access arrangement period*, being the period 1 July 2001 to 30 June 2011.





## 2 Services

NT Gas described three pipeline services in its access arrangement proposal. These were:

- Firm service, which is also a reference service;
- Interruptible service; and
- Negotiated service.

In its draft decision, the AER was satisfied that these services met the requirements under the Rules and did not require any amendments.<sup>1</sup>

NT Gas has not proposed any further amendments to its services in the revised access arrangement.

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<sup>1</sup> Australian Energy Regulator 2011, *NT Gas Access Arrangement proposal for the Amadeus Gas Pipeline 1 July 2011 – 30 June 2016: Draft Decision*, April, p 20





## 3 Capital base

### 3.1 Opening capital base

**AER Amendment 3.1:** amend the access arrangement information to:

- delete Table 3.8 and replace it with the following, and make all other necessary changes so as to be consistent with the following:

**Table 3.13: Opening capital base for the earlier access arrangement period (\$'000, nominal)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Opening capital base	228479.1	216156.2	203509.9	189126.7	171092.0	152128.3	138472.9	129320.0	117284.5	105136.9
plus net capex	224.8	393.6	3040.3	396.0	516.9	330.0	740.0	597.4	692.9	5668.9
plus reused redundant assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
less depreciation	19262.6	20477.2	21456.2	22893.1	24584.4	17691.0	15766.5	15822.1	16227.7	16512.9
plus indexation	6714.9	7437.3	4032.8	4462.4	5103.8	3705.6	5873.5	3189.1	3387.3	2702.0
Closing capital base	216156.2	203509.9	189126.7	171092.0	152128.3	138472.9	129320.0	117284.5	105136.9	96994.9

**Amendment 3.2:** amend the access arrangement information to:

- delete Table 2.1 and replace it with the following, and make all other necessary changes so as to be consistent with the following:

**Table 3.14; Capital expenditure by asset class over the earlier access arrangement period (\$'000, 2010-11)**

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Total
Pipeline	22	32	0	0	0	150	0	261	370	2814	3648



Meter stations	0	164	507	122	0	0	0	4	116	2190	3103
SCADA & Communications	2	2	2924	89	266	59	4	105	13	0	3465
Operation & Management Facilities	251	274	124	244	302	147	750	246	188	417	2943
Building	0	0	0	0	0	0	0	0	0	0	0
Total	275	471	3555	455	567	356	753	616	687	5422	13158

### 3.1.1 Opening capital base for the earlier access arrangement period

The AER considered that NT Gas has correctly calculated its opening capital base for the earlier access arrangement period and accepted the opening value of \$228.5 million (\$nominal).<sup>2</sup>

NT Gas has made no further revisions to this value and thus it remains the opening capital base value for the earlier access arrangement period.

### 3.1.2 Conforming capital expenditure over the earlier access arrangement period

The AER accepted NT Gas' capital expenditure from 2001/02 to 2009/10 as conforming capital expenditure under Rule 79 of the NGR and has allowed this expenditure to be included, in full, in the capital base. NT Gas makes no further amendment to its reported capital expenditure over the earlier period and has rolled these values into the capital base in line with the AER's draft decision.

The AER did not accept NT Gas' estimate of conforming capital expenditure for 2010/11 (the last year of the earlier access arrangement period) and has therefore not approved NT Gas' estimate of conforming capital expenditure for the earlier access arrangement period. The AER required amendment to the reported value of 2010/11 expenditure to remove some \$13.6 million (\$2010/11) in estimated expenditure before it will approve the opening capital base.<sup>3</sup>

#### *NT Gas revised forecast – enhanced integrity program*

Following submission of NT Gas' original proposal to the AER in December 2010, the AER sought an update from NT Gas on enhanced integrity program spending in the year to date (2010/11) and the level of remaining project expenditure.<sup>4</sup> In response, NT Gas advised the AER that all projects were at that time undergoing an internal

<sup>2</sup> AER 2011, *Draft Decision*, p 34

<sup>3</sup> AER 2011, *Draft Decision*, p 34

<sup>4</sup> Australian Energy Regulator 2011, *Email to NT Gas*, 31 January





review process by the specialist project manager, including the development of highly detailed project proposals. NT Gas further advised that at the end of this process, NT Gas would be able to advise as to the accuracy of forecasts and the timing of expenditure.<sup>5</sup> NT Gas was able to advise at that stage, however, that NT Gas operating expenditure was tracking close to forecast, but that the year to date variance in the capital expenditure to budget was significant, and it was expected that some 2010/11 forecast project expenditure will shift to 2011/12.

On 25 February 2011, NT Gas provided the AER with detailed information of project expenditure to date and revised project justifications and costings for its enhanced integrity program.<sup>6</sup> This advice included the following significant revisions to the program:

- Reduction in Katherine meter station expenditure from proposed \$7.487 (\$2010/11) million in 2010/11 to \$1.124 million;
- Revision to the Palm Valley filtration and slamshut project arising from detailed analysis and costing of this project by the specialist project manager;
- Significantly changed scope to the anchor block repair project. This project was initially conceived as involving relatively minor repairs to anchor blocks at Newcastle Waters and Palm Valley. Subsequent investigations uncovered that coating defects were within the anchor blocks, requiring substantial repair. Direct Current Voltage Gradient (DCVG) surveys had uncovered defects in the vicinity of a further eight anchor blocks. The project scope had therefore been extended to the repair of 10 anchor blocks over the access arrangement period;
- Removal of the Elliott heater replacement project due to a decision not to proceed with this project during the access arrangement period;
- Revision of the below ground station pipework recoating project arising from detailed analysis and costing of this project by the specialist project manager; and
- Significant revisions to the engineering option required for the Southbound piggability (now called bidirectional pigging) project after detailed assessment of risks associated with previously preferred option.

Along with a revised table of costings, NT Gas provided the AER with twelve project justifications for the enhanced integrity program projects that set out the detailed costing elements making up these projects. NT Gas also indicated that this information was considered to update its original proposal to the AER. While the revised project costings submitted to the AER were in 2009/10 dollars, NT Gas reproduces them below (Table 3.1) in 2010/11 dollars for consistency within this document and the AER's draft decision.

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<sup>5</sup> NT Gas 2011, *Email to Australian Energy Regulator*, 11 February

<sup>6</sup> NT Gas 2011, *Email to Australian Energy Regulator*, 25 February



**Table 3.1 – Revised capital expenditure forecasts - enhanced integrity program – as provided to the AER in February 2011**

Projects	Updated forecast						
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	Total
<b>\$'000 (2010/11), with labour escalation</b>							
Katherine Meter Station Upgrade	1,124	0	0	0	0	0	1,124
Channel Island Meter Station Upgrade	311	328	0	0	0	0	639
Palm Valley slamshut and filter	225	1,801	0	0	0	0	2,026
Channel Island Bridge project	1,329	2,414	4,469	0	0	0	8,212
Ultrasonic meter upgrade – Channel Island	30	534	0	0	0	0	564
Darwin City Gate oil vessel	40	91	0	0	0	0	131
Darwin City Gate Moisture Analyser	99	0	0	0	0	0	99
Darwin City Gate C9 GC	141	0	0	0	0	0	141
Hazardous Areas Assessment and equipment replacement	285	451	318	38	0	0	1,092
Heat Shrink Sleeve Replacement	395	106	0	0	0	0	501
Upgrade Elliott heaters	0	0	0	0	0	0	0
Bidirectional pigging	225	2,156	1,228	0	0	0	3,609
Cathodic Protection - Stage 2	1,032	2,628	639	0	0	0	4,299
Anchor block repairs	0	1,957	825	825	825	825	5,256
Below Ground Station Pipework Recoating	0	6,205	3,576	1,924	0	0	11,705
<b>Total</b>	<b>5,236</b>	<b>18,672</b>	<b>11,055</b>	<b>2,787</b>	<b>825</b>	<b>825</b>	<b>39,398</b>

NT Gas then followed up this advice provided to the AER in response to AER questions with a submission setting out its revised forecast, accompanied by the detailed project justifications previously submitted to the AER, and revised models giving updated revenue and pricing information. This package was provided to the AER on 18 March 2011. The introduction to this submission stated:

NT Gas has prepared this submission to provide additional information to the Australian Energy Regulator (AER) and interested parties on its access arrangement revision proposal for the Amadeus Gas Pipeline (AGP), lodged with the AER on 23 December 2010.

This is a public submission to the AER's access arrangement revision process for the AGP.



This submission sets out NT Gas' updated capital expenditure forecast for its enhanced integrity program and provides updates to the necessary components of the revenue building blocks taking account of these revised forecasts.<sup>7</sup>

NT Gas provided the AER with both public and confidential versions of the submission, with the intent that the public version be published by the AER to give information to interested parties as to NT Gas' revised proposal. Despite this, the AER did not publish this information on its website. NT Gas has attached its submission to this revised proposal for the information of interested parties (see Attachment B).

The AER's draft decision has in large part adopted NT Gas' revised forecasts for 2010/11, which represented a significant reduction in expenditure in this year as much of the expenditure was deferred to the access arrangement period. The AER has, however, removed its estimate of project management costs from the enhanced integrity program projects<sup>8</sup>, as well as the escalation of these projects by NT Gas' proposed labour escalator<sup>9</sup>.

NT Gas accepts the revisions made by the AER to the underlying project spends forecast for 2010/11 as these were made in accordance with NT Gas' revised proposal. NT Gas does not accept, however, the AER's revisions to project management costs that make up these forecasts, or to the escalator applied to the labour component of these forecasts, as discussed briefly in the section below, and in more detail in 3.2.1 in respect of the projected capital base.

### *Project management costs*

The AER did not accept NT Gas' proposed project management costs associated with the enhanced integrity program.<sup>10</sup> The AER imposed a blanket percentage reduction to all capital projects to remove its estimate of these project management costs.

NT Gas considers that its direct project management costs are a necessary part of its costs of delivering and capital program and should be accepted by the AER as part of NT Gas' capital expenditure.

NT Gas has, however, reviewed the total of its direct project management costs and the methodology used to allocate these costs to individual projects in response to the AER's concerns. This review has led NT Gas to develop a more accurate allocation of its expected direct project management costs included in NT Gas' capital program forecast. The basis for these project management costs and their allocation are discussed in detail in section 3.2.1 below in relation to the projected capital base. Revised capital expenditure over the earlier access arrangement period included in the opening capital base reflects this revision to the allocation of project management costs.

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<sup>7</sup> NT Gas 2011, *Amadeus Gas Pipeline Access Arrangement Revision Proposal 2011-2016 Submission*, 18 March, p 1

<sup>8</sup> AER 2011, *Draft Decision*, pp 43-4

<sup>9</sup> AER 2011, *Draft Decision*, p 44

<sup>10</sup> AER 2011, *Draft Decision*, pp 43-4



### *Application of labour escalator to project expenditure*

NT Gas' original forecast (December 2010) was made in 2009/10 dollars, and was therefore escalated for labour in 2010/11 and the access arrangement period. NT Gas' revised forecast was made in 2010/11 and in \$2010/11, but was presented (for consistency with NT Gas' original proposal) in \$2009/10 in the March 2011 revised forecast documents, and so was effectively de-escalated by labour and CPI.

NT Gas has prepared this forecast in 2010/11 dollars, and therefore no escalation has been applied to 2010/11 project expenditure.

### 3.1.3 Depreciation used in the roll forward model

While accepting the use of forecast depreciation approved by the Australian Competition and Consumer Commission (ACCC) to roll forward the capital base to 1 July 2011, the AER did not consider that NT Gas correctly adjusted the depreciation amounts for the difference between actual and forecast inflation.<sup>11</sup>

In a discussion of depreciation, it is important to distinguish the concepts of "depreciation" and "return of capital". Depreciation is an accounting concept by which the cost of an asset is recovered in some rational form over the useful life of the asset. Return of capital, in contrast, directly addresses the amount of capital that has been returned to a business (or an investor) on which a return is no longer earned.

In a commercial business, the return of capital is a residual amount after all costs and returns on capital have been met – it influences prices with the confines of the market, but is not a causal factor. In contrast, the return of capital is a key component of the price determination process in a regulated business; a change to the return of capital component will result in a commensurate change to prices.

In a regulatory framework, depreciation is often used as a proxy for the regulator to be satisfied that the amount of capital being returned to the business through reference tariffs is appropriate considering the age, condition and future usefulness of the underlying assets. Accounting depreciation concepts inform, but do not decide, the regulator's return on capital decision. This is no more apparent than in those regulatory decisions in which the regulator has dispensed with the accounting depreciation concept and adopted an economic depreciation measure.

In section 3.6.1.3 of the draft decision, the AER identified that it did not accept the depreciation amount in NT Gas' asset base roll forward on the grounds that NT Gas had not indexed the previous Access Arrangement forecast depreciation for outturn inflation. In section 3.3.1.3, the AER discusses how NT Gas disaggregated the reported regulatory depreciation amount into its component "return of capital" and indexation components. The AER's draft decision applies the outturn inflation rates to both the return of capital and indexation components.

Required amendment 3.1 indicates that the AER has confused the concepts of "depreciation" on one hand and "return of capital" on the other. In applying

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<sup>11</sup> AER 2011, *Draft Decision*, p 35



indexation to the “return of capital” component (by adjusting the indexation of this component), the AER forces a mis-statement of the amount of capital returned to the business. In this case, the AER’s adjustment results in it assuming that \$0.8 million more capital was returned to the business than was embedded in the calculation of Reference Tariffs to be charged to customers. This has the consequential impact of understating the opening 2011/12 capital base by that same amount, and confiscating that value from the business.

NT Gas submits that its calculation of the straight line depreciation component is sound, in that it represents the amount of capital returned to the business through Reference Tariffs. NT Gas therefore elects not to implement AER amendment.

It should be noted that AER Amendment 3.4 introduces scope to perpetuate this misconception. NT Gas has therefore disaggregated the “Regulatory Depreciation” line into its component return of capital and indexation components.

### 3.1.4 Adjustment to the capital base for inflation

NT Gas used June to June CPI figures to adjust its capital base for outturn inflation.<sup>12</sup> In its draft decision the AER cites its preference for the inflation rate used to index the capital base to be consistent with the rate used in the annual tariff variation mechanism.

NT Gas did not specify the CPI to be used in its tariff variation mechanism, instead stating that it would use the most recent CPI data available at the time of submitting its tariff variation notice.<sup>13</sup> The AER’s draft decision, however, has a required amendment (AER Amendment 11.1) which requires March CPI to be used in the annual tariff variation formula.<sup>14</sup> As a result, the AER requires NT Gas to use March to March CPI figures to adjust its capital base.<sup>15</sup>

Notwithstanding the profound circularity in the AER’s reasoning and the complexity this requirement adds to the tariff variation mechanism (discussed further in Chapter 11 of this submission), NT Gas has adopted this required amendment in its revision proposal. Therefore, as noted in section 1.2.2 above, past values used in this submission are escalated using CPI all groups, eight capital cities average March over March published by the ABS.

### 3.1.5 Disposals and redundant capital

NT Gas’ calculation of the capital base for the earlier access arrangement period included values for disposals and redundant capital. The AER accepted NT Gas’

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<sup>12</sup> NT Gas 2010, *Amadeus Gas Pipeline Access Arrangement Revision Proposal Submission*, December, p 4

<sup>13</sup> NT Gas 2010, *Access Arrangement for the Amadeus Gas Pipeline 01 July 2011 to 30 June 16*, December, clause 4.7.1

<sup>14</sup> AER 2011, *Draft Decision*, pp 162-3

<sup>15</sup> AER 2011, *Draft Decision*, p 36



values for disposals and redundant capital for the earlier access arrangement period.<sup>16</sup>

Power and Water Corporation (PWC), in a submission on NT Gas' access arrangement revision proposal argued that the Warrego compressor should be made a redundant asset.<sup>17</sup> The AER sought information from NT Gas during the review process as to the current and future use of the Warrego compressor and as a result, concluded that the compressor should not be considered redundant as the compressor continues to provide an operational capability.<sup>18</sup>

NT Gas agrees with the AER that the Warrego compressor should not be considered a redundant asset for the access arrangement period, and has retained this asset in its capital base as per the AER draft decision.

### 3.1.6 Revised opening capital base for the access arrangement period

NT Gas' revised capital expenditure in the earlier access arrangement period by driver and asset class, taking account of the discussion in the preceding sections, is set out in Table 3.2 and Table 3.3 below.

NT Gas' calculation of depreciation in the earlier access arrangement period, outturn CPI and the indexation of the capital base are shown respectively in Table 3.4, Table 3.5 and Table 3.6 below.

Table 3.7 shows the resulting revised opening capital base for the AGP, taking account of the AER's required amendments as appropriate as discussed above.

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<sup>16</sup> AER 2011, *Draft Decision*, pp 33 and 36-7

<sup>17</sup> Power and Water Corporation 2011, *Submission to the Australian Energy Regulator, Application by NT Gas for new gas access arrangement for Amadeus Gas Pipeline*, 14 March, pp 3-4

<sup>18</sup> AER 2011, *Draft Decision*, p 37



**Table 3.2 – Capital expenditure by driver over the earlier access arrangement period**

<b>\$ '000 (2010/11)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>	<b>Total</b>
Expansion capital	0	0	0	0	0	0	0	0	373	1,151	1,524
Replacement capital	128	256	3,300	374	130	226	170	456	225	4,549	9,814
Non system capital	149	215	276	85	447	135	595	164	94	85	2,245
<b>Total</b>	<b>278</b>	<b>471</b>	<b>3,576</b>	<b>459</b>	<b>577</b>	<b>361</b>	<b>765</b>	<b>620</b>	<b>692</b>	<b>5,785</b>	<b>13,582</b>

**Table 3.3 – Capital expenditure by asset class over the earlier access arrangement period**

<b>\$ '000 (2010/11)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>	<b>Total</b>
Pipeline	22	32	0	0	0	152	0	262	373	3,054	3,894
Compression	0	0	0	0	0	0	0	0	0	0	0
Meter Stations	0	164	509	123	0	0	0	5	117	2,310	3,229
SCADA & Communications	2	2	2,942	89	270	60	4	105	13	0	3,487
Operation & Management facilities	254	274	125	246	307	149	761	248	189	421	2,973
Building	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>278</b>	<b>471</b>	<b>3,576</b>	<b>459</b>	<b>577</b>	<b>361</b>	<b>765</b>	<b>620</b>	<b>692</b>	<b>5,785</b>	<b>13,582</b>



**Table 3.4 – Disaggregation of ACCC 2002 Final Decision forecast depreciation**

<b>\$m (nominal)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>
Regulatory Depreciation per ACCC <sup>19</sup>	14.12	15.53	17.09	18.80	20.75	14.44	12.49	13.09	13.71	14.35
Indexation	4.19	3.99	3.84	3.65	3.42	3.19	3.00	2.74	2.46	2.18
Straight line depreciation	18.30	19.52	20.93	22.45	24.17	17.63	15.49	15.83	16.18	16.53

**Table 3.5 – Outturn CPI**

	<b>Unit</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>
Actual CPI	%	2.94	3.44	1.98	2.36	2.98	2.44	4.24	2.47	2.89	3.33

**Table 3.6 – Indexation of the Capital Base 2002-2011**

<b>\$ '000 (nominal)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>
Indexation	6,715	7,470	4,071	4,522	5,194	3,791	6,029	3,290	3,508	3,650

<sup>19</sup> ACCC 2002, Access Arrangement proposed by NT Gas Pty Ltd for the Amadeus Basin to Darwin Pipeline: Final Decision, Table 3.2





**Table 3.7 – Opening capital base for the access arrangement period**

<b>\$'m (nominal)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>
Opening capital base	228.5	217.1	205.5	191.6	174.1	155.6	142.1	133.4	121.5	109.5
Conforming Capital Expenditure	0.2	0.4	3.0	0.4	0.5	0.3	0.7	0.6	0.7	6.1
Disposals	-	-	-	-	-	-	-	-	-	-
Depreciation	(18.30)	(19.52)	(20.93)	(22.45)	(24.17)	(17.63)	(15.49)	(15.83)	(16.18)	(16.53)
Indexation	6.7	7.5	4.1	4.5	5.2	3.8	6.0	3.3	3.5	3.6
Redundant Assets	-	-	-	-	-	-	-	-	-	-
<b>Closing capital base</b>	<b>217.1</b>	<b>205.5</b>	<b>191.6</b>	<b>174.1</b>	<b>155.6</b>	<b>142.1</b>	<b>133.4</b>	<b>121.5</b>	<b>109.5</b>	<b>102.7</b>





## 3.2 Projected capital base

**AER Amendment 3.3:** amend the access arrangement information to:

- delete Table 3.1 and replace it with the following, and make all other necessary changes so as to be consistent with the following:

**Table 3.15: Forecast capital expenditure by asset class over the access arrangement period (\$m, 2010–11)**

	2011–12	2012–13	2013–14	2014–15	2015–16	Total
Pipeline	7.4	0.9	0.9	0.8	0.9	11.0
Compression	0.0	0.0	0.0	0.0	0.0	0.0
Meter Stations	0.6	0.1	0.0	0.1	0.0	0.8
SCADA & Communications	0.1	0.3	0.5	0.1	0.4	1.4
Operation & Management facilities	0.1	0.1	0.1	0.1	0.1	0.6
Building	0.0	0.0	0.0	0.0	0.0	0.0
Total	8.2	1.5	1.5	1.2	1.4	13.9

**Amendment 3.4:** amend the access arrangement information to:

- delete Table 3.7 and replace it with the following, and make all other necessary changes so as to be consistent with the following:

**Table 3.16: Projected capital base for the access arrangement period (\$m, real 2010–11)**

	2011–12	2012–13	2013–14	2014–15	2015–16
Opening capital base	99.5	104.9	103.6	102.2	100.2
plus forecast capex	8.7	1.6	1.7	1.4	1.6
less regulatory depreciation	3.5	2.9	3.1	3.3	0.9
less forecast disposals	0.0	0.0	0.0	0.0	0.0
less forecast redundant assets	0.0	0.0	0.0	0.0	0.0
Closing capital base	104.7	103.7	102.3	100.3	100.9



### 3.2.1 Forecast capital expenditure

#### *Replacement capital expenditure*

The AER's draft decision purports to accept NT Gas' replacement capital expenditure forecast, with the exception of project management costs and the application of AER-imposed labour escalators in place of those proposed by NT Gas.<sup>20</sup> In reaching this decision the AER assessed NT Gas' enhanced integrity program expenditure proposed in its December 2010 submission that found that:

- The program was necessary to maintain the integrity and improve the safety of services offered by the pipeline, and complied with Rules 79(2)(c)(i)-(iii)<sup>21</sup>;
- The majority of the costs of the program (excluding project management costs and escalators) were justified under Rule 79(1)(a); and
- The timing of the program was appropriate.<sup>22</sup>

In total, the AER considered that the enhanced integrity program costs would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice and are justifiable.<sup>23</sup>

As noted above in respect of capital expenditure in the earlier access arrangement period, the AER sought from NT Gas an update of its actual and expected enhanced integrity program expenditure.<sup>24</sup> NT Gas provided this information to the AER in February 2011, noting that it considered that its revised expenditure forecasts constituted a revised proposal.<sup>25</sup> In light of this, NT Gas is disappointed that the AER have chosen not to take into account these revised values in forecast expenditure.<sup>26</sup> This position is particularly disappointing as the AER have chosen to adopt NT Gas' revised forecast in establishing the opening capital base, seemingly because these revisions lead to a reduction in that value.

The lack of AER engagement on NT Gas' revised project numbers means that NT Gas will not have opportunity to respond to any concerns or questions that the AER may have on the revised proposal, or to respond to stakeholder comments. This was a key reason why NT Gas submitted its revised project expenditure to the AER as a public submission in March 2011. NT Gas is therefore concerned that it has been denied the opportunity to respond to AER and stakeholder comments.

NT Gas considers that it is unacceptable for the AER to partially adopt its revised proposal, choosing to take account only of changes that lead to a reduction to that forecast. It is particularly concerning as, at the same time as assessing that the replacement enhanced integrity program expenditure included in NT Gas' original

<sup>20</sup> AER 2011, *Draft Decision*, p 40

<sup>21</sup> AER 2011, *Draft Decision*, p 39

<sup>22</sup> AER 2011, *Draft Decision*, p 41

<sup>23</sup> AER 2011, *Draft Decision*, p 41

<sup>24</sup> AER 2011, *Email to NT Gas*, 31 January

<sup>25</sup> NT Gas 2011, *Email to AER*, 11 February and NT Gas 2011, *Email to AER*, 25 February

<sup>26</sup> AER 2011, *Draft Decision*, p 42



proposal was necessary, justified and timely, the AER has effectively approved only 62 per cent of these costs. Only a small proportion of this reduction in costs is associated with the AER's decision on project management costs and escalators, the rest is associated with the AER's failure to adopt costs previously included in the opening capital base that the AER had considered efficient and prudent, but were deferred to the forecast period in NT Gas' revised program forecast.

On this assessment it is clear that the AER have not provided NT Gas with a capital expenditure budget that meets its minimum needs to maintain the integrity and safety of the pipeline, as recognised by the AER itself.

Part of the reason given by the AER for not taking into account NT Gas' revisions to the replacement capital expenditure forecasts was that the revisions were not publicly available and interested parties had not had opportunity to comment on the revisions. As discussed above, NT Gas provided the AER with a public version of its submission setting out its revised forecast numbers and reasons for the revisions, with the intent that this information be made publicly available (see discussion in section 3.1.2 above, and the submission at Attachment B). The AER have not acknowledged this fact in its revised proposal, instead stating that the revised forecasts were confidential.<sup>27</sup> It is clearly not the case, as while some details of projects were confidential, the forecasts themselves were not and a public version of the submission was provided to the AER to public disclosure.

NT Gas further notes that its submission was made before that of the Northern Territory Government<sup>28</sup>, which the AER has taken account of in various parts of its draft decision.<sup>29</sup> It is unclear why the AER chose to take account of some submissions made to the process, while disregarding others (at least those parts of submissions that lead to an increase in forecast capital expenditure).

As part of its advice to the AER, NT Gas provided background as to why its expenditure forecast had varied since its original proposal. This was also explained in NT Gas' public submission. The submission stated:

Since submission of NT Gas' December proposal, NT Gas' appointed special project manager has undertaken a detailed review of all projects, including project scopes and the delivery timetable, and developed a comprehensive plan for delivery of the projects, including detailed costings. This review of projects has yielded revised forecasts and timings for a number of projects compared to those submitted by NT Gas in December 2010.<sup>30</sup>

In support of these revisions, NT Gas provided the AER with project justifications including detailed breakdowns of proposed costs and timings, with the delivery of some projects extending beyond the original enhanced integrity program timetable of

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<sup>27</sup> AER 2011, *Draft Decision*, footnote 94, p 42

<sup>28</sup> Northern Territory Government 2011, *Proposed access arrangement for the Amadeus Gas Pipeline: Letter to the AER from the Northern Territory Treasury*, 21 March

<sup>29</sup> See for example AER 2011, *Draft Decision*, p 31

<sup>30</sup> NT Gas 2011, *Amadeus Gas Pipeline Access Arrangement Revision Proposal 2011-2016 Submission*, 18 March, p 5



2010/11 and 2011/12. These project justifications are supporting documents and form the basis for project expenditure forecast in this revision proposal.

In light of the detailed information provided to the AER in respect of its revised forecast, NT Gas does not consider that the AER is correct in suggesting that delivery of revised project forecasts suggests that doubt should be placed on the ability of NT Gas to prepare reliable forecasts.<sup>31</sup> The AER has no material and no basis on which to form such a judgement in relation to the revised forecasts.

NT Gas' forecasts provided in December 2010 were the best available at the time of submission, however, as is the case with all forecasts, more detailed project planning and costings made immediately prior to project start will yield more accurate forecasts. This will, as is the case for the enhanced integrity program, mean both increases and reductions in expected project costs compared with forecasts prepared before these highly detailed project plans are developed. NT Gas provided this updated information to the AER in response to a direct request for updated information, and was careful to ensure that the information provided to the AER represented the best forecast or estimate available in the circumstances, as required under Rule 74. The alternative would have been to knowingly provide the AER with incorrect and out of date information.

NT Gas considers that its revised forecast for the enhanced integrity program represents the best forecast or estimate possible in the circumstances, and complies with the requirements for Rule 91(1) as being consistent with expenditure that would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice.

### *Project management costs*

The AER did not accept NT Gas' proposed project management costs associated with the enhanced integrity program. The AER considered that NT Gas provided insufficient information to support its proposal for what it termed project management fees.<sup>32</sup>

As noted in NT Gas' original access arrangement revision proposal submission, the enhanced integrity works program will be conducted by specialist contract labour through a special project management structure. The special project team includes a dedicated project manager, and project team encompassing contract staff in engineering design and management and document control to oversee and undertake projects within the structure. This team is located on-site at NT Gas' offices in Palmerston NT, in demountable units constructed specially to house the project team for the duration of the enhanced integrity program. In its draft decision, the AER determined that NT Gas had shown the necessity of the program, and that the costs and timing of the program was efficient and prudent.<sup>33</sup> NT Gas submits that in order for this program to proceed the project management costs must also be included in forecast capital expenditure.

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<sup>31</sup> AER 2011, *Draft Decision*, p 21

<sup>32</sup> AER 2011, *Draft Decision*, pp 43-4

<sup>33</sup> AER 2011, *Draft Decision*, p 41



The costs of this team are divided into two types:

- the project planning and engineering costs associated with each project; and
- direct project management costs.

NT Gas has allocated these costs to the enhanced integrity program of works in different ways.

Project planning and engineering costs vary in relation to the complexity of the project (uniqueness of the task, number of sites involved, etc), and are included in detailed project costings in accordance with the specific requirements of each project. These costs are not included in direct project management costs.

Direct project management costs represent the direct costs associated with delivering the enhanced integrity program of works. In line with normal accounting practice, the direct costs of project management are included in the capital costs of projects as these functions are an essential part of the delivery of capital projects. The direct project management costs incurred by NT Gas associated with the enhanced integrity program, these costs are made up of:

- Labour, including the time-related costs for contractors not otherwise allocated to specific capital projects in the following roles:
  - Project Manager;
  - Technical Regulatory Manager;
  - Senior Engineer Instrument Electrical;
  - Project Engineer (2); and
  - Administration and document controller.
- Vehicles and fuel for the project manager and engineers;
- Accommodation, hotel and unit accommodation for fly-in, fly-out team members;
- Flights for project team members; and
- Purchase or lease of office facilities, including the installation, rental and removal of temporary office demountable on site at NT Gas Palmerston Office, and car parking.

As noted by the AER, NT Gas provided detailed project justifications to the AER in February 2011. These project justifications included detailed breakdowns of costs of materials and contractors. These project justifications also included allocations for planning, engineering and project management costs.

The acceptance of these costs, and their capitalisation, is in line with normal regulatory and accounting practice. For example, the AER acknowledged in its draft



decision in respect of the Victorian electricity network distribution businesses that it is reasonable to allow for direct overheads of this type in approved capital expenditure.<sup>34</sup>

NT Gas does not consider that these costs can be correctly characterised by ‘fees’ (as done in the AER’s draft decision<sup>35</sup>) but instead represent base costs of project management that are necessary for the delivery of the capital plan. As such NT Gas considers that they represent prudent expenditure that should be accepted by the regulator.

The level of project management costs set out in NT Gas December 2010 proposal was calculated by undertaking a base build-up of project management costs that were not directly allocated to specific enhanced integrity program projects. This amount was then converted to a percentage proportion of the total project costs, and then allocated to each project in the program in accordance with that proportion.

This methodology was considered appropriate as project management costs largely represent base costs that remain stable over time, and the short duration of the initial enhanced integrity program (2 years) meant that it was appropriate for all projects to bear a proportion of the total project expenditure incurred in all years of the program.

The revision to the capital program extended the duration of special projects beyond the initial two years, while also increasing the expected expenditure on some of the projects. At this time NT Gas reviewed its project management costs and found that they grew in proportion to the projects (largely because the growth in project costs was accompanied by an extension of the duration of the program) and that it was acceptable to continue to apply the same percentage proportion of project management costs to the extended program.

In light of the AER’s concerns set out in the draft decision over the basis of these costs, NT Gas has reviewed its forecast for direct project management costs, as well as how it has allocated these costs to individual projects.

NT Gas has undertaken a new bottom-up forecast of its enhanced integrity program direct project management costs expected over the revised duration of the program (2010/11 to 2015/16). The results of this review are shown in Table 3.8 below, broken down into the components of this forecast. More detail on the components of this forecast is provided at confidential Attachment C.

This resulting amount for direct project management costs is similar to that forecast by NT Gas in March 2011, reducing that forecast amount by \$0.2m (\$2010/11), or about 10 per cent.

NT Gas considers that this revised forecast amount for direct project management costs represents the best forecast or estimate possible in the circumstances, and complies with Rule 79 as being expenditure that would be incurred by a prudent service provider acting efficiently. NT Gas considers that it has demonstrated that

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<sup>34</sup> Australian Energy Regulator 2010, *Victorian electricity distribution network service providers Distribution determination 2011-15: Draft Decision*, June, p 298

<sup>35</sup> AER 2011, *Draft Decision*, pp 43-4





these costs are essential for the delivery of its enhanced integrity program, and are made up of costs that are routinely capitalised for other capital projects.

**Table 3.8 – Revised total project management cost base build**

<b>\$'000 (\$2010/11)</b>	<b>Cost</b>
Labour	c-i-c
Vehicles	c-i-c
Accommodation	c-i-c
Flights	c-i-c
Office facilities	c-i-c
<b>Total</b>	c-i-c

NT Gas has allocated these costs to individual capital projects using an alternative methodology that more accurately reflects the cost drivers for project management costs for each project. As can be seen from Table 3.8 above, the single biggest driver of project management costs is labour, which is related to the duration of the program.

NT Gas has therefore allocated the direct project management costs forecast for each year to the capital projects undertaken in that year in proportion to the level of project expenditure in that year for that project. This means that projects undertaken in a single year only contribute to project management costs accrued in that year. NT Gas considers that this alternative methodology leads to a more precise allocation of project management costs to individual projects.

NT Gas considers that its revised project management costs allocated to individual projects in accordance to their project timing is consistent with the requirements of Rule 79, and achieves an accurate forecast of the total costs of each capital project, including associated project management costs. NT Gas considers that these costs are prudently and efficiently incurred in delivering its enhanced integrity program, as they are essential to ensuring the delivery of the capital projects within the timetable and labour resources available to NT Gas.

The AER has previously noted that it is satisfied that the accelerated timetable for project delivery was necessary to limit costs risks associated with a return to historically high levels of mining activity in NT that would increase NT Gas' costs for labour.<sup>36</sup> NT Gas has therefore included the revised project management costs in its project capital expenditure in the earlier access arrangement period and the access arrangement period, as set out in Table 3.9 below.

<sup>36</sup> AER 2011, *Draft Decision*, p 41



**Table 3.9 – Revised capital expenditure forecasts - enhanced integrity program**

Projects	Updated forecast						
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	Total
<b>\$'000 (2010/11), with labour escalation</b>							
Katherine Meter Station Upgrade	1,151	0	0	0	0	0	1,151
Channel Island Meter Station Upgrade	318	323	0	0	0	0	642
Palm Valley slamshut and filter	231	1,776	0	0	0	0	2,006
Channel Island Bridge project	1,362	2,380	4,482	0	0	0	8,225
Ultrasonic meter upgrade – Channel Island	31	527	0	0	0	0	557
Darwin City Gate oil vessel	41	90	0	0	0	0	131
Darwin City Gate Moisture Analyser	102	0	0	0	0	0	102
Darwin City Gate C9 GC	145	0	0	0	0	0	145
Hazardous Areas Assessment and equipment replacement	292	445	319	40	0	0	1,096
Heat Shrink Sleeve Replacement	405	105	0	0	0	0	509
Upgrade Elliott heaters	0	0	0	0	0	0	0
Bidirectional pigging	231	2,126	1,232	0	0	0	3,588
Cathodic Protection - Stage 2	1,057	2,592	641	0	0	0	4,289
Anchor block repairs	0	1,930	827	865	849	809	5,280
Below Ground Station Pipework Recoating	0	6,118	3,587	2,019	0	0	11,723
<b>Total</b>	<b>5,364</b>	<b>18,410</b>	<b>11,088</b>	<b>2,924</b>	<b>849</b>	<b>809</b>	<b>39,444</b>

### *Non-system capital expenditure*

The AER accepted NT Gas' forecast for non-system capital expenditure for the access arrangement period.<sup>37</sup>

NT Gas has identified a minor error in its forecast for non-system capital expenditure accepted by the AER in its draft decision. NT Gas advised the AER of this error when it was discovered.<sup>38</sup> Correction of this error leads to a very minor reduction to the 2010/11 value for this category (in the earlier access arrangement period), as well as to the forecast in the access arrangement period. The revised numbers are reflected in NT Gas' revised forecast in this revision proposal.

<sup>37</sup> AER 2011, *Draft Decision*, p 43

<sup>38</sup> NT Gas 2011, *Email to Australian Energy Regulator*, 9 February



### *Cost escalators*

NT Gas' capital and operating expenditure proposal escalated labour by a real 1.5 per cent per annum. The AER did not accept this escalator value and instead applied alternative escalator values derived from its own escalator report prepared by Deloitte Access Economics. The AER sets out its reasons for preferring its alternative escalators in chapter 7 of its draft decision.

NT Gas does not accept the AER's alternative escalators and has retained its approach set out in its December 2010 submission of applying a flat 1.5 per cent per annum real labour cost increase to labour components of its capital forecast.

NT Gas' discussion of its reasons and methodology for deriving its escalators is set out in section 7.4 of this submission.

### *Summary forecast capital expenditure*

NT Gas' revised expansion and enhanced integrity program project expenditure (replacement category) is set out in Table 3.9 above. This expenditure includes revised project management costs directly allocated to each capital project as discussed above.

NT Gas' revised capital expenditure for the access arrangement period by driver and asset class (including the above project expenditure), is set out in Table 3.10 and Table 3.11 below.

**Table 3.10 – Forecast capital expenditure over the access arrangement period**

<b>\$ '000 (2010/11)</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>Total</b>
Expansion	0	0	0	0	0	0
Replacement	19,336	12,481	4,036	1,938	1,885	39,676
Non-system	108	108	418	108	315	1,059
<b>Total</b>	<b>19,444</b>	<b>12,589</b>	<b>4,455</b>	<b>2,046</b>	<b>2,200</b>	<b>40,735</b>

**Table 3.11 – Forecast capital expenditure by asset class**

<b>\$ '000 (2010/11)</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>Total</b>
Pipeline	7,814	7,225	879	782	828	17,528
Compression	0	0	0	0	0	0
Meter Stations	11,330	4,860	2,946	971	832	20,938
SCADA & Communications	169	361	490	165	395	1,580
Operation & Management facilities	130	142	138	127	144	681
Building	1	2	2	1	2	8
<b>Total</b>	<b>19,444</b>	<b>12,589</b>	<b>4,455</b>	<b>2,046</b>	<b>2,200</b>	<b>40,735</b>



### 3.2.2 Capital contributions

The AER accepted NT Gas' proposed forecast for capital contributions as being consistent with Rule 82(3).<sup>39</sup> NT Gas has made no further revisions to its forecast capital contributions used to derive the projected capital base in this revised proposal.

### 3.2.3 Disposals

The AER accepted NT Gas' proposed forecast for disposals for the access arrangement period.<sup>40</sup> NT Gas has made no further revisions to its forecast disposals used to derive the projected capital base in this revised proposal.

### 3.2.4 Adjustment to the capital base for inflation

The AER accepted the forecast inflation rate used by NT Gas for the access arrangement period of 2.5 per cent for the purposes of the draft decision.<sup>41</sup> The AER notes, however, that the forecast inflation rate will be updated as close as practicable to the final decision based on the most up to date information.<sup>42</sup>

NT Gas has adopted the AER's forecast inflation rate for the access arrangement period, resulting in a calculation of forecast indexation as set out in Table 3.12 below.

**Table 3.12 – Forecast indexation of the capital base**

\$'000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Total	2,639	2,986	3,267	3,319	3,298

### 3.2.5 Revised projected capital base for the access arrangement period

Table 3.13 shows the project capital base for the access arrangement period, taking account of the discussion in the sections above, as well as the depreciation discussion in the following chapter 4.

<sup>39</sup> AER 2011, *Draft Decision*, p 46

<sup>40</sup> AER 2011, *Draft Decision*, p 47

<sup>41</sup> AER 2011, *Draft Decision*, pp 85-6

<sup>42</sup> AER 2011, *Draft Decision*, p 47



**Table 3.13 – Projected capital base for the access arrangement period**

<b>\$ '000 (nominal)</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
Opening capital base	102,681	116,175	127,114	129,157	128,315
<i>plus</i> forecast capex	20,738	13,772	4,999	2,355	2,598
<i>less</i> forecast regulatory depreciation	9,882	5,819	6,222	6,516	4,096
<i>less</i> forecast disposals	-	-	-	-	-
<i>less</i> forecast redundant assets	-	-	-	-	-
<b>Closing capital base</b>	<b>116,175</b>	<b>127,114</b>	<b>129,157</b>	<b>128,315</b>	<b>130,115</b>





## 4 Depreciation

### 4.1 Depreciation approach

The AER accepted NT Gas' proposed use of the straight line depreciation method to calculate depreciation over the access arrangement period.<sup>43</sup> NT Gas has retained this straight line methodology in this revised proposal.

The AER further approved NT Gas' proposal to use forecast depreciation to establish the opening capital base at the start of the next access arrangement period. NT Gas has similarly retained this approach in this revised proposal.

### 4.2 Asset lives

#### 4.2.1 Standard asset lives

NT Gas proposed a new asset class 'Buildings' in its December 2010 access arrangement revision proposal. Buildings has been removed from the Operations and Maintenance Facilities category to better reflect the differences in asset lives between operations and maintenance facilities, made up of office equipment, tools, and other asset with relatively limited lives, and buildings, which have considerably longer lives.<sup>44</sup>

This change led to a change in the standard lives for each of these categories as follows:

- Operations and Maintenance Facilities – 10 years (formerly 65); and
- Buildings – 40 years

The AER accepted the change in asset categories and standard lives as proposed by NT Gas.<sup>45</sup> The AER also accepted the standard lives proposed for other asset classes as being consistent with those used for the earlier access arrangement period. NT Gas has retained these standard lives in its revised access arrangement proposal.

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<sup>43</sup> AER 2011, *Draft Decision*, p 55

<sup>44</sup> NT Gas 2010, *Revision Proposal Submission*, December, pp 94-5

<sup>45</sup> AER 2011, *Draft Decision*, p 56



## 4.2.2 Remaining asset lives

**AER Amendment 4.2:** make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the revised to the remaining lives and asset values for the asset classes of pipelines and meter stations as discussed in section 4.5.2.2 and shown in table 4.4

**Table 4.4 Comparison of NT Gas opening asset values and remaining lives (\$ million nominal)**

Asset class	NT Gas asset value	NT Gas remaining life (years)	AER asset value	AER remaining life (years)
Pipeline	68.9	58.7	62.0	54.8
Compression	7.3	20.0	7.2	20.0
Meter stations	16.1	31.0	7.9	33.4
SCADA and communications	6.0	6.4	6.0	6.4
Operation and management facilities	13.1	4.0	9.2	4.0
Building	0	36.0	3.9	36.0

Source: NT Gas, *Access arrangement submission*, December 2010, p. 94; NT Gas, *Access arrangement submission*, December 2010, p. 171; NT Gas, *Access arrangement submission*, December 2010, attachment E-3, (confidential); AER analysis.

The AER did not accept NT Gas' methodology used to calculate the remaining lives of certain asset classes.

NT Gas considers that the amendments to the historical return of capital component, as discussed in the response to AER Amendment 3.1, and the actual capital expenditure over the earlier access arrangement period, both impact the calculation of remaining asset lives.

On reviewing the remaining life calculations in the draft decision, NT Gas' analysis suggests that the AER has calculated the weighted average remaining life based on the previous forecast amount and timing of asset additions in the 2001 access arrangement, rather than the actual capital expenditure. As a consequence the resulting number does not accurately represent the remaining life of the residual assets.





NT Gas recognises that the weighted average remaining life of the asset class is a “blend” of the remaining life of the component assets in the class. However, consistent with the discussion of the return of capital in response to AER Amendment 3.1, NT Gas has tested the reasonableness of the remaining weighted average useful life by dividing the annual return of capital amount into the opening asset base. For example:

- (A) 2011/12 opening value – pipeline: \$63.335 million
- (B) Annual depreciation – pipeline \$1.148 million
- (C) Estimated remaining life (A)/(B) 55.2 years

NT Gas has applied this methodology to all asset classes. For the most part, the difference between the two approaches is not significant, given the additions in NT Gas have not been substantial (eg. pipelines AER: 54.8 years vs NT Gas: 56.6 years).

**Table 4.1 – Remaining Economic Lives**

Asset class	Economic Life (years)	Average Remaining Economic Life (years)
Transmission Pipeline	80	56.6
Compressor Stations: Rotating Equipment Station Facilities	30	20.0
Regulation and Metering Stations Odourising Stations	50	28.0
SCADA	15	6.4
O&M Facilities	10	4.0
Buildings	40	36.0

### 4.2.3 Value of buildings as at 1 July 2011

**AER Amendment 4.1:** make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the revised opening asset values for building and O&M facilities as discussed in section 4.5.3 of this draft decision and shown in table 4.4.



**Table 4.4 Comparison of NT Gas opening asset values and remaining lives (\$ million nominal)**

Asset class	NT Gas asset value	NT Gas remaining life (years)	AER asset value	AER remaining life (years)
Pipeline	68.9	58.7	62.0	54.8
Compression	7.3	20.0	7.2	20.0
Meter stations	16.1	31.0	7.9	33.4
SCADA and communications	6.0	6.4	6.0	6.4
Operation and management facilities	13.1	4.0	9.2	4.0
Building	0	36.0	3.9	36.0

Source: NT Gas, *Access arrangement submission*, December 2010, p. 94; NT Gas, *Access arrangement submission*, December 2010, p. 171; NT Gas, *Access arrangement submission*, December 2010, attachment E-3, (confidential); AER analysis.

As noted above, the AER accepted NT Gas' proposal to separate O&M facilities and Buildings into individual asset classes. NT Gas further proposed that the Buildings asset class would only be applied going forward, with only new assets being added to this class.

The AER has not accepted NT Gas' proposal to retain the residual value of buildings in the O&M facilities asset class, as it did not consider that the remaining asset life for O&M facilities of four years reflected the remaining life of buildings making up this class.<sup>46</sup> The AER therefore requires the value of buildings as at 1 July 2011 to be separated from O&M facilities.

NT Gas had previously provided the AER with an estimate of the value of buildings in the O&M facilities asset class of \$3.94 million. The AER has accepted this value and required an amendment (AER Amendment 4.1) for NT Gas to reflect this revised opening asset value in the opening value of the Buildings asset class, with a commensurate reduction to the O&M facilities asset class opening value.<sup>47</sup>

NT Gas notes that the value of \$3.94 million adopted by the AER as the opening value for the Buildings asset class was estimated in response to AER questions. NT Gas has previously advised the AER that this value is an estimate only, calculated in

<sup>46</sup> AER 2011, *Draft Decision*, p 58

<sup>47</sup> AER 2011, *Draft Decision*, p 59



the absence of detailed information.<sup>48</sup> The lack of available information was a key reason why NT Gas proposed to populate the new Buildings asset class with only future expenditure.

Notwithstanding these concerns as to the accuracy of the opening value, NT Gas has accepted the AER's amendment and adopted a 1 July 2011 opening value for the Buildings asset class of \$3.94 million, with a commensurate adjustment to the O&M facilities asset class opening value in its revised proposal.

### 4.3 Forecast depreciation over the access arrangement period

**AER Amendment 4.3:** 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	6.0	5.5	5.7	5.9	3.5
Inflationary gain	2.5	2.6	2.6	2.6	2.5
Regulatory depreciation	3.5	2.9	3.1	3.3	0.9

Source: AER analysis.

Table 4.2 sets out forecast straight line depreciation over the access arrangement period, taking account of the discussion above.

These values were used to derive NT Gas' forecast of regulatory depreciation for the projected capital base for the access arrangement period, set out in Table 3.13 above.

**Table 4.2 – Forecast straight line depreciation over the access arrangement period**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Transmission Pipeline	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Compressor Stations	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c

<sup>48</sup> NT Gas 2011, *Email to Australian Energy Regulator Re. AER.NTGas.31*, 23 February 2011



Regulation and Metering Stations	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
SCADA	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
O&M Facilities	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Buildings	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
<b>Total</b>	<b>9,882</b>	<b>5,819</b>	<b>6,222</b>	<b>6,516</b>	<b>4,096</b>



## 5 Rate of return

**AER 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 (%)	5.53
Inflation (%)	2.57
Real risk-free rate (%)	2.89
Equity beta	0.8
Market risk premium (%)	6.0
Debt risk premium (%)	3.79
Gearing (%)	60
Cost of debt (%)	9.32
Cost of equity (%)	10.33
<b>Nominal vanilla WACC (%)</b>	<b>9.72</b>

NT Gas accepts parts of this amendment, as discussed below.

Aspects of the AER's draft decision in relation to the rate of return are identical to the draft decision for APT Allgas Pty Ltd (APT Allgas), which is also owned by the APA Group. That decision was released on 17 February 2011. APT Allgas lodged its response to that decision on 23 March 2011. Reflecting the commonality of issues across the two assets in relation to rate of return, many of the arguments in the APT Allgas response have also been re-presented here in full. Gamma and debt raising costs are also addressed in this chapter.

### 5.1 Evaluation of the overall rate of return

NT Gas submitted analysis prepared by Synergies Economic Consulting (Synergies) as a 'reasonableness check' based on the difference between the cost of debt and equity.<sup>49</sup> The AER rejected this analysis. Instead, the AER presented its own analysis

<sup>49</sup> Synergies Economic Consulting 2010, *Estimating a WACC for the NT Gas Transmission Pipeline, Key Issues in the Current Environment*, December



based on an examination of recent regulated asset sales and Modigliani and Miller's capital structure theorem. NT Gas addresses each of these below.

### 5.1.1 Examination of recent regulated asset sales

The AER presented its own analysis of recent regulated asset sales, observing that regulated assets have generally been sold at a premium to the Regulated Asset Base (RAB).<sup>50</sup> In going so, the AER acknowledges that:

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.<sup>51</sup>

The AER goes on to cite 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. NT Gas observes that these synergies can arise from a number of sources, including:

- 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.<sup>52</sup>

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

...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.<sup>53</sup>

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

NT Gas does not 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. It is important not to make assumptions about motivations that

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<sup>50</sup> AER 2011, *Draft Decision*, p 66

<sup>51</sup> AER 2011, *Draft Decision*, p 66

<sup>52</sup> 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

<sup>53</sup> J.Porter and H.Singh 2010, *What Factors Drive Takeovers in Australia?*



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:

This suggests that the regulated cost of capital has been at least as high as the actual cost of capital faced by the businesses, and *most likely* that it has been in excess of the actual cost of capital.<sup>54</sup> [emphasis added]

This hypothesis 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 that includes the data referenced by the AER, Grant Samuel states:

This data should also be treated with caution...<sup>55</sup>

Below the table, Grant Samuel also states:

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.<sup>56</sup>

It then goes on to conclude:

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 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.<sup>57</sup>

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.

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<sup>54</sup> AER 2011, *Draft Decision*, p 67

<sup>55</sup> 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

<sup>56</sup> Grant Samuel & Associates 2009, *Financial Services Guide*, p 78

<sup>57</sup> Grant Samuel & Associates 2009, *Financial Services Guide*, p 81



NT Gas 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, and is not supported by the strength of evidence on which it is based.

### 5.1.2 The relationship between the return on debt and equity

The AER dismissed the Synergies analysis in respect of the relationship between the return on debt and equity for two reasons. The first reason was because there “does not appear to be any a priori reason to expect to see a constant difference between the cost of debt and equity.”<sup>58</sup> The second was because the 4.5 per cent difference between the cost of debt and equity that was quoted is “an overstatement with respect to the benchmark service provider”.<sup>59</sup>

NT Gas agrees that a constant difference between the cost of debt and equity will not be maintained through time, but also considers that 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 Market Risk Premium (MRP). NT Gas considers that reference to the average difference between the return on debt and equity between 1990 and 2007, which is a seventeen year period, is a valid reasonableness check.<sup>60</sup>

The Synergies analysis used 4.5 per cent 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 per cent between 1990 and 2007;
- 2.85 per cent, if this is extended to include the global financial crisis (GFC).

The difference between the AER’s proposed cost of debt and equity is 1.01 per cent.

Clearly, the difference between the cost of debt and equity will vary through time. However, it is reasonable to question the reasonableness of the AER’s recommended estimates because they are some several orders of magnitude below the average over the seventeen year period referenced: one-sixth of the pre-crisis average and one-quarter of the average if the crisis data is included. Such stark differentials ought to give the AER cause to pause and consider the reasonableness of the outcomes of their analysis.

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<sup>58</sup> AER 2011, *Draft Decision*, p 193

<sup>59</sup> AER 2011, *Draft Decision*, p 194

<sup>60</sup> 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.





The AER's second criticism is that the parameters used in this analysis do not reflect the cost of debt and equity for a regulated utility. For the reasons that have been previously submitted, NT Gas 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), NT Gas agrees that it would reduce this difference.

However, even if this difference was estimated based on the AER's preferred approach, NT Gas questions whether it would support the difference of only 1.01 per cent implied by the AER's draft decision.

The AER has also formed the view that the impact of the GFC on the Australian market is no longer pervasive and hence has proposed to return to its long-term MRP of 6.0 per cent. If this assumption is true (which NT Gas questions, as discussed below), it would also be reasonable to expect observed returns to move back towards pre-crisis levels. Synergies' 'pre-crisis' estimate of the average difference between the return on debt and equity was 6.07 per cent. The proposed reference point of 4.5 per cent is conservative relative to this estimate. Even if the 6.07 per cent difference was halved based on the AER's preferred parameters, that difference would still be three times the implied difference between the AER's proposed cost of debt and equity.

### 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.<sup>61</sup> It then seeks to show 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:

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.<sup>62</sup>

NT Gas 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 hold in practice. In

<sup>61</sup> AER 2011, *Draft Decision*, p 194

<sup>62</sup> 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



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.

The AER's own consultants, Professor Davis and Associate Professor Handley, "both caution the use of the Modigliani and Miller theorem to imply a relationship between the cost of debt and equity."<sup>63</sup> However, the AER states that it:

...does not intend to set NT Gas's WACC based on Modigliani and Miller's proposition 2, however notes that this analysis demonstrates that the AER's rate of return does not under compensate NT Gas.<sup>64</sup>

NT Gas questions the relevance of this analysis. NT Gas considers that it is misleading to recognise the issues with using this theorem to explain the relationship between the cost of debt and equity on the one hand, while still using the theorem to support its conclusion that the relationship between the cost of debt and equity is reasonable. The analysis should either have a direct and relevant bearing to the issue or it should not be included.

#### 5.1.4 Analysis submitted by Envestra

As part of its submission to the AER in relation to its South Australian and Queensland gas distribution networks, Envestra submitted a report by CEG that examined the estimation of the cost of capital under the Rules.<sup>65</sup> CEG concluded that the Capital Asset Pricing Model (CAPM), Dividend Growth Model (DGM) and Fama French three factor Model (FFM) are all well accepted financial models under the Rules. It also observed that, while the CAPM is a well accepted model, the way in which it is implemented by the AER does not satisfy the requirements of the Rules because it results in a downward bias in the return on equity for low beta estimates.

Cross checks against a number of alternative models showed that the AER's approach will produce the lowest cost of equity outcome of the various methods applied. This is shown in Table 5.1 below.

Based on this analysis CEG also concluded that the AER's cost of equity is unreasonably low when compared against the prevailing cost of debt.

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<sup>63</sup> AER 2011, *Draft Decision*, p 195

<sup>64</sup> AER 2011, *Draft Decision*, p 196

<sup>65</sup> CEG 2010, *Estimating the Cost of Capital under the NGR, A Report for Envestra*, September



**Table 5.1 – CEG comparisons of cost of equity outcomes under alternative well accepted models (June 2010)**

Financial model	Range for cost of equity (55% to 60% gearing)
AER static CAPM	8.9% (7.9% to 9.9%)
AER model with AER's ad hoc upward adjustment	10.5%
FFM	11.6% to 14.4%
DGM based on Australian utility data	11.6% to 16.7%
DGM based on Australian market wide data <sup>1</sup>	12.4% to 17.5%
DGM based on US regulatory decisions	>12.2%
Estimate derived from the cost of debt	>14.4%
More accurate implementation of the CAPM <sup>2</sup>	11.4% to 13.3%

1 Assuming an equity beta of 1.0

2 Bottom of range is based on the application of the Black CAPM with Australian data and an equity beta of 0.55 and an MRP of 6.5%. Top of the range is associated with an equity beta of 1.0 and a MRP of 8.0%

Source: CEG 2010, *Estimating the Cost of Capital under the NGR, A Report for Envestra*, September, p 8

Envestra also commissioned a report by Professor Bruce Grundy that examined the theoretical and empirical limitations of the Sharpe CAPM, as well as the relationship between the cost of equity and the cost of debt.<sup>66</sup> The report shows how the Sharpe CAPM underestimates the cost of equity for low beta stocks and demonstrates that the Black CAPM provides a better fit to the data.

Envestra also submitted a report by SFG Consulting, (SFG) which examined the required return on equity based on the prevailing market conditions for funds.<sup>67</sup> The report also considered the issues associated with the application of the Sharpe CAPM and that it produces a cost of equity that is below the returns available for comparable firms. Based on an examination of dividend yields it was concluded that the total return on equity for comparable firms (comprising dividends and capital gains) was in the order of 13 to 14 per cent.

### 5.1.5 Implications

NT Gas does not consider that the AER's analysis supports the adequacy of its proposed rate of return or that it satisfies the requirements of the Rules.

In addition to the discussion above, the AER has 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.

<sup>66</sup> B. Grundy 2010, *The Calculation of the Cost of Capital, A Report for Envestra*, 30 September

<sup>67</sup> SFG Consulting 2010, *The Required Return on Equity Commensurate with Current Conditions in the Market for Funds, Report Prepared for Envestra*, 27 September



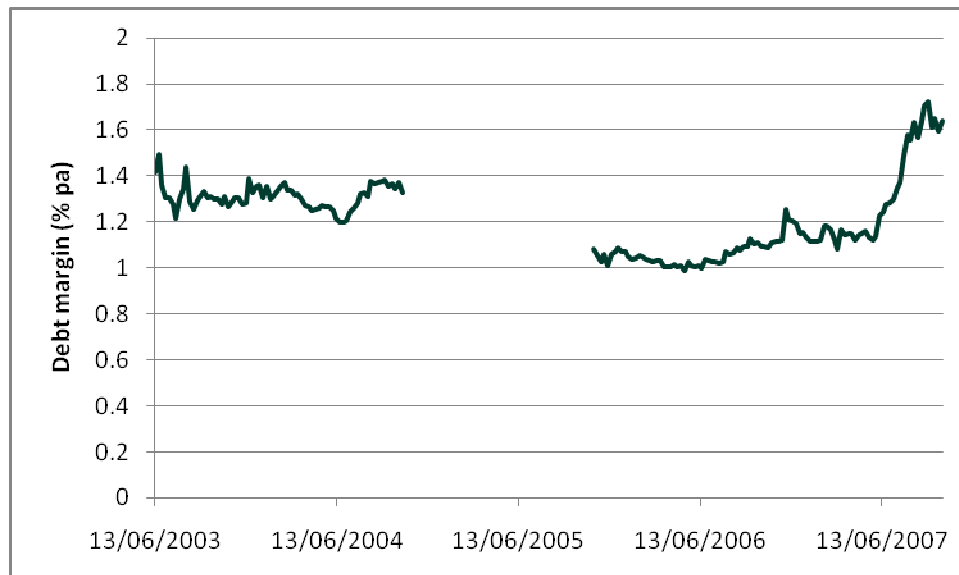
However, as highlighted in the previous submission, the standard regulatory approach results in the application of:

- more 'static' parameters to estimate the cost of equity, in particular, a long-term average MRP; and
- current market estimates of the cost of debt, based on actual yields observed in the market over the relevant twenty day averaging period.

NT Gas acknowledges the reasons why longer term averages of the MRP are relied upon, given short-term estimates can be inherently volatile and not necessarily reflective of the forward-looking MRP over the relevant horizon. However, the practical consequence is that in the market conditions that are currently being experienced, the combination of a 'static' cost of equity and a market-based cost of debt is producing outcomes that are not consistent with underlying theory. As identified in the Australia Ratings report that will be discussed in section 5.3, in the debt markets there has been a "general and significant re-pricing of risk post the GFC."<sup>68</sup>

Prior to the deterioration of global financial market conditions commencing 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, the debt margin determined for NT Gas' 2001-2011 Access Arrangement was 1.54 per cent. Figure 5.1 below shows the margin between Bloomberg's ten year BBB yield and the risk-free rate between 1 July 2003 and 12 October 2007.<sup>69</sup> 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

<sup>68</sup> Australia Ratings 2011, *Expert Opinion, Prepared for NT Gas Pty Ltd: Estimating the Debt Risk Premium*, p 14

<sup>69</sup> Note that there was a gap in which the Bloomberg 10 year BBB yield was not published.



While NT Gas 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). As highlighted by Australia Ratings:

...none of the corporate bond indices have returned to their pre-GFC levels.<sup>70</sup>

In NT Gas' earlier access arrangement, the implied difference between the cost of debt and equity was 4.6 per cent. The AER is now proposing a lower cost of equity and higher cost of debt, and the difference has contracted to 1.01 per cent.

The cost of debt is observable whereas the cost of equity needs to be estimated using historical proxies relying upon assumptions of stationarity. In the view of NT Gas, 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 6.0 per cent, on the basis that the uncertainty that resulted as a consequence of the GFC appears to have "substantially diminished".<sup>71</sup> NT Gas raises the following issues 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;
- 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, the turmoil in the Middle East and Africa, and ongoing concerns about the strength of the US and European economies, all have a potential impact on the Australian economy. For example, in summarising the economic outlook that underpins the 2011-12 Commonwealth Budget, the Government observed that while Australia's medium-term fundamentals remain strong, there are some uncertainties regarding the global economic recovery:

While gaining traction, the global economic recovery also remains vulnerable. Uncertainty about the speed and strength of the Japanese recovery, compounded by the ongoing nuclear situation, and rising world oil prices are adding to existing fragilities. While financial conditions have improved in recent months, the potential for sovereign debt concerns in the euro area to affect the broader European financial sector and cause

<sup>70</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 14

<sup>71</sup> AER 2011, *Draft Decision*, p 79



contagion effects beyond Europe remains a key risk. Failure to develop a credible medium-term response to the unsustainable US fiscal position also poses a threat to the sustainability of the global recovery. Inflationary pressures continue to build in emerging market economies, driven by reduced spare capacity and compounded by rising food and oil prices. While oil prices have not returned to their July 2008 peaks, a further significant and sustained increase could pose broader risks to global growth in the context of a fragile global recovery<sup>72</sup>

It is also important to remain cognisant of the relationship between the financial markets and the real economy, noting that it is the former that is the most important in estimating the cost of debt and equity. While the two are inextricably linked, a positive outlook for the domestic economy does not mean that uncertainties do not continue to prevail in the financial markets, as the outlook for the Australian domestic economy is just one factor – albeit a very important one – that influences participants' return expectations. For example, preceding the Commonwealth Budget one commentator observed:

The problem with the rosy forecasts of Treasury and the Reserve Bank is that the global financial crisis is still with us. It is there in the massive sovereign debts of the US, Japan and half a dozen lesser European nations. It is there in the paper-thin capital ratios maintained by Europe's largest banks. It is there in the extreme monetary policies in place throughout the major advanced world and, by virtue of their fixed exchange rates, in much of the emerging world as well. A large part of the rapid growth in Asia is due to excessively low interest rates. China may have been lifting interest rates, but they are still negative in real terms. China's banks have a day of reckoning approaching as the loans they lavished on local councils in 2009 to fend off the global financial crisis fall into arrears. The Reserve Bank's stance is to behave as if it is sunny days ahead, but carry an umbrella in the form of a readiness to slash rates if need be.<sup>73</sup>

It was observed that the key lesson from the GFC was the significance of the financial markets to the performance of the real economy. However, it was postulated that neither the Reserve Bank, the Commonwealth Treasury nor the International Monetary Fund know how to factor the probability of these potential shifts into forecasts of economic growth.<sup>74</sup> To some extent this is not considered surprising, given it is difficult to assess the likelihood, probability and timing of any significant shifts in global financial market conditions or major shocks.

NT Gas considers that it is premature to assume that the uncertainty that has followed the GFC is no longer having an impact on investor expectations. Further, it is not appropriate to solely rely on conditions in the real economy in making that assessment.

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<sup>72</sup> Commonwealth Government 2010, *2011-12 Commonwealth Budget, Statement 2: Economic Outlook*, pp 2-4

<sup>73</sup> D. Uren 2011, *Outlook must heed market shifts*, The Australian, 9 May 2011, <http://m.theaustralian.com.au/AustralianFinancialMarkets/pg/0/fi303180.htm>.

<sup>74</sup> D. Uren 2011, *Outlook must heed market shifts*



## 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 GFC. These estimates, which assume an imputation credit utilisation rate of 0.65, are reproduced below in Table 5.2.

**Table 5.2 – 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	6.1	6.1
1958-	6.8	7.2	6.2	6.2	6.6

Source: AER 2011, *Draft Decision*, p 72

NT Gas makes a number of comments in response to the AER's analysis, as set out below.

### *Pre- and post-GFC estimates*

The AER makes the observation that the range of values for the periods ending in 2010, being 6.1 per cent to 6.6 per cent, "are not inconsistent with the estimates prior to the GFC."<sup>75</sup> NT Gas contends that the range of 6.1 per cent to 6.6 per cent is quite different from the range of 6.1 per cent to 6.8 per cent (period ending 2005) and 6.4 per cent to 7.2 per cent (period ending 2007). The pre-GFC estimates are more consistent with a long-term MRP of at least 6.5 per cent, as submitted by NT Gas. 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 Table 5.3 below.

NT Gas 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 per cent would seem reasonable, even if the potential effects of the GFC are ignored.

<sup>75</sup> AER 2011, *Draft Decision*, p 73



**Table 5.3 - Selected Australian estimates of market risk premium**

Author	Year	Period	MRP (%)
Officer	1985	1882-1987	7.9
AGSM	1989	1974-1983	6.3
		1977-1983	11.7
AGSM	1998	1964-1995 (incl Oct 1987)	6.2
		1964-1995 (excl Oct 1987)	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	1 year arithmetic: 7 10 year arithmetic: 7.2
		1960-2005	10 year geometric (adj): 4.5* *recommended estimate
Gray and Officer	2005	1975-2004	7.7
		1955-2004	6.43
		1930-2004	6.58
		1905-2004	7.15
		1885-2004	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.

### *Use of longer averaging periods*

A naive statistical approach to estimate the 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.<sup>76</sup>

<sup>76</sup> T. Brailsford, J. Handley & K. Maheswaran 2008, *Re-examination of the historical equity risk premium in Australia*, *Accounting and Finance*, 48, pp 73-97





One of the most widely cited MRP estimates in Australia is by Officer for the period from 1882 to 1987.<sup>77</sup> 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 finalised in 2009, concluding that:

Accordingly, Brailsford et al advise, and the AER agrees, that the pre-1958 data should be used with caution.<sup>78</sup>

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

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.<sup>79</sup>

NT Gas therefore considers that there is a legitimate case to place more weight on the post-1958 estimate.

### *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<sup>80</sup> noted significant

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<sup>77</sup> 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.

<sup>78</sup> Australian Energy Regulator 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)*, p 196

<sup>79</sup> 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

<sup>80</sup> N. Hathaway 2005, *Australian Market Risk Premium*, Capital Research Pty Ltd



differences between averages under each method, with the arithmetic mean producing an estimate of 7.2 per cent, whereas the geometric mean estimate was 6 per cent.

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.<sup>81</sup> They note that a geometric mean is appropriate:

...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.<sup>82</sup>

NT Gas 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.

### 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.

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<sup>81</sup> S. Gray & R. Officer 2005, *Review of the Market Risk Premium and Commentary on Two Recent Papers*

<sup>82</sup> S. Gray & R. Officer 2005, *A Review of the Market Risk Premium and Commentary on Two Recent Papers*, p 21



The AER refers to two recent studies by Fernandez and Del Campo from the University of Barcelona.<sup>83</sup> These studies are used by the AER to show that “the market views of the MRP did not significantly differ from those expressed prior to the onset of the GFC”.<sup>84</sup> NT Gas questions the relevance of these studies as the authors of these studies make it clear that the estimates are of the required MRP, not the expected MRP. NT Gas submits 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”<sup>85</sup>. No horizon was 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:<sup>86</sup>

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

In the 2008 study, which was limited to professors, the responses ranged from 2 per cent to 7.5 per cent.<sup>87</sup>

The AER concludes that because the averages of different surveys are similar “there is no reason to suspect bias in this type of evidence.”<sup>88</sup> NT Gas does not consider that such an assumption can be made on the basis of the results listed above.

The AER considers that a range of evidence should be used to inform the estimate of the expected MRP. NT Gas concurs that in theory, this is highly desirable. However, this should not encompass evidence that cannot be considered reliable as this will produce misleading or biased results. NT Gas does not consider that survey estimates are reliable.

## 5.2.4 Conclusion: MRP

Based on the preceding arguments, NT Gas maintains that 6.5 per cent is the most appropriate ‘long term average’ estimate of the MRP. Further, this estimate remains the best estimate even if the effects of the GFC are ignored. The estimate of 6.5 is

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<sup>83</sup> AER 2011, *Draft Decision*, p 58

<sup>84</sup> AER 2011, *Draft Decision*, p 58

<sup>85</sup> 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

<sup>86</sup> Fernandez and del Campo 2010, *Market Risk Premium used in 2010 by Analysts and Companies*, p 8

<sup>87</sup> Fernandez and del Campo 2009, *Market Risk Premium used in 2008 by Professors*, p 5

<sup>88</sup> AER 2011, *Draft Decision*, p 57



considered reasonable in light of the data presented by the AER using an arithmetic averaging method.

NT Gas further notes that if the potential implications of the continued uncertainty in the market are considered, this estimate would appear conservative.

### 5.3 Debt risk premium

In its December 2010 access arrangement proposal submission NT Gas provided detailed arguments refuting the AER's recent practice of averaging the yield on the Australian Pipeline Trust's (APT's) ten year bond issue with an extrapolated Bloomberg ten year fair value estimate (the submission included the report by Synergies). The AER rejected this analysis in the draft decision and proposes to retain this practice. The key reasons provided by the AER for maintaining this view are:

- there is evidence to suggest that “the behaviour of the Bloomberg curve since the onset of the GFC is somewhat counterintuitive”<sup>89</sup>;
- that the APT bond possesses the characteristics of the efficient benchmark firm and reflects the risks involved in providing the reference services;
- that the following bond issues provide further support for relying on the yield on the APT bond:
  - A-rated ten year issues by SP AusNet and Stockland
  - a recently issue eight year BBB bond by Brisbane Airport;
  - two long-term floating rate bonds issued by Sydney Airport;
- that other Australian regulators, in particular the ERA and IPART, have recently published discussion papers with indicative debt margins that are over 200 basis points below the NT Gas proposal.

The AER also noted that “the Victorian final decision is currently the subject of a merits review before the Australian Competition Tribunal”<sup>90</sup> and that it will consider the implications of this, if any, for the final decision for NT Gas.

Each of the above reasons is addressed below.

NT Gas also commissioned a report by Australia Ratings to address aspects of the AER's draft decision. Australia Ratings is an independent company that is licensed to provide domestic credit ratings on debt securities, bonds and fixed income products. With an analytical team with over 50 years of experience in assessing and rating credit risk, it is well positioned to provide an informed and unbiased opinion on the current conditions in the Australian financial markets. Its report can be found at Attachment D.

<sup>89</sup> AER 2011, *Draft Decision*, p 81

<sup>90</sup> AER 2011, *Draft Decision*, p 83



### 5.3.1 The behaviour of Bloomberg's fair value estimates

#### *Comparisons against the share market*

The AER continues to question the reasonableness of Bloomberg's fair value estimates on the basis that they would appear to be 'counterintuitive'. One of the bases that it uses for this proposition is by comparing Bloomberg's fair value estimates with the ASX 200.

In Figure A.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.<sup>91</sup> It states:

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.<sup>92</sup>

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.

NT Gas considers 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.

The following analyses the relationship between debt margins and the movement in the market index. Figure 5.2 displays the relationship between BBB debt margin and market returns between 1 July 2004 and 16 May 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. From this analysis, there appears to be some inverse relationship between debt margins or credit spreads and movements in the market.

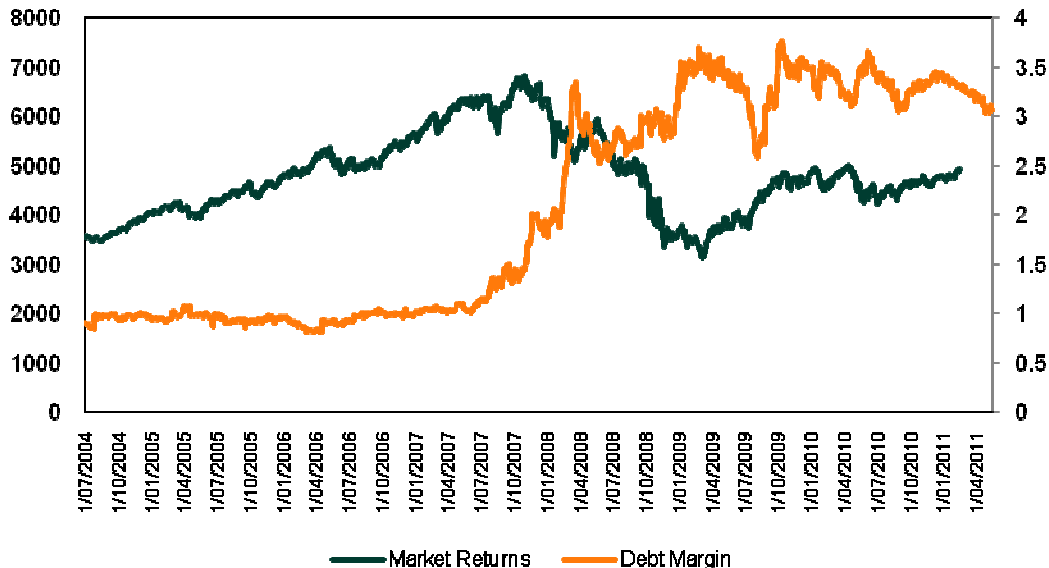
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<sup>91</sup> AER 2011, *Draft Decision*, p 200

<sup>92</sup> AER 2011, *Draft Decision*, p 186



Figure 5.2 – 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 0.125, 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 0.0156 indicating changes in market returns only explained 1.6 per cent 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 per cent of the change and other factors account for 98.4 per cent.

A suggestion that Bloomberg’s fair value curve is unreliable if it doesn’t move as expected with movements in the equity markets has no valid premise or foundation. The movement in the debt margin may well be caused by one of the other factors account for 98.4 per cent of the movement in the debt margin.

The AER states that the continued increase in Bloomberg spreads is “implying increasing default risk”<sup>93</sup> and that this is counterintuitive given the “improving” conditions in equity markets. The AER is assuming that default risk is the primary driver of yields. However, as highlighted in the Australia Ratings report, there are a number of other pervasive factors at work in the current environment.

Australia Ratings refers to a body of academic literature that has examined the determinants of credit spreads noting that the focus of much of the recent literature has

<sup>93</sup> AER 2011, *Draft Decision*, p 200



been the “credit spread puzzle”, or “why the spread (difference in yield) between a corporate bond and an equivalent risk free government bond is so much greater than that required to compensate for the expected loss given default on a corporate bond”.<sup>94</sup> Australia Ratings lists seven determinants that have been identified and observes that most of these affect the liquidity of the bond in the secondary market.<sup>95</sup>

### *Comparisons by Australia Ratings*

Australia Ratings also compared Bloomberg’s A and BBB fair value curves against the:

- S&P/ASX 200;
- Markit (Aussie) iTraxx five year credit default swap (CDS) index (this index reflects price movements in the CDS market and is accordingly used as an indicator of the pricing of credit in the Australian market); and
- Pricing of five year bonds issued by the four major domestic banks.

It noted that the interpretation of trends is very sensitive to the time period used. For example, Chart 4 in the Australia Ratings report tracks the period from the start of January 2009 to the end of March 2011.<sup>96</sup> It noted that over this period:

- the iTraxx index showed the strongest relative performance (contracting by 70 per cent);
- the S&P/ASX 200 equity index improved by 23 per cent;
- Bloomberg’s fair market spread for A rated bonds improved by 22 per cent; while
- Bloomberg’s fair market spread for BBB rated bonds deteriorated by almost 7 per cent.

However, if the starting point for the analysis is the beginning of January 2010:

- the iTraxx index underperformed (widening by 24 per cent);
- the S&P/ASX 200 equity index was flat;
- the Bloomberg A and BBB fair value spreads improved by 5% and 4% respectively.

It also noted that over the same period in which the deterioration in the performance of the iTraxx index has been observed:

...the credit spreads paid by the four largest Australian banks on their five year domestic bond issuance, widened from 95.5 bps to 114 bps.<sup>97</sup>

<sup>94</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 9

<sup>95</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, pp 9-10

<sup>96</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 20

<sup>97</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 21



The Australian Ratings analysis highlights the variability in market conditions in the period following the commencement of the GFC, and the sensitivity of any analysis to the time period chosen. More importantly, this evidence does not support the AER's 'singling out' of the Bloomberg BBB fair value yield curve as 'counterintuitive', when the intuition on which that view is based has no solid foundation. Australia Ratings concludes:

Clearly, prevailing market conditions for the largest Australian banks have deteriorated in recent times and are reflective of the observed performance of the Aussie iTraxx index over the same period. Indeed, it cannot be said that there has been a steady and generalised improvement in credit conditions since the end of the GFC – sectoral differences are apparent...

Furthermore, consideration of the relative performance of the Bloomberg fair market estimates for five year, A and BBB rated bonds has not revealed any underperformance relative to other indicators of prevailing conditions in credit market. Indeed, comparisons against the more 'immediate' indicators - the S&P/ASX 200 equity index, the Aussie iTraxx index and the credit spreads paid by the four major banks on their more recent five year bond issues – underlines the benefit of the intertemporal smoothing provided by using an "unrefined" index.<sup>98</sup>

Importantly, as mentioned above, Australia Ratings notes that there has been a general and significant repricing of credit risk post the GFC. This is not limited to the BBB sector – examples are provided of the change in the pricing of AAA corporate debt. One such example is the World Bank, who placed a ten year bond issue in September 2010 at over twice the spread to the relevant government bond compared to pre-GFC levels.<sup>99</sup>

Australia Ratings states that this re-pricing of credit risk is most evident in the BBB sector as this is a volatile sector, suffering from less liquidity than other sectors:

...as investor risk tolerances change it will be reflected in this sector first. When investors are looking for higher yields i.e. are risk seeking they will look in the BBB sector, when risk aversion sets in and investors seek higher rated bonds in a flight to quality, it is the BBB rated bonds that will be sold first. These changes in investor risk tolerance will be amplified by the generally smaller issue sizes of BBB rated bonds, which makes the bonds relatively more illiquid than higher rated bonds – another credit spread component, as noted above...<sup>100</sup>

It also notes that some investment mandates restrict firms to a minimum credit rating in the A category. Others will be restricted to minimum investment grade (BBB-). Accordingly, firms with this restriction will need to liquidate these investments if the perceived risk of credit rating downgrades increases, which further contributes to the volatility in the BBB sector.

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<sup>98</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 22

<sup>99</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 14

<sup>100</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 15



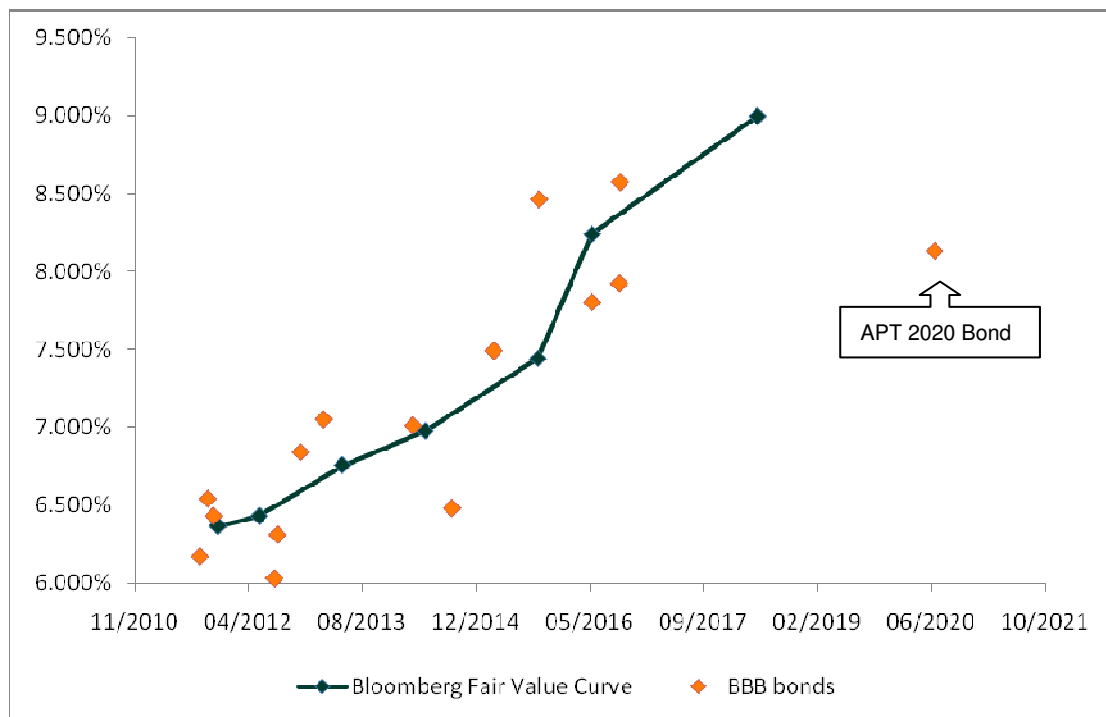


This volatility is seen as a further reason as to why it is far better to rely on an index (the fair value curve), which ‘averages out’ the myriad of factors impacting individual issues. This is discussed further below.

*Plot of the Bloomberg fair value curve against individual BBB yields*

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. Figure 5.3 below displays the Bloomberg BBB fair value curve for the 16 May 2011 and the yields on the bonds included in that sample that were published on that day. The yield on the APT bond is also shown.

**Figure 5.3 – Bloomberg BBB fair value curve and individual BBB yields for fair value sample and APT ten year bond: 16 May 2011**



Source: Bloomberg

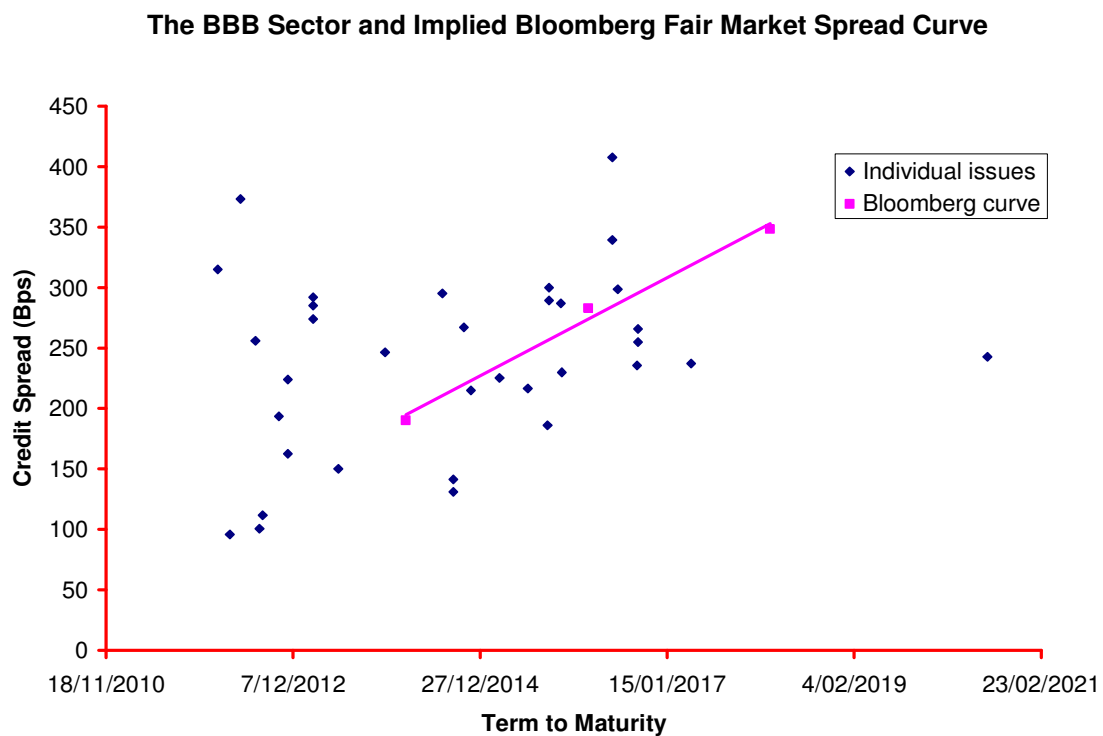
As discussed in NT Gas’ previous submission, Bloomberg uses a form of regression to fit the fair value curve to the data. It can be seen that the individual yields on bonds that are included in the sample fall randomly around the fair value curve. This random distribution provides strong support for the validity of the fair value curve. This chart also shows that the APT bond is clearly an outlier when compared against the yields on the bonds that are included in the fair value sample. The APT bond is available for inclusion in this fair value sample but to date, it has not been included. NT Gas notes that the APT bond is not liquid. Given that liquidity is taken into account by Bloomberg when constructing this sample, it is considered reasonable to assume that this lack of liquidity is a possible reason that the APT bond is not included in the fair value sample.



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 and is clearly preferable to referencing individual bonds that are not actively traded.

Australia Ratings also compared the credit spreads on individual BBB bonds against the Bloomberg curve<sup>101</sup>, including all of the bonds in that sector with published yields (Figure 5.4). It does not include issues like SP AusNet and ETSA Utilities as these are not BBB rated.

**Figure 5.4 – Bloomberg BBB fair value spreads and all individual BBB credit spreads**



Source: Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 11

This graph similarly confirms that the spreads implied by Bloomberg’s BBB fair value estimates appear consistent with the credit spreads observed on individual bonds in that sector across the maturity spectrum.

The AER has not specifically considered the extent to which the Bloomberg fair value curve is an appropriate fit given the yields on the bonds Bloomberg has included in its sample. As outlined in the Synergies report that was submitted with NT Gas’ regulatory proposal, Bloomberg exercises judgement in determining whether or not a bond will be included in that sample and will only include a bond if it is considered to be ‘well

<sup>101</sup> The Bloomberg curve represents the credit spreads of the yield curve to swap, based on the indicator yields for three, five and seven years.



priced'.<sup>102</sup> This in turn requires liquidity. NT Gas considers that a reasonable question is 'should the yield on a single 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'.

Bloomberg's selection process is independent and unbiased. Its primary focus is on the perceived statistical 'quality' of the estimate in informing the fair value curve. The AER has not addressed the question of why the APT bond is not in Bloomberg's sample other than assume that it is because it has a maturity longer than seven years. It has also not considered if the other recent BBB bond issues it has examined are in that sample, and if not, why not (NT Gas observes that those bonds are not in the BBB sample). It has not considered the specific factors that might be affecting the demand for, and pricing of, these new issues. Consideration of these factors is important and will be discussed in sections 5.3.2 and 5.3.3.

### *The benefits of relying on an index versus individual bonds*

Australia Ratings concluded that there are a number of advantages in using an independent index such as Bloomberg's fair value curve. It explains how there are a number of factors that influence price. These factors 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 and is also more stable through time.

It is clear that the AER prefers an index that is more stable over time; for example, NT Gas notes that one of the reasons that the AER rejected its proposed use of AWOTE to escalate its labour cost estimates was because of its inherent volatility:

...the AER considers that the pronounced volatility associated with the AWOTE is unlikely to represent a reasonable basis for a forecast, or to produce the best forecast possible in the circumstances.<sup>103</sup>

Australia Ratings does not endorse reference to individual bonds that will have idiosyncratic risks that would otherwise be 'averaged out' in an index:

...it is each of the individual components of the credit spread that will determine the final price of an individual bond in the secondary market. The significant advantage of using a benchmark indicator or index for determining the cost of debt to be applied across an industry sector or sectors is that these idiosyncratic risks are averaged out – a complete view of prevailing market conditions is obtained and not a biased one. Thus by implication, if an index is "refined" by weighting the index with selected individual bonds that may or may not be incorporated in the index, the idiosyncratic features of those individual bonds are being introduced or reintroduced to effectively distort the index. As such, a biased view of market conditions will result.<sup>104</sup>

As will be discussed further below, the recently issued bonds that have been referenced by the AER to legitimise the inclusion of the APT bond are likely to possess

<sup>102</sup> Synergies Economic Consulting 2010, *Estimating a WACC for the NT Gas Transmission Pipeline*, p 36

<sup>103</sup> AER 2011, *Draft Decision*, p 115

<sup>104</sup> Australian Ratings 2011, *Estimating the Debt Risk Premium*, p 16



a number of idiosyncratic features, including features that are specific to new issues in the current market.

### *Conclusions: the behaviour of Bloomberg's fair value estimates*

The AER maintains that the behaviour of Bloomberg's fair value estimates is 'counterintuitive'. This evidence is based on an examination of share market performance and what would appear to be an implicit assumption that equity markets are 'improving'. While there may have been some improvement since the GFC (which should not be unexpected given share market indices fell to amongst their lowest levels in history), performance is sensitive to the time frame of the analysis. More importantly, as outlined above, the relationship between equity markets and credit spreads is weak. There are a number of other factors influencing spreads, many of which reflect liquidity. The AER continues to place no weight or importance on liquidity in its analysis.

The implicit assumption in the AER's assessment of Bloomberg's fair value estimates is that debt markets have 'recovered' from the GFC, and accordingly, debt margins should have also fallen. NT Gas does not think that the information and analysis relied upon by the AER provides robust evidence (if any evidence) to support such an assumption.

The Bloomberg fair value curve appropriately fits the yields on the BBB bonds that have been referenced by it in its sample. NT Gas considers that one of the key issues in this debate, which has not been focussed on by the AER, is the consideration that is given by Bloomberg as to which bonds are included in its sample, and importantly, why the APT bond is not in that sample. By having regard to factors such as liquidity, Bloomberg is considering the extent to which the yield on a bond can reasonably inform its fair value estimates.

Importantly, the analysis by Australia Ratings shows the benefits of relying on an index such as Bloomberg, which 'averages out' the idiosyncratic features of individual bond issues. Relying on individual bonds whose yields are influenced by these idiosyncratic features is potentially misleading and vulnerable to bias. The issues associated with the use of the APT bond are explored further below.

## 5.3.2 Use of the APT bond

NT Gas had strongly opposed reliance on the APT bond on the basis that by having regard to its actual cost of debt, this departs from the benchmark approach and hence the requirements of the NGR. The AER refutes this by saying that it:

...does not adopt the yield on the APT bond. That is, the AER's benchmark cost of debt also gives weight to Bloomberg's fair value yields.<sup>105</sup>

Placing a 50 per cent weight on the yield on the APT bond is material. NT Gas disagrees with the AER's statement that placing a 50 per cent weight is not "adopting" the yield on the APT bond. The reality is that the APT bond yield has a direct and

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<sup>105</sup> AER 2011, *Draft Decision*, p 208



significant impact on the outcome and produces a very different result than if it were excluded.

The AER has also sought information from APA Group on its actual funding arrangements in the context of the APT Allgas review. While the APA Group questioned the relevance of this information in setting the benchmark cost of debt, it complied with that request. The AER is now using that information to conclude that its estimate of the Debt Risk Premium (DRP) “provided a reasonable opportunity for APT Allgas to recover at least its efficient costs.”<sup>106</sup> Accordingly, as NT Gas is also majority owned by the APA Group it appears that the AER has presumed that NT Gas will also be able to recover its efficient costs.

NT Gas has two main concerns with this. First, it is not aware of any such reviews being undertaken for other regulated businesses (that is, businesses that are not owned by the issuer of the APT bond). Second, it is of no relevance to an assessment that is required to be based on a benchmark approach.

As previously submitted, one of the reasons that a benchmark approach has been applied is because it is compatible with incentive regulation, that is, providing regulated businesses with an incentive to improve performance relative to that benchmark. The outcomes that were achieved on the APT bond issue were unique and may not be able to be repeated, even in the current market. NT Gas remains of this view.

### 5.3.3 Reliability of the APT bond yield in informing the DRP

The AER is primarily relying on other recent bond issues to justify its continued reliance on the APT bond. Apart from the concerns in referencing NT Gas’ actual cost of debt, as outlined above, NT Gas is concerned that:

- the AER has not adequately addressed the concerns raised regarding the liquidity of the bond and the implications of liquidity for the reliability of an estimate; and
- no consideration has been given to the potential difference between primary and secondary market issues, and in particular, the tight pricing observed for recent bond issues given the scarcity of long-term, low investment grade corporate debt.

Each of these issues will be discussed in turn.

#### *Implications of liquidity*

The regulatory proposal submitted by NT Gas emphasised the importance of liquidity in price discovery and the lack of liquidity in the APT bond. The Synergies report provided a detailed discussion on this issue. The AER’s consultant, Oakvale, also identified liquidity as a relevant factor in explaining differences in yields on bonds.<sup>107</sup>

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<sup>106</sup> AER 2011, *Draft Decision*, p 83

<sup>107</sup> AER 2011, *Draft Decision*, p 203



The AER dismissed this analysis with limited consideration. Instead, it relies on its observation that the APT bond yields quoted by UBS and Bloomberg differ by no more than 15 basis points.

UBS and Bloomberg could quote the same yield but that does not mean that the price is indicative of the price that would be obtained if a trade was actually executed today. With the bond the cash flows are known and there are two missing variables, being the market price and the yield. The ten year yield is unknown. Both Bloomberg and UBS need to estimate the yield from the price. If the price is a non-indicative price quoted by a market maker that does not reflect market prices, then both UBS and Bloomberg will solve for similar yields, not the same yields due to differing methodologies. The magnitude of the difference does not validate the AER's dismissal of the concerns expressed about liquidity.

The key issue with lack of liquidity is that prices will not necessarily reflect current information and accordingly cannot be used to inform forward-looking estimates that are required to reflect prevailing market conditions. The fact that there is not a material difference between the prices quoted by UBS and Bloomberg does not enable the conclusion to be made that those prices can be used to inform "the best forecast or estimate possible in the circumstances" of the yield on the benchmark BBB corporate bond.

#### *Use of BVAL prices and the risk of estimation error*

The AER observes Bloomberg's APT yields reflect Bloomberg Evaluated Prices (BVAL) and that:

...while BVAL may not be the most preferred measure of bond yields published by Bloomberg...they still reflect yields published by an independent and well respected data services provider based on prevailing market conditions.<sup>108</sup>

In saying this, the AER has also stated the Bloomberg's fair value yields are counterintuitive, despite having been produced by the same "independent and well respected data provider based on prevailing market conditions." As noted above, liquidity is a factor that Bloomberg does consider when it is selecting the bonds that it will use to inform its fair value sample.

Bloomberg's BVAL methodology enables it to estimate prices for bonds "across the liquidity spectrum"<sup>109</sup>. It uses sophisticated algorithms to generate prices, based on the following approach:

Step One – the Direct Observations methodology uses trades, indicative quotes and executable levels on the Target Security

Step Two – the Historical Tracking methodology uses the historical correlation of the Target Security to direct observations of comparable bonds when observable market data on the Target Security is insufficient

<sup>108</sup> AER 2011, *Draft Decision*, pp 203-4

<sup>109</sup> Bloomberg 2011, *BVAL Pricing Methodology, For Government, Agency, Supra-National and Corporate Bonds*, April, version 6.0, p 3



Step Three – the Observed Comparables methodology uses direct observations on comparable bonds to derive a relative value price for the Target Security when observable market data on the Target Security is insufficient.<sup>110</sup>

Recognising that the quality and quantity of market data used to estimate prices on bonds will vary, it also assigns a ‘BVAL score’ to each price. It describes this as follows:

The BVAL Score is an innovative metric designed to gauge the level of market data used in constructing the Final BVAL Price. The BVAL Score measures the quantity and quality of the market data used in each step of the BVAL Evaluated Pricing methodology. A BVAL Score is calculated for each algorithmic step - Direct Observations, Historical Tracking and Observed Comparables, which are then appropriately weighted to derive a Final BVAL Score. The Final BVAL Score is measured on a scale of 1 (the weakest) to 10 (the strongest).

Given the BVAL score measures the quantity and quality of market data observed, the Direct Observations methodology can receive a maximum BVAL Score of 10. Historical Tracking, however, uses market observations of correlated comparable bonds when there are no market observations on the Target Security, and therefore only receives a maximum BVAL Score of 7. Observed Comparables derives a price using comparable bond observations, and can therefore only receive a maximum BVAL Score of 5.<sup>111</sup>

NT Gas sought yields and BVAL scores for the BBB bonds in Bloomberg’s fair value sample, as well as the APT bond and the other bonds referenced by the AER in the draft decision, on 16 May 2011. NT Gas notes that, apart from being recent, the selection of this particular day was otherwise random and is also consistent with the ‘point in time’ analysis conducted in section 5.3.1. The outcomes are shown in Table 5.4 below.

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<sup>110</sup> Bloomberg 2011, *BVAL Pricing Methodology*, p 4

<sup>111</sup> Bloomberg 2011, *BVAL Pricing Methodology*, p 9



**Table 5.4 – Bloomberg yields and BVAL scores, BBB bonds: 16 May 2011**

Bond	Yield (%)	BVAL score
<b>Bonds in Bloomberg's BBB fair value sample</b>		
Energy Partnerships	7.188	4
Transurban Finance Company	6.168	8
Origin Energy Limited	6.545	7
Tabcorp Investment No 4	6.427	10
Coles Group Finance	6.026	10
Holcim Finance Australia	6.306	10
CLP Australia Finance	6.836	10
Snowy Hydro Limited	7.052	7
Transurban Finance Co PT	7.008	8
Leighton Finance Ltd	8.419	8
Wesfarmers Ltd	6.481	10
Mirvac Group Funding Limited	7.49	8
Santos Finance Limited	6.816	7
DBNGP Finance Co Pty Ltd	8.457	7
Goodman Australia	7.805	8
BBI DBCT Finance Pty Ltd	9.233	5
Mirvac Group Finance Limited	7.918	10
New Terminal Financing Co	8.571	No BVAL
<b>Bonds referred to by AER</b>		
Australian Pipeline Trust	8.129	4
SP AusNet	Not available	Not available
Stockland	Not available	Not available
Brisbane Airport Corporation	Not available	Not available
Sydney Airport Corporation	Not available	Not available
ETSA Utilities	Not available	Not available

There are a number of observations that can be made from this. First, most of the bonds in the Bloomberg sample have a score of seven or above, with six bonds having the maximum score of ten. Of bonds that have been scored, the APT bond has the lowest, along with Energy Partnerships.





As cited above, the BVAL score reflects the “quality and quantity of market data observed”. A lower score means that there is less market data used and/or that data is of lesser quality. This provides important information about the quality of the APT estimate relative to other bonds whose prices have scored more highly.

NT Gas does not propose that the AER should select individual bonds based on their BVAL score. However, the fact that the APT bond’s estimate has a lower score than the majority of the bonds in Bloomberg’s fair value sample is considered relevant to NT Gas’ concerns about the reliability of that estimate.

On the contrary, this analysis highlights two important things. First, it reinforces that in the absence of a liquid market, the estimation of current yields on BBB bonds is highly vulnerable to estimation error. Bloomberg is being transparent about this by assigning a BVAL score to its BVAL prices.

Second, it provides further support for the use of a larger sample via an index, that is, Bloomberg’s fair value index ‘averages out’ the estimation error associated with the yields on individual bonds, to the extent that their yields have not been solely based on actual secondary market trades.

The AER does not address the question of why the APT bond is not included in Bloomberg’s fair value sample (this is similarly the case with regard to the other individual BBB issues it has referenced in the Draft Decision). Instead, it dismisses the question stating that:

Notably, the maturity of this bond is around two years longer than the seven year, BBB rated fair value estimates published by Bloomberg.<sup>112</sup>

If the price was a robust price and indicative of market prices, then it is expected that Bloomberg would include the bond in the sample as the longer dated bond would inform a seven year yield. Currently Bloomberg estimates a seven year yield by using a portfolio including shorter dated bonds. It is preferable for that portfolio to also include longer dated bonds (if robust) so that the seven year yield is estimated from traded bonds less than and greater than seven years.

NT Gas does not consider that this satisfactorily explains the exclusion of this bond from its sample. The AER’s statement provides a reason for including the bond, not excluding it.

Bloomberg constructs its yield curve from bonds of various maturities (which are used to inform the position and slope of the curve) and NT Gas expects that it would use the APT bond if it was considered informative (it may actually enable it to estimate the curve out to ten years, noting that the AER is willing to apply significant weight to a single estimate). This similarly applies to the other BBB issues referenced by the AER. The low BVAL score may provide some insight as to why the APT bond is not referenced however it is not known if this is taken into account in the construction of its sample. However, the factors that influence the BVAL score are related to liquidity and

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<sup>112</sup> AER 2011, *Draft Decision*, p 205



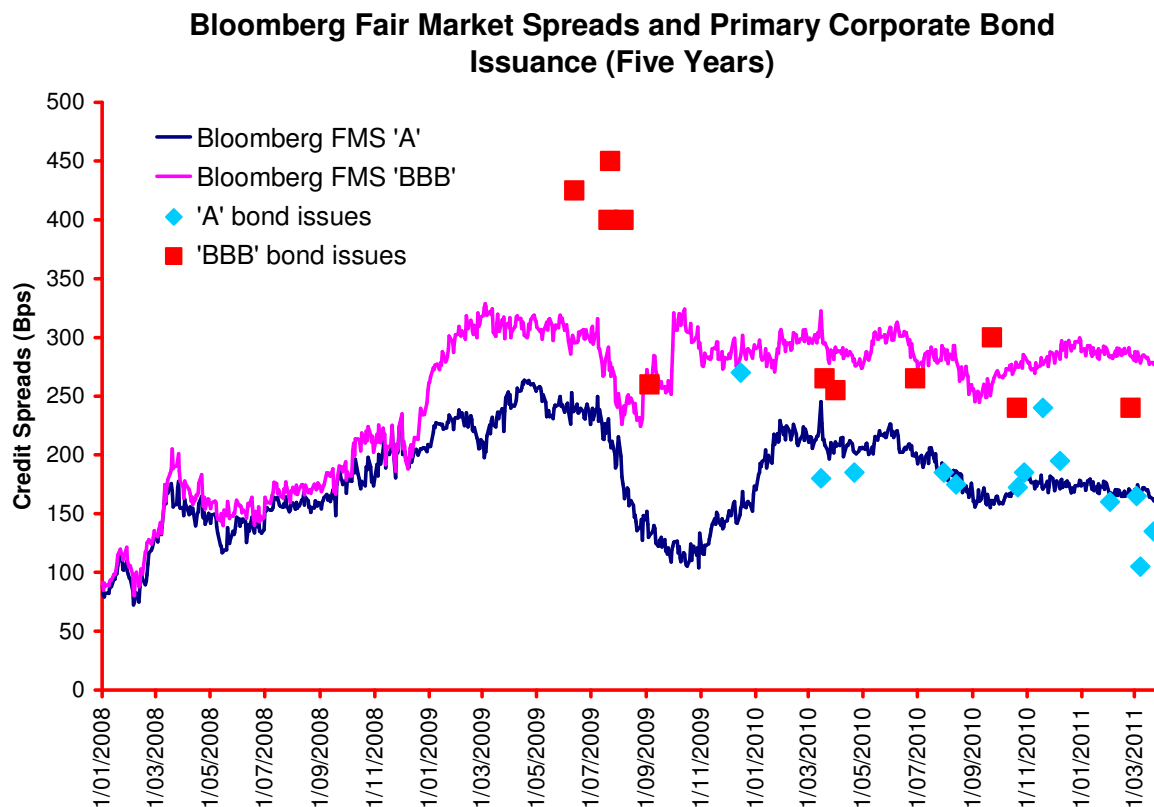
it is known that liquidity is one factor that Bloomberg takes into account in constructing its sample.

*Pricing of new issues*

One of the main considerations relied upon by the AER in questioning the reliability of Bloomberg’s fair value estimates is the yields on new issues that have come to the market since the APT bond was issued. In particular, it has noted that these yields are well below Bloomberg’s fair value curve.

Australia Ratings examined Bloomberg’s fair market spreads for the A and BBB sectors and primary market five year issues in these sectors since the beginning of 2008. This is shown in Figure 5.5 below.

**Figure 5.5 – Bloomberg BBB fair value spreads and all individual BBB credit spreads**



Source: Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 19

In 2008, there were no new issues. When bond issuance resumed in 2009 following the commencement of the GFC, yields were well above Bloomberg’s fair value curve.<sup>113</sup> NT Gas notes that while the AER expressed concerns about Bloomberg and CBA Spectrum’s estimates at the time, it was not because of the pricing of new issues relative to the Bloomberg curve.

<sup>113</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 18



In 2010, yields on primary market issues contracted quickly. This is now the primary evidence that the AER is relying upon to question the reliability of the fair value curve. However, as pointed out by Australia Ratings, there will always be individual bonds priced above and below this curve.

This analysis illustrates two main points. First, this reinforces the benefits of using the fair value curve as it achieves an intertemporal smoothing of the volatility of these estimates. This smoothing effect is clearly shown in the above chart. Second, this shows the risk of questioning the fair value estimates based on the pricing of individual primary market issues, as the relationship between these observed yields and the fair value estimates varies through time.

#### 5.3.4 Reviews by other Australian regulators

The AER notes discussion papers that have been released by other Australian regulators, including the Economic Regulation Authority of Western Australia (ERA) and Independent Pricing and Regulatory Tribunal of New South Wales (IPART). NT Gas does not agree with the methodology proposed by either regulator although does not propose to critique these reviews in detail here. Overall, NT Gas' fundamental concerns with the proposals put forward by these other regulators are consistent with its concerns with the AER's approach, which is that they all seek to place less reliance on Bloomberg's fair value estimates.

Both the ERA and IPART propose to construct their own sample of bonds, although the criteria used to determine each sample varies. IPART, for example, has proposed to reference bonds issued in US dollars by Australian firms. (NT Gas questions how conditions in US bond markets – regardless of the domicile of the issue – have any relevance to setting the domestic cost of debt.)

Both ERA and IPART have access to the same data as Bloomberg and all other market participants. As has previously been highlighted, Bloomberg has specialist knowledge and expertise in financial markets and should be best placed to interpret and synthesise market data, particularly given the difficult conditions. The decisions by the ERA and IPART signal a view that these organisations are better placed to estimate the cost of debt for the efficient benchmark firm in the prevailing market environment. It is noted that neither regulator has any regard to the individual characteristics of the securities (that are relevant to informing a forward-looking estimate), such as liquidity, in constructing the sample.

These concerns are further highlighted by the methods that each regulator applies to develop an estimate from the data. The ERA proposes to take a term to maturity weighted average of the yields on the bonds in its sample. IPART proposes to take a median. The bonds in each regulator's sample have different terms to maturity. It is not valid to take an average or median to produce an estimate of the forward-looking cost of debt, particularly if that cost of debt is meant to reflect a specific term to maturity. These approaches grossly oversimplify the task.

Bloomberg derives its fair value yield curves by fitting a curve to the various data points, being yields on bonds of differing terms to maturity. This is quite a different process to calculating some form of average or median of these data points. This



approach appropriately captures the term structure of interest rates, with the various data points (including the yields on bonds of a shorter maturity) informing the position and slope of that curve.

In order to meaningfully interpret the yields on BBB bonds with different maturities, the approach of constructing a yield curve – or fitting a line to the data points – is the most appropriate method to apply. Yield curve construction requires the application of an appropriate mathematical approach. It can be computationally demanding and hence requires access to appropriate resources and skills.

The precise method that Bloomberg currently uses to construct its yield curves is not known in detail. However, NT Gas recognises that Bloomberg is a robust and independent data provider with specialist skills and resources in financial markets. The approaches proposed by the ERA and IPART do not demonstrate that these organisations are better placed than Bloomberg to interpret the same market data, nor do they show that they would provide a ‘better estimate’ of the expected cost of debt under the circumstances.

### 5.3.5 Conclusions: the use of Bloomberg’s fair value estimates

NT Gas submits that it is appropriate to continue to solely rely on Bloomberg’s fair value estimates. Supplementing the Bloomberg 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. As highlighted by Australia Ratings:

By discounting the Bloomberg fair market indicator and weighting against it an individual bond, the DRP is now being influenced by the many factors that influence the pricing of one individual bond. The advantages of using market data as set out by ACT [Australian Competition Tribunal], that the data is published, widely used and market respected, is being lost.<sup>114</sup>

The report by Australian Ratings highlights the volatile market conditions that have been experienced following the commencement of the GFC. It also shows how the BBB corporate bond sector is inherently volatile. The use of an index such as Bloomberg’s fair value curve ‘smooths’ this volatility, as well as the impact of idiosyncratic features of individual bonds. ‘Adjusting’ the fair value curve by the yield on the APT bond, when the yield on that bond is vulnerable to estimation error, could result in a misleading and biased estimate of the debt risk premium.

NT Gas considers that given the significance of these issues and the potential complexities underpinning them, particularly following the commencement of the GFC, 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.

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<sup>114</sup> Australia Ratings 2011, *Estimating the Debt Risk Premium*, p 8



### 5.3.6 The AER's proposed extrapolation method

NT Gas does not consider that it is appropriate to use the difference between the seven and ten year AAA yields from June 2010 to estimate a forward-looking cost of debt to apply from 1 July 2011, as discussed in the December 2010 submission.

However, while it does not agree with this approach, NT Gas has applied the AER's preferred extrapolation method in its revised estimate of the debt margin.

### 5.3.7 Conclusion: cost of debt

In conclusion, NT Gas does not consider that it is appropriate for the AER to place any reliance on the APT bond (or any other individual bond) in estimating the benchmark cost of debt, nor is it appropriate to have any regard to its actual cost of funds. The AER states that it considers that placing equal reliance on the Bloomberg fair value estimates and the APT bond is a "cautious approach"<sup>115</sup>. 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), and whose yield reflects idiosyncratic features, materially increases the risk of regulatory error.

The AER continues to question Bloomberg's fair value curve because its yield appears 'counterintuitive'. However, this submission has shown that this intuition lacks a robust foundation. One form of 'evidence' that the AER is relying upon is the observed yields on primary market issues relative to the fair value curve.

The analysis by Australia Ratings shows that these relativities can change through time and that one of the key benefits of using an index such as the Bloomberg fair value curve is that it smoothes volatility over time and 'averages out' the idiosyncratic features impacting individual bond prices. NT Gas 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 between the average regulated utility and the general market

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

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<sup>115</sup> AER 2011, *Draft Decision*, p 211



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.<sup>116</sup>

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

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.<sup>117</sup>

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.

NT Gas 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 Comparisons between average regulated utility and NT Gas

The AER does not clearly represent the position submitted by NT Gas in relation to beta, as well as the supporting analysis provided by Synergies. The fundamental point made by NT Gas and the Synergies report is that the AGP is unique, although on balance, there was no evidence to depart from the previously determined equity beta of 1.0, which (at the time) was the most common value applied to regulated energy transmission assets.

NT Gas acknowledged that stranding risk is not compensated by beta, although not because it does not have any systematic elements, but because it is asymmetric in nature. The AER does not consider that the risk is systematic in nature, although its only justification for this is provided in a brief sentence in a footnote. Both NT Gas and the AER agree that stranding risk is best dealt with in the cash flows. However, to the extent that there is no clear mechanism permitted by the AER for dealing with this risk, it remains uncompensated.

The AER does not consider that the AGP is subject to stranding risk, because:

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<sup>116</sup> AER 2011, *Draft Decision*, p 83

<sup>117</sup> 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



- NT Gas has proposed a single zone reference tariff, under which all sections of the pipeline will be equally price competitive;
- the majority of pipeline capacity is expected to be contracted to a single user during and beyond the access arrangement period;
- new gas fields are supplying natural gas to the pipeline, alleviating concerns of depleted supply reserves.<sup>118</sup>

It also refutes the proposition that there is low market power, because the single user is “unable to easily substitute away from the services offered by NT Gas.”<sup>119</sup>

It is not clear on what evidence the AER is basing this assessment. As outlined in the Synergies report (based on information supplied by NT Gas):

There are a number of offtake points along the pipeline. However, most of the gas is transported for use in electricity generation in the Darwin/Katherine area – some 74% of gas expected to be transported on the pipeline in 2010/11. At the offtake points between the Amadeus Basin and Darwin gas is primarily supplied for local electricity generation. It is also supplied to mining developments, some of which went into care and maintenance mode in the last access arrangement period. Delivery points south of Mataranka (at the northern tip of the pipeline) are understood to account for only around 25% of total demand. It is understood that there are no significant alternative sources of demand envisaged for the AGP, at least in the medium-term.

Over the course of the last access arrangement period (and the original contract period with PWC), the reserves in the Amadeus Basin were deemed inadequate to meet PWC’s demand for the term of this original contract period. In 2006 it therefore switched the majority of its source of supply to the Blacktip field, which enters the pipeline just south of Darwin (around 5 TJ per day will still be sourced from Palm Valley until January 2012). Alternative (emergency) reserves have also been sourced that also enter the pipeline at delivery points at its very northern end (close to the sources of underlying demand), including the Bayu Undan fields in the Timor Sea.<sup>120</sup>

In other words, most of the pipeline’s demand is now concentrated in the northern tip of the pipeline. There are two key locations at this end of the pipeline, being Channel Island and Weddell. Weddell could access alternative supply sources without using the pipeline at all.

Accordingly, NT Gas questions the basis for the AER’s claims. These substitution possibilities also refute the AER’s conclusion that the AGP has market power.

In the context of what is a reasonably short discussion on beta, the AER also spends some time dismissing the concept of mean reversion.<sup>121</sup> While the Synergies report made brief mention of this issue it did not rely on mean reversion as even partially

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<sup>118</sup> AER 2011, *Draft Decision*, p 84

<sup>119</sup> AER 2011, *Draft Decision*, p 198

<sup>120</sup> Synergies Economic Consulting 2010, *Estimating a WACC for the NT Gas Transmission Pipeline*, p 19

<sup>121</sup> AER 2011, *Draft Decision*, p 198



justifying or supporting its proposed equity beta estimate of 1.0. Similarly mean reversion was not relied upon by NT Gas in justifying its submitted value of 1.0. NT Gas therefore questions why this issue has been given this emphasis by the AER when it was not relied upon.

### 5.4.3 Conclusion

NT Gas maintains its view that an equity beta of 1.0 is an appropriate assumption for the average regulated energy transmission business. This is the same as the equity beta of the market, however this reflects that the average regulated energy transmission business has:

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

It is difficult to directly compare the AGP pipeline with other pipelines. On balance, there is no basis to support any revision to the equity beta estimate from the value of 1.0 that was previously determined by the ACCC. NT Gas therefore remains of the view that the equity beta should be set at 1.0.

## 5.5 Summary – WACC

The outcomes of the discussion above can be summarised in the following Table 5.5. The risk-free rate and debt margin have been calculated using the agreed averaging period of the twenty business days ending 1 April 2011.

**Table 5.5 – NT Gas proposed WACC parameter values**

Parameter	Estimate
Risk-free rate	5.54%
Debt to value	60%
Debt margin <sup>a</sup>	4.60%
Debt raising costs	0.109% (included in opex)
MRP	6.50%
Gamma	0.25
Equity beta	1
Cost of equity	12.04%
Cost of debt	10.14%
<b>Post tax nominal vanilla WACC</b>	<b>10.90%</b>

a. Estimated as the seven year BBB fair value yield, averaged over the 20 days to 1 April 2011, extrapolated to a ten year yield based on the difference between the seven and ten year AAA yields over the 20 days ending 22 June 2010.





## 5.6 Forecast inflation

The AER accepted the forecast inflation rate used by NT Gas for the access arrangement period of 2.5 per cent for the purposes of the draft decision. The AER notes, however, that the forecast inflation rate will be updated as close as practicable to the final decision based on the most up to date information.

NT Gas has adopted the AER's forecast inflation rate for the access arrangement period.

## 5.7 Averaging period for the risk-free rate

The AER accepted NT Gas' proposed averaging period of 20 business days ending 1 April 2011. NT Gas has retained this averaging period in this revised proposal.

## 5.8 Gamma

In the draft decision the AER proposed a gamma of 0.45, which is the mid-point of its preferred range of 0.4 to 0.5. The lower bound of this estimate is based on:

- the Beggs and Skeels (2006) estimate of theta, which is 0.57; and
- a distribution rate of 0.7.

The upper bound is based on regulatory precedent prior to the AER's WACC review.

As part of its submission to the AER in relation to its South Australian and Queensland gas distribution networks, Envestra submitted a report by SFG presenting its estimate of theta of 0.23.<sup>122</sup> That estimate is based on a variation of the Beggs and Skeels (2006) methodology and includes data after July 2000.

SFG also submitted a report to show that if its estimated value for theta of 0.23 was applied, there is no need to adjust the MRP.<sup>123</sup> This report showed that the maximum adjustment required would only be in the order of 0.1 per cent to 0.2 per cent, "which is well within the bounds of error."<sup>124</sup>

NT Gas notes that the Australian Competition Tribunal (the Tribunal) has reached its decision in relation to the appeal of gamma by the Queensland and South Australian electricity distribution network businesses and has arrived at a gamma estimate of 0.25.<sup>125</sup> This decision is based on placing full weight on the theta estimate produced by SFG in the updated study completed in March 2011 that it undertook at the request of

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<sup>122</sup> SFG Consulting 2010, *The Best Available Empirical Estimates of Theta, Report Prepared for Envestra*, 27 September

<sup>123</sup> SFG Consulting 2010, *The Relationship between Theta and MRP, Report for Envestra*, 27 September.

<sup>124</sup> SFG Consulting 2010, *The Relationship between Theta and MRP, Report for Envestra*, p 2

<sup>125</sup> Australian Competition Tribunal, *Application by Energex Limited (Gamma)(No 5)[2011]ACompT 9*



the Tribunal. The terms of reference for that study “were settled between the parties, with intervention by the Tribunal”<sup>126</sup>. In that study SFG arrived at a theta of 0.35.

It determined that no weight would be applied to the Beggs and Skeels (2006) study. It also stated that on the basis of the material before it, it was unable to make any conclusions regarding the utilisation of tax statistics. It concluded:

The Tribunal is satisfied that SFG’s March 2011 report is the best dividend drop-off study currently available for the purpose of estimating gamma in terms of the Rules. Its estimate of a value of 0.35 for theta should be accepted as the best estimate using this approach.<sup>127</sup>

NT Gas had proposed a gamma of 0.2, which was the mid-point of what is considered to be a reasonable range, which was zero to 0.4. The Tribunal’s determination is close to the estimate proposed by NT Gas. NT Gas has therefore adopted the value determined by the Tribunal, which is 0.25.

## 5.9 Debt raising costs

The AER accepted the estimate for debt raising costs proposed by NT Gas however does not accept its proposed method, which is to include these costs in the WACC (via the cost of debt) rather than in operating expenditure. NT Gas has therefore incorporated these costs into its revised operating expenditure allowance. This is based on the AER’s updated allowance of 10.9 basis points per annum.

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<sup>126</sup> Australian Competition Tribunal, *Application by Energex Limited (Gamma)*, para 15

<sup>127</sup> Australian Competition Tribunal, *Application by Energex Limited (Gamma)*, para 29



## 6 Taxation

NT Gas proposed a post-tax approach for this access arrangement period, and adopted the AER's Post Tax Regulatory Model (PTRM) to calculate its tax allowance. The AER accepted both of these approaches.<sup>128</sup>

### 6.1 Opening tax asset base

**AER Amendment 6.2:** make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the revised tax allowance in table 6.5 of this draft decision.

**Table 6.5: AER tax allowance for the access arrangement period (\$'000, nominal)**

	2011–12	2012–13	2013–14	2014–15	2015–16
Tax	0	902	1186	1204	704

Source: AER analysis

The AER has accepted NT Gas' opening tax asset base (TAB) as at 1 July 2001 and the depreciation rates used by NT Gas for assets comprising the opening TAB over the earlier access arrangement period.<sup>129</sup>

The AER has not, however, accepted the application of the same tax depreciation rates to new assets acquired over the earlier access arrangement period as it considers that changes to taxation law should be reflected in the depreciation rates applied to capital expenditure. The AER has instead compiled an alternative set of depreciation rates that it considers should be applied to assets added to the TAB over the earlier access arrangement period. These are shown in Table 6.1 below.

**Table 6.1 – AER preferred asset class depreciation rates (%)**

Asset class	1 July 2001	1 July 2002	5 July 2006
Pipeline	20.0	7.5	10.0
Compression	20.0	7.5	10.0
Meter stations	20.0	7.5	10.0
SCADA	20.0	15.0	20.0
O&M facilities	20.0	7.5	10.0
Buildings	10.0	7.5	10.0

<sup>128</sup> AER 2011, *Draft Decision*, pp 92-3

<sup>129</sup> AER 2011, *Draft Decision*, pp 93-4



The TAB roll forward is necessarily complex, due to frequent changes in the standard tax asset lives of particular classes of assets for particular years, and periods of “bonus depreciation” enacted in federal budgets from time to time. In particular, Rulings of the Deputy Commissioner of Taxation override the standard tax legislation for some periods. Further, temporary allowances to accelerate depreciation (targeted at stimulating expenditure in particular industries) mean that the TAB roll forward must be done individually for each year’s capital expenditure.

For example, SCADA capital expenditure incurred in 2006 is allowed a 15 per cent tax depreciation rate, whereas SCADA expenditure in fiscal 2007 is allowed to be depreciation for tax purposes at 20 per cent. These “vintages” of assets must be tracked separately to calculate the correct amount of allowed tax depreciation. Moreover, capital expenditure in the 2002 through 2006 fiscal years was allowed accelerated depreciation at 150 per cent of the published rate. This also needs to be tracked in calculating the allowed tax depreciation amount.

NT Gas has reviewed its TAB roll forward, adjusting for the AER’s draft decision on 2010/22 capex, and largely agrees with the AER regarding the closing balance, as set out in Table 6.3 at the end of this section.

## 6.2 Tax asset lives

The AER has accepted NT Gas’ proposed standard tax asset lives as consistent with the requirements of the Income Tax Assessment Act 1997.<sup>130</sup> NT Gas has not proposed any further changes to its standard tax asset lives in this revised proposal.

The AER has not, however, accepted NT Gas’ proposed remaining tax asset lives as it does not consider that they are consistent with changes to tax law and the tax commissioner’s rulings from 1 July 2001 to 30 June 2011.<sup>131</sup>

The variability of allowed and accelerated tax depreciation rates also has an impact on the estimated remaining asset lives for tax purposes. The estimated tax asset life for a particular class of asset will necessarily be a composite measure that cannot be reconciled back to any particular asset class or vintage. In this regard, the remaining tax asset life is an informative, rather than determinative, measure.

In its estimates of the remaining tax asset lives, the AER appears to have incorrectly reflected the remaining life of the opening asset base. For example, the standard life of pipeline assets is 80 years, and the ACCC’s 2001 access arrangement decision indicates a remaining life of 65 years as at 01 July 2001. This suggests that the opening pipeline assets were 15 years old in 2001. With a tax life of 20 years, the assets should have recorded a remaining tax life of 5 years at 01 July 2001; at the end of the previous access arrangement period, 30 June 2011, these assets would have a remaining tax asset life of zero. However, the AER has recorded a remaining tax asset life of ten years for the opening assets. A similar approach appears to have been taken with respect to other asset classes.

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<sup>130</sup> AER 2011, *Draft Decision*, p 95

<sup>131</sup> AER 2011, *Draft Decision*, p 96



NT Gas has recalculated the remaining tax asset lives as shown in Table 6.2 below.

**Table 6.2 – Remaining Tax Asset Lives**

<b>Summary Tax Value and Life</b>	<b>Tax Opening Value (\$m)</b>	<b>Tax Effective Life (years)</b>
Pipes	5.03	13.28
Compressors	0.32	-
Meter Station	2.64	17.63
SCADA	1.49	2.27
O&M Facilities	1.77	15.97
Buildings	-	39.50
<b>Total</b>	<b>11.24</b>	

The resulting tax asset base at 30 June 2011 is shown in Table 6.3 below.





**Table 6.3 – Tax Asset Base as at 30 June 2011**

<b>\$ 'm (nominal)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>
Opening TAB	22.3	18.0	14.8	14.6	12.2	10.5	8.9	8.1	7.3	6.8
Additions	0.2	0.4	2.9	0.4	0.5	0.3	0.7	0.6	0.7	5.8
Disposals	-	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	-
Tax Depreciation	4.5	3.6	3.1	2.7	2.2	1.9	1.6	1.4	1.2	1.3
Closing TAB	18.0	14.8	14.6	12.2	10.5	8.9	8.1	7.3	6.8	11.2







## 6.3 Tax loss carried forward

**AER Amendment 6.3:** make all amendments necessary in the access arrangement proposal and access arrangement information to take account of the tax loss carried forward of \$7.8 million as shown in table 6.4.

In section 6.5.3 of its draft decision, the AER estimated the remaining value of a tax loss determined by the ACCC in its 2001 access arrangement decision.

The AER has conducted its own analysis of the tax loss carried forward as at 1 July 2011. Starting with the tax loss carried forward of \$214.4 million as at 1 July 2002 as calculated by the ACCC and using the forecast revenues and expenses approved in the earlier access arrangement period, the AER has calculated a residual tax loss carried forward of \$7.8 million as at 30 June 2011.<sup>132</sup>

NT Gas considers that such an analysis should be conducted reflecting the actual costs and operating characteristics of the pipeline over the earlier access arrangement period. NT Gas has reconstructed the tax loss carry forward based on the following assumptions:

- Opening value of the tax loss carry forward is taken from the ACCC 2001 access arrangement final decision;
- Revenue is calculated as actual throughput charged at the approved access arrangement tariffs. Importantly, this reflects the change in operation of the pipeline, from the 2001 forecast case in which most gas travelled the length of the pipeline (injections in zone 1 and withdrawals in zones 2 and 3) to the more recent operations in which the majority of gas traversed only zone 3;
- Operating expenditure is recorded as incurred (forecast for 2010/11);
- Tax depreciation is calculated in accordance with the value of the tax asset base (see Attachment A) and the relevant tax legislation in place from time to time;
- Interest is calculated as the value of the capital base, multiplied by the 60 per cent gearing ratio and then by the 7.07 per cent return on debt allowed in the 2001 access arrangement. 2010/11 capital expenditure is based on the AER's March 2011 draft decision;
- c-i-c.<sup>133</sup>

NT Gas therefore submits that the closing balance for the tax loss carry forward should be \$0.82 million, as shown in Table 6.4. This amount has been reflected in NT Gas' forecast revenue modelling.

<sup>132</sup> AER 2011, *Draft Decision*, pp 97-9

<sup>133</sup> This is the amount that is reflected in tariffs.



**Table 6.4 – NT Gas tax loss carry forward calculation**

\$'000 (nominal)	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Opening Tax loss	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Revenue	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Opex	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Tax Depreciation	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
Interest	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c	c-i-c
<b>Closing tax profit/(loss)</b>	<b>(193.71)</b>	<b>(171.63)</b>	<b>(145.97)</b>	<b>(116.11)</b>	<b>(83.78)</b>	<b>(47.09)</b>	<b>(25.79)</b>	<b>(8.15)</b>	<b>(1.26)</b>	<b>(0.99)</b>

## 6.4 Use of imputation credits

**AER Amendment 6.1:** make all amendments necessary in the access arrangement proposal and access arrangement information to take account of a gamma of 0.45.

NT Gas' response to the AER draft decision regarding imputation credits (gamma) can be found in section 5.8 of this submission.

NT Gas' proposed value for gamma applied in this revision proposal is 0.25.

## 6.5 Revised forecast tax allowance

NT Gas' forecast tax allowance is a product of the specific discussion above in relation to the calculation of the tax asst base, as well as changes to actual and forecast capital expenditure discussed in chapter 3 of this submission. NT Gas' revised forecast tax allowance is shown in Table 6.5 below.

**Table 6.5 – Corporate income tax allowance**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Tax allowance	2,782	1,779	1,910	1,985	1,242



## 7 Operating expenditure

**AER 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 7.7

**Table 7.8: AER required amendments to NT Gas's forecast opex (\$'000, 2010–11)**

	2011–12	2012–13	2013–14	2014–15	2015–16	Total
<b>Total NT Gas proposed operating expenditure</b>	13 489	15 234	13 763	13 861	16 646	<b>72 993</b>
<i>AER specific amendments</i>						
Operations & maintenance						
Step changes: <sup>a</sup>						
increased integrity works	-19	-40	-62	-85	-110	<b>-316</b>
above ground station recoating	-51		-51		-51	<b>-154</b>
Labour escalation	-196	-309	-393	-537	-754	<b>-2189</b>
Overheads <sup>b</sup>						
Corporate overheads <sup>c</sup>	-867	-901	-935	-970	-1005	<b>-4678</b>
Insurance	-1293	-1293	-1293	-1293	-1293	<b>-6467</b>
Marketing	-116	-116	-116	-116	-116	<b>-580</b>
<b>Total AER specific amendments</b>	<b>-2543</b>	<b>-2660</b>	<b>-2851</b>	<b>-3001</b>	<b>-3329</b>	<b>-14 384</b>
<b>Total AER approved operating expenditure</b>	<b>10 946</b>	<b>12 574</b>	<b>10 912</b>	<b>10 860</b>	<b>13 317</b>	<b>58 609</b>

- a. The AER has accepted all of the proposed step changes except for increased integrity works and above ground station recoating.
- b. The AER has accepted local overheads and regulatory costs and therefore no adjustments are required for these cost categories.
- c. The AER has adjusted corporate overheads by subtracting the local overheads and adjusting for the affect of the AER's approved escalation applied to corporate overheads.

### 7.1 Overheads expenditure

The AER accepted NT Gas' proposed local overheads and regulatory costs as consistent with Rules 74 and 91. The AER did not accept NT Gas' forecast for corporate cost, and proposed to reduce NT Gas' total forecast amount of corporate



costs by the amount it considered to represent “double counting” of corporate overheads.<sup>134</sup> The AER also did not accept NT Gas’ forecast for insurance, disallowing NT Gas’ insurance cost forecast in full.<sup>135</sup>

### 7.1.1 Local overheads

NT Gas used 2009/10 as its base year for calculating the local overheads component of the overheads expenditure category.<sup>136</sup> The AER accepted the use of 2009/10 as the base year for forecast expenditure, noting that expenditure in the proposed base year was consistent with expenditure in other years of the earlier access arrangement period that the base year was sufficiently close to the forecast period to represent an accurate reflection of NT Gas’ costs.<sup>137</sup>

NT Gas has retained the use of 2009/10 as its base year for calculating its forecast local overheads expenditure.

The AER’s concerns over double counting between local and corporate overheads were based on a presumption that “the AER considers that a number of corporate functions, including accounting and engineering functions which are normally undertaken by APA are, in the case of NT Gas, undertaken locally and are therefore already included in local overheads.”<sup>138</sup>

NT Gas submits that the costs in the local overheads category are costs that are incurred by the local entity. Examples of these include costs of local office accommodation, locally incurred electricity and other utility costs, local on-site IT costs, etc. These are costs that would be incurred by the local body regardless of the larger ownership structure.

To confirm this, NT Gas has examined the categories of costs included in the local overheads account, and note that this account consists of costs that are neither incurred nor allocated by the corporate group. These include:

- Local travel;
- Stationery, postage, library etc;
- Electricity & water;
- Phone & fax;
- Local legal fees;
- Bank fees;

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<sup>134</sup> AER 2011, *Draft Decision*, p 119

<sup>135</sup> AER 2011, *Draft Decision*, pp 118-22

<sup>136</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 129

<sup>137</sup> AER 2011, *Draft Decision*, p 110

<sup>138</sup> AER 2011, *Draft Decision*, p 120



- Accounting and audit fees;
- Consumables, minor capital etc;
- Building maintenance;
- Quality, safety etc;
- Cleaning, fire systems etc;
- Property rental; and
- Computer licensing.

These costs do not overlap with the costs for the services provided by the corporate group as discussed below and in section 9.3.2 of the NT Gas December 2010 submission. There is therefore no scope for double counting to be included in the measurement of corporate overheads.

Moreover, it would be reasonable to assume that these local costs, which are currently incurred by NT Gas, would continue to be incurred by the local subsidiary in the future.

NT Gas does not expect to see a commensurate reduction in local overhead costs associated with a change in governance structure within the business. Its remote location means that APA Group must maintain a senior management structure in NT, including a general manager, to ensure appropriate corporate and financial governance and responsibility is maintained on the ground in the NT. It is also necessary to maintain senior engineering, marketing and commercial staff, as well as local accounting and procurement functions. The AER has previously concluded that it “considers it is reasonable to expect that NT Gas’s level of local overheads is affected by the remoteness of the AGP”.<sup>139</sup>

As shown in Figure 4.7 of the AER’s draft decision, and as noted by the AER on page 119 of the draft decision, these local costs have remained quite stable over time and are forecast to remain stable into the access arrangement period. The AER has accordingly accepted the forecast level of local overheads.<sup>140</sup> NT Gas has retained its forecast for local overheads at the same level as that in its December 2010 proposal.

## 7.1.2 Corporate costs

### *Centralised corporate overheads*

As discussed in the NT Gas December 2010 submission (section 9.3.2), the APA Group corporate costs consist of the following functions:

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<sup>139</sup> AER 2011, *Draft Decision*, p 120

<sup>140</sup> AER 2011, *Draft Decision*, p 120



- Chief Executive Officer function;
- Company Secretary function – including annual reporting, general meetings, risk management, compliance management, directors costs and general administrative costs;
- Corporate Finance function – including, treasury, tax, budgeting, general financial and management accounting;
- Corporate Commercial function – including corporate legal, investor relations, strategic planning and general commercial functions;
- Operations – including general oversight of the operations functions of all assets;
- Human Resources – including health safety and environment, employee communications, payroll, recruiting;
- Financial Services Centre (e.g., accounts payable processing);
- IT; and
- Technical services – including asset management, engineering services and project management.

As discussed above, these functions do not overlap with the functions performed locally. There is therefore no scope for double counting to be included in the measurement of corporate overheads.

As discussed in the NT Gas December 2010 submission, APA Group corporate costs are based on a comprehensive planning and review process, subject to rigorous commercial disciplines including APA Board approval. Particularly as the APA Group owns a number of non-regulated assets which are not subject to a regulatory cost recovery mechanism, the AER can take comfort that the amount of corporate overheads incurred represent the least cost that need to be incurred.

Also as discussed in the December 2010 NT Gas submission, APA Group allocates corporate costs on a consistent basis across the organisation. This was demonstrated in the APT Allgas submission and accepted by the AER in its draft decision on that network, and in the NT Gas draft decision.<sup>141</sup>

APT Allgas also filed a benchmarking report from KPMG which indicated that there were economies of scale achieved, in that the allocated corporate costs were indeed less than the benchmark stand alone costs.

NT Gas therefore submits that the forecast of corporate overheads to be recovered by NT Gas is reasonable in total and does not include any element of double counting as surmised in the AER draft decision.

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<sup>141</sup> AER 2011, *Draft Decision*, p 120



### *Level of corporate costs*

NT Gas acknowledges the concerns expressed by the AER regarding the difference between the level of 2010/11 corporate overheads as forecast in 2001 and the level of corporate overheads forecast for the upcoming period.<sup>142</sup> The AER surmised that “the large increase in total overhead costs, when compared with the earlier access arrangement period, may indicate that the level of double counting is likely to be substantial”<sup>143</sup>.

NT Gas has demonstrated above that there is indeed no scope for double counting of corporate costs in the NT Gas submission. It is reasonable, then, for the AER to question the increase in corporate overhead costs from the current (actual) to future (forecast) access arrangement periods.

NT Gas submits that the responsibilities of corporate management have changed significantly in recent years, and these changes in the corporate environment would invalidate any comparisons made between current actual costs and a forecast developed ten years ago. Particularly in light of the Global Financial Crisis, the requirements for rigorous corporate governance procedures have become more and more onerous.

NT Gas also notes that it is not reasonable to assume that corporate costs calculated in 1999 are comparable to those that may apply in 2011. As an example, substantial increases in corporate governance requirements, human resourcing, health and safety and taxation laws have been implemented in this time. These all contribute to increased total corporate costs which are reflected in the allocation to NT Gas for the access arrangement period.

These costs have been assessed as efficient for other pipelines within the APA Group, most recently in the draft decision on the APT Allgas gas distribution network. The consistency of allocation of costs, and that fact that the level of required corporate overhead costs were validated in the APT Allgas access arrangement process, indicates that the forecast level of corporate overheads does represent a reasonable forecast.

NT Gas submits that the level of forecast local and corporate overhead costs represents the best forecast or estimate possible in the circumstances in accordance with Rule 74.

### 7.1.3 Insurance

NT Gas forecast its insurance costs for the access arrangement period based on an insurance estimate prepared by Marsh Pty Ltd (Marsh), APA Group’s insurance broker. Marsh prepared the estimate after an assessment of the risks and revenues derived from the NT Gas business. The insurance estimate was \$1.3 million per year (\$2010/11). This estimate related only to the regulated pipeline (AGP).

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<sup>142</sup> AER 2011, *Draft Decision*, p 119

<sup>143</sup> AER 2011, *Draft Decision*, p 120



In light of the AER's concern over the detail provided by NT Gas on the basis of this quote, NT Gas has asked Marsh to provide NT Gas with further details as to the basis of its estimate. These details as prepared by Marsh are provided at confidential Attachment E.

NT Gas acknowledges that its insurance estimate represents a significant increase on that allocated to NT Gas in the earlier access arrangement period. c-i-c

NT Gas notes that its insurance forecast has been developed on the same basis (and by the same broker) as that used and accepted by the AER in respect of the APT Allgas gas distribution network.<sup>144</sup>

NT Gas considers that estimate of insurance costs for the AGP, supported by the data provided at confidential Attachment E, represents the best forecast or estimate possible in the circumstances, and is consistent with the requirements of Rule 91.

NT Gas is very concerned that should the AER persist with its decision not to approve NT Gas' forecast for insurance it will leave NT Gas without any allowance for insurance in its forecast operating expenditure. The AER's draft decision does not include any allowance for this important and prudent expenditure. This fact is clearly shown in Figure 7.4 of the AER's draft decision, where historic and forecast insurance costs are graphed separately from local and corporate overheads, and operations and maintenance expenditure. The AER's amendment 9.1 clearly removes the full amount of NT Gas' forecast insurance costs.

NT Gas does not consider that the AER's decision not to approve an allowance for insurance is appropriate or consistent with the revenue and pricing principles. NT Gas considers that its forecast was reasonably based and supported by evidence provided to the AER during the review process.<sup>145</sup> NT Gas considers that the AER must provide NT Gas with an allowance for insurance, and that its forecast provided in this submission, supported by additional information, represents the best forecast or estimate possible, and must be approved by the AER in accordance with Rule 91 and Rule 49(2).

#### 7.1.4 Regulatory costs

NT Gas notes the AER's acceptance of its proposed regulatory costs, making up part of its overheads expenditure forecast. The AER found that the amount represented the best forecast or estimate possible in the circumstances, and met the Rule 91 operating expenditure criteria. In reaching this conclusion, the AER noted that these

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<sup>144</sup> APT Allgas Energy Pty Ltd 2010, *Access Arrangement submission, effective 01 July 2011 – 30 June 2016*, 30 September, p 94

<sup>145</sup> NT Gas 2011, *Email to the AER*, 23 February





costs were comparable to estimated regulatory costs in the earlier access arrangement period.<sup>146</sup>

NT Gas' forecast scheduled this expenditure to occur in 2015/16, in line with its proposed revisions submission date of 1 January 2016.

In accordance with the AER's amendment to NT Gas' access arrangement that changes the revisions submission date to 1 July 2015 (AER amendment 12.11)<sup>147</sup> which NT Gas has accepted in this revision proposal, NT Gas now expects to incur regulatory costs associated with developing its next revision proposal in 2014/15.

NT Gas has therefore rescheduled this expenditure to occur in 2014/15, without changing the level of expenditure, which the AER has determined to be consistent with the Rules. This change is reflected in NT Gas' revised forecast for operating expenditure.

## 7.2 Operations and maintenance expenditure

### 7.2.1 Base year selection and adjustments

#### *Base year selection*

NT Gas used 2009/10 as its base year for calculating its forecast operations and maintenance expenditure.<sup>148</sup> The AER accepted the use of 2009/10 as the base year for forecast expenditure, noting that expenditure in the proposed base year was consistent with expenditure in other years of the earlier access arrangement period that the base year was sufficiently close to the forecast period to represent an accurate reflection of NT Gas' costs.<sup>149</sup>

NT Gas has retained the use of 2009/10 as its base year for calculating its forecast operations and maintenance expenditure.

#### *Base year adjustments*

NT Gas' adjusted its operations and maintenance expenditure base year amount to take account of:

- Abnormal labour allocation in the base year associated with work undertaken on non-regulated assets; and
- Non-routine expenditure.

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<sup>146</sup> AER 2011, *Draft Decision*, p 122

<sup>147</sup> AER 2011, *Draft Decision*, pp 187-9

<sup>148</sup> NT Gas 2010, *Revision Proposal Submission*, December, pp 123-4

<sup>149</sup> AER 2011, *Draft Decision*, p 110



The AER accepted these adjustments to the base year finding that forecast expenditure derived from the adjusted base year represents expenditure that would be incurred by a prudent service provider as required under Rule 91.<sup>150</sup>

## 7.2.2 Step changes

The AER accepted the majority of NT Gas' proposed step changes as meeting the requirements of Rule 91.<sup>151</sup> NT Gas has made no further revisions to these step changes. Relevant annual or routine step changes are:

- Base year DCVG dig-ups;
- Changed requirements for Cathodic Protection surveys;
- Access lease fees;
- SCADA costs associated with asset changes; and
- Replacement of emergency response trucks.

Forecast expenditure associated with these step changes has been incorporated into forecast operating expenditure in line with NT Gas's December 2010 proposal and the AER's draft decision.

The AER also accepted the majority of non-annual expenditure forecast by NT Gas. NT Gas has made no further revisions to these forecasts. Relevant non annual expenditure is:

- Right of way erosion;
- Intelligent pigging; and
- Battery replacement.<sup>152</sup>

Forecast expenditure associated with this non-annual expenditure has been incorporated into forecast operating expenditure in line with NT Gas' December 2010 proposal and the AER's draft decision.

### *Increased integrity works*

The AER did not accept NT Gas' proposal to include an ongoing adjustment to forecast operating and maintenance expenditure associated with the increasing number of DCVG dig-ups required as the pipeline ages. The AER considered that this step change is not required given that it approved the base year DCVG dig-ups

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<sup>150</sup> AER 2011, *Draft Decision*, p 111

<sup>151</sup> AER 2011, *Draft Decision*, Table 7.7

<sup>152</sup> AER 2011, *Draft Decision*, Table 7.7



step change, and additional labour in the base year associated with labour recoveries.<sup>153</sup>

NT Gas accepts this amendment and has removed ongoing integrity works expenditure from forecast operating expenditure.

#### *Above ground station recoating*

The AER did not accept NT Gas' proposed non-annual expenditure adjustment associated with above ground station recoating. The AER considered that this expenditure was already incurred in the base year and therefore was not consistent with Rule 91. This was based on the schedule for station recoating every two years.<sup>154</sup>

NT Gas acknowledges that the schedule of above ground station recoating expenditure submitted by NT Gas would suggest that this expenditure also occurred in the base year. NT Gas can confirm, however, that there is no expenditure for above ground station recoating currently included in the base year, and that the proposed two-yearly schedule for recoating commences in the access arrangement period.

NT Gas notes that the AER does not consider that this expenditure is inappropriate for inclusion on forecast operating expenditure, only that it has already been compensated for in the base year roll forward. This conclusion was also supported by Wilson Cook who noted that NT Gas' proposed step changes met their usual criteria for step changes.<sup>155</sup>

NT Gas has reinstated the non-annual amounts associated with this activity in its forecast operating expenditure.

#### *Additional step change included in this revised proposal*

As discussed above, the AER raised concerns over potential double counting between local and corporate overheads in regards to the overheads operating expenditure category.<sup>156</sup> NT Gas has shown that there is no scope for double counting between these subcategories of overheads expenditure, and that the local overheads category includes non-labour overhead elements such as electricity, property rental, local legal and travel costs that are not reflected in NT Gas' allocation of corporate costs.

In light of the AER's concerns, however, NT Gas has undertaken a detailed review of future functional allocations and responsibilities following the dissolution of the current NT Gas governance structure. As a result of this review, NT Gas has identified a number of functions that will no longer be undertaken within the NT Gas local management structure, and will instead be undertaken at a corporate level.

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<sup>153</sup> AER 2011, *Draft Decision*, Table 7.7

<sup>154</sup> AER 2011, *Draft Decision*, Table 7.7

<sup>155</sup> Wilson Cook & Co 2011, *Review of expenditure in relation to the Amadeus Gas Pipeline: Preliminary Assessment*, 14 January, p 2

<sup>156</sup> AER 2011, *Draft Decision*, p 119



Costs associated with these functions are situated in the operations and maintenance category as they are labour-related, and all NT Gas local labour costs are allocated to this operating expenditure category.

NT Gas considers that the specific circumstances associated with the end of the leasing arrangements for the AGP can be considered to constitute a negative step change in costs associated with a change in local governance requirements arising from the dissolution of the current NT Gas governance structure. For example to date, NT Gas has operated under its own local governance structure with a dedicated Board and company secretary role. With the dissolution of the Amadeus Gas Trust, these functions will disappear immediately, and it is appropriate to recognise these changes in functions in forecast expenditure.

Details of the calculation of this step change are provided in confidential Attachment F, and amount to a \$206,000 (\$2010/11) adjustment to the operations and maintenance base year. This means that the step change in costs applies to the full access arrangement period.

NT Gas does not consider that such a step change or adjustment would be appropriate for pipelines or networks where changes in ownership or structure are expected to yield efficiency or productivity gains. As discussed further below in relation to the AER's use of a productivity adjusted labour measure, NT Gas does not consider that it is appropriate to apply up-front efficiency gains or expectations in an incentive based *ex ante* regulatory regime. This is because the regulatory regime is intended to provide the service provider with an incentive to pursue efficiency gains as these gains are not immediately returned to users. NT Gas also notes that in many cases efficiency or productivity gains come with an upfront cost, which must be recovered by the service provider before efficiency gains are passed on to customers.

### 7.3 Sales and marketing expenditure

NT Gas forecast expenditure in the sales and marketing operating expenditure category of \$172,000 in each year of the access arrangement period. This amount was derived from historic forecasts made when there was gas available for transport on the pipeline.<sup>157</sup>

The AER did not accept this forecast in its draft decision, finding that this was not a sufficient basis on which to base the proposed increase in NT Gas' expenditure. The AER instead used NT Gas' expenditure for 2010/11 (the last year in the earlier access arrangement period) as a basis for future expenditure. The AER reasoned that this expenditure was made after the changed circumstances of the gas supply and is likely to reflect actual expectations of expenditure in this category.<sup>158</sup>

NT Gas considers that the forecast included in the original proposal represented a best estimate of a return to 'normal' levels of expenditure in this category following a period where the lack of availability of gas and capacity in the AGP meant that

<sup>157</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 133

<sup>158</sup> AER 2011, *Draft Decision*, p 122



marketing activity effectively ceased. Forecast expenditure in this category is associated with:

- Preparation of draft and final confidentiality agreements, term sheets and contracts;
- Meetings, negotiations and legal advice related to agreements;
- Technical reviews and flow modelling to assess pipeline capacity to deliver gas as per prospective user requirements; and
- Promotional material such as landowner packs and sponsorships.

NT Gas notes the AER's preference to base operating expenditure on historic realised expenditure as a way of determining efficient costs. NT Gas accepts that its forecast for sales and marketing expenditure has not been made on this basis, and that it is unable to provide the AER with more information to support its forecast as its forecast relates to activities that are by their nature responsive rather than proactive. On this basis NT Gas accepts the AER draft decision to reduce forecast sales and marketing expenditure to that shown in 2010/11, and has reflected this in its revised proposal.

## 7.4 Real labour cost escalators

### 7.4.1 Methodology to derive real cost escalators

In its original proposal NT Gas proposed to apply a 1.5 per cent per annum real labour cost escalator to labour costs over the forecast period. This labour escalator was derived from the ABS national average weekly earning data for electricity, gas, water and wastewater services, and was below NT Gas' observed salary growth over the same five-year period.<sup>159</sup>

The AER did not accept NT Gas' forecast of labour escalation applied over the forecast period. The AER concluded that:

- the forecasting methodology was not sufficiently rigorous;
- the proposed labour cost index measure is inappropriate; and
- the escalators do not properly account for productivity effects, and therefore do not distinguish between wages and labour costs.<sup>160</sup>

The AER therefore applied productivity-adjusted real cost escalators developed by Deloitte Access Economics in place of NT Gas' own labour cost escalators.<sup>161</sup>

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<sup>159</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 85

<sup>160</sup> AER 2011, *Draft Decision*, p 112

<sup>161</sup> AER 2011, *Draft Decision*, p 113



NT Gas does not accept the AER's amendments to its proposed labour escalator which substitute NT Gas' proposal with the AER's preferred forecast. NT Gas does not consider that the AER's forecast, which has been prepared by Deloitte Access Economics, represents a superior forecast to that proposed by NT Gas as:

- the Deloitte Access Economics forecast has not been based on NT utility-specific data, but instead uses national data with extensive assumptions; and
- information released since the completion of the report, including the Federal Budget Papers and Deloitte Access Economics' own forecasts prepared for the Northern Territory Government, provide an update on information presented in the Deloitte Access Economics' report, such that the expectation of negative real labour growth cannot be considered a best estimate.

These issues are discussed below.

#### *Basis of the NT Gas and Deloitte Access Economics forecast*

The AER's draft decision dedicates considerable discussion to the merits of the methodology used by Deloitte Access Economics in developing its forecast. These merits include imputed benefits associated with Deloitte Access Economics:

- Using a macro-economic model to derive its forecasts<sup>162</sup>;
- Using the Australian Bureau of Statistics' (ABS) Labour Price Index (LPI)<sup>163</sup> as opposed to using the AWOTE index; and
- Adjusting forecasts for expected productivity gains<sup>164</sup>.

On the basis of these benefits, the AER rejects NT Gas' methodology for developing its labour escalators, stating that it does not consider that judgement alone is a reasonable basis on which to forecast real escalation of costs, and that the AER developed escalators constitute a superior forecast.

NT Gas does not accept the AER's analysis and considers that the AER's assessment of both the basis of NT Gas' forecast, and the superiority of that prepared by Deloitte Access Economics, is flawed.

NT Gas considers that the AER's description of NT Gas' forecast methodology as being based on judgement alone is incorrect, as it does not adequately recognise the basis of NT Gas' forecast. NT Gas derived its labour escalator from the ABS national average weekly earnings data for electricity, gas, water and waste water services (EGW) for the five years leading up to the submission date for the revision proposal. The average annual growth in this measure over the five years was 4.47 per cent.<sup>165</sup> NT Gas used this data as a base level to estimate future EGW labour costs in the absence of NT-specific utility sector data.

<sup>162</sup> AER 2011, *Draft Decision*, p 113

<sup>163</sup> AER 2011, *Draft Decision*, pp 114-5

<sup>164</sup> AER 2011, *Draft Decision*, pp 115-6

<sup>165</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 85



NT Gas then calculated its historic annual labour growth over the same five years. It did this by calculating the percentage increments awarded to employees in each of these years. This approach means that increases in labour costs which may be driven by matters independent of underlying salary growth, such as additional personnel to cover leave periods, timing and delays in recruiting, resignations, hand-over periods, market corrections and promotions of existing personnel to new positions, are not reflected in NT Gas' historic labour cost growth calculation. The resulting value was an annual salary growth rate of 4.34 per cent.

NT Gas then used this value to compare it to the national value, and to provide an insight as to the NT-specific changes in labour costs. Finding the values to be similar, NT Gas chose a conservative forecast value of 4 per cent (applied as a 1.5 per cent real adjustment based on forecast inflation of 2.5%) for adjusting its labour costs for the access arrangement period. NT Gas considered that this historic forecasting approach represented the best forecast or estimate possible in the circumstances given the absence of NT-specific utility measures on which to base a more detailed forecast, and its assessment of the future pressure it would face in the labour market.

On this basis, NT Gas used available internal and independent information, in addition to its judgement, to make its forecast.

#### Use of macroeconomic models

In contrast, the AER states that a “rigorously derived forecast series of cost growth projections would have to be derived with a rigorous methodology that satisfies r.74 of the NGR”. The AER goes on to note that “consequently, the AER has only accepted labour cost escalator forecast where they have been derived based on an established macroeconomic model”, while at the same time noting that the Access Economics' AEM model is one such macroeconomic model.<sup>166</sup>

NT Gas considers that it has derived its forecast using a methodology that satisfies Rule 74, by using the best available information on which to derive its forecast. NT Gas does not accept the AER's assertion that the use of a macroeconomic model is the only basis on which real cost escalators that satisfy Rule 74 can be developed. This suggestion imputes a kind of magical quality to forecasts made through such models, without recognising that these models are only as good as the data and assumptions which form the basis of their output.

The Deloitte Access Economics model is not publicly available and therefore NT Gas (and the AER) has not had opportunity to assess the veracity of the model or the assumptions it uses. There is therefore no available evidence from which to draw the conclusion that the AER has that the outputs of this model are necessarily superior to NT Gas' forecast based on the workings of the model.

#### Data constraints

It is therefore only appropriate to consider the quality of the data available on which to make the forecast. NT Gas does not consider that Deloitte Access Economics has

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<sup>166</sup> AER 2011, *Draft Decision*, p 113



developed a superior forecast that would justify its substitution for that developed by NT Gas on this basis. The Access Economics report states:

Note that the ABS numbers for the Territory are subject to lack of availability and considerable volatility. No LPI series are produced for NT industries..., and utilities AWE/AWOTE is not produced for the NT either.

As a result, Deloitte Access Economics' NT LPI figures for utilities are imputed rates based on national and wider State trends. NT figures for the other industries are based on recorded related AWOTE/AWE trends.<sup>167</sup>

Therefore, Deloitte Access Economics was subject to the same information limitations as NT Gas in deriving an NT-specific utilities measure.

While NT Gas addressed the lack of available data by referring to its own observed labour cost movements (assessed by the AER in its draft decision to be efficient<sup>168</sup>), Deloitte Access Economics did not do this, and instead used data from "wider state trends". It is unclear exactly what data Deloitte Access Economics used as this is not described in any way in the Deloitte Access Economics report. What is clear is that Deloitte Access Economics used adjusted values *and its judgement* in deriving its forecast. It is therefore incorrect for the AER to assert that the Deloitte Access Economics' forecast is superior because it is derived from a macroeconomic model as opposed to the use of judgement, as it is clear that judgement had a principal role to play in Deloitte Access Economics' forecasting methodology.

The Deloitte Access Economics report provides no further information regarding the macroeconomic inputs used to derive a NT specific estimate, and therefore NT Gas (and the AER) have no basis on which to assess these other inputs to the model, or their effect on resulting values.

### LPI versus AWOTE

A further issue raised by the AER related to its preference for using LPI over AWOTE figures to forecast real labour growth. Putting aside the active debate waged in the past over the AER's preference for using the LPI measure<sup>169</sup>, it is incorrect to suggest that the Deloitte Access Economics forecast is based on measured labour price movements.

As set out above, Deloitte Access Economics faced significant data shortfalls in making its forecast, one of which was the lack of LPI data for any NT industry. Without providing any detail as to how it made its calculations, Deloitte Access Economics states that its LPI measures are imputed rates based on wider national and state trends, with NT figures based on recorded related AWOTE/AWE trends.<sup>170</sup>

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<sup>167</sup> Deloitte Access Economics 2011, *Australian Energy Regulator: Northern Territory LPI Growth*, April, p 3

<sup>168</sup> AER 2011, *Draft Decision*, pp 111-2

<sup>169</sup> Envestra 2011, Queensland Access Arrangement Information: Attachment 6-9 October 2010, 23 March, pp 23-7

<sup>170</sup> Deloitte Access Economics 2011, *AER: NT LPI Growth*, April, p 3





The AER went to great lengths in its draft decision to establish that the AWOTE and LPI measures can vary from each other over time, with the AWOTE measure being a more volatile measure, making it an inappropriate basis on which to make a forecast. The AER provided the following graph (Figure 7.1) to demonstrate its point.

**Figure 7.1 – Growth in AWOTE and LPI, Australian utilities sector – graph used in AER draft decision<sup>171</sup>**



Given the lack of NT LPI figures, and the lack of relationship between LPI and AWOTE demonstrated in the AER's graph, it is difficult to see how Deloitte Access Economics drew the conclusion stated in its report that "while the Territory's economy is yet to take off in response to the second resources boom, local LPI trends have continue [sic] to outpace the national rate<sup>172</sup>". At best, this conclusion appears to be based on Deloitte Access Economics' assessment of NT projects past, present and future, rather than an analysis of data and the output of a macroeconomic model. It is difficult to see how in these circumstances that Deloitte Access Economics can derive a forecast to the level of accuracy imputed in its tables, where it can predict movement is the NT LPI to 0.1 of a per cent, five years from its forecast.

In its concluding discussion to the escalator section in its draft report, the AER points to the use by Deloitte Access Economics of LPI figures over AWOTE figures as a key reason for rejecting NT Gas' proposed labour escalators "because of its [LPI's] suitability at the required level of state-sectoral disaggregation"<sup>173</sup>. As set out above, NT Gas refutes that Deloitte Access Economics uses LPI figures at a state or sectoral level in respect of its forecast, as the Deloitte Access Economics report itself states that these figures are not available. A key basis for the AER's rejection of NT Gas' proposal is therefore based on incorrect information.

NT Gas also endorses the expert opinion made by Professor Jeff Borland for Envestra in respect of the Queensland and South Australian gas network access

<sup>171</sup> AER 2011, *Draft Decision*, p 114

<sup>172</sup> Deloitte Access Economics 2011, *AER: NT LPI Growth*, April, p 2

<sup>173</sup> AER 2011, *Draft Decision*, p 117



arrangement revision processes with regard to the relative suitability of using the LPI over AWOTE in forecasting future labour costs. Professor Borland wrote:

The AWOTE series is, in my opinion, on both theoretical and practical grounds, the best series according to the test to be used as the basis for forecasts of future labour costs. First, in deriving a productivity adjusted measure of labour costs, it is necessary for the earnings measure used to incorporate effects of changes to labour productivity – both due to composition effects and increases in the productivity of individual workers; otherwise the measure of changes to labour costs will under-estimate true changes in labour costs. It is the AWOTE series that best reflects the effects of changes to average worker productivity on earnings. That AWOTE reflects labour market fundamentals has been confirmed by the benchmarking exercise I have undertaken which shows that – over the longer-term – the rate of change in AWOTE is closely related to the sum of the rates of change in the CPI and labour productivity. Second, for forecasting future earnings, and on the basis of the length of the time series of data available, I am not aware of practical problems with using AWOTE that would not also exist for other earnings series such as LPI.<sup>174</sup>

NT Gas therefore considers that the AER's preference for using LPI over AWOTE is not appropriate and does not yield the best estimate of labour escalators possibility in the circumstances. A second report prepared for Envestra by Economics Insights further supports this conclusion.<sup>175</sup>

NT Gas submits that the AER's preference for a forecast based on a macroeconomic model is a rule of its own making, and is not a necessary requirement for satisfaction of Rules 74, 79 or 91. The implicit assumption made by the AER is that forecasts made by macroeconomic modelling are superior to those using historic information and judgement. NT Gas submits that the veracity of this assumption is highly dependent on the quality of the model, the data inputted into the model and the judgement made by the modeller in adjusting values. NT Gas considers that in each of these areas the AER has not demonstrated that Deloitte Access Economics has produced a superior forecast. In fact, the basis provided by the AER for preferring Deloitte Access Economics' inputs for the model, namely the use of LPI figures, is unfounded on the evidence, and on analysis found to be inappropriate.

### Productivity gains

One final reason why the AER considers that the Deloitte Access Economics should substitute for NT Gas' forecast is in the recognition of productivity gains.

This is a relatively new position for the AER, first enunciated in respect of the Queensland and South Australian gas distribution businesses.<sup>176</sup> Previous to these decisions, the AER had always adopted escalators that were not productivity-

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<sup>174</sup> Professor Jeff Borland 2011, Labour cost escalation report for Envestra Limited, March, pp 13-4

<sup>175</sup> Economic Insights 2011, Review of AER Draft Decisions on Envestra Queensland's and Envestra South Australia's input price escalators, 22 March

<sup>176</sup> For example, Australian Energy Regulator 2011, *Envestra Limited Access Arrangement proposal for the Qld gas network 1 July 2011 – 30 June 2016: Draft Decision*, February, p 140



adjusted, despite Access Economics providing escalators to the AER both before and after productivity adjustment.<sup>177</sup>

In respect of the Victorian electricity draft determination, the AER noted that it considered applying productivity-adjusted measures to the Victorian electricity network businesses but concluded that it 'does not consider it necessary to include further productivity adjustments', concluding that Access Economics' wages cost growth forecasts reflect a realistic expectation of labour costs.<sup>178</sup> This suggests that the AER's application of productivity-adjusted escalators to NT Gas is related to an assumption that 'further' productivity adjustments are appropriate to apply to NT Gas.

The AER does not provide any reasons in its draft decision as to the basis on which NT Gas should have further productivity gains assumed in its labour costs. NT Gas notes that the AER applied significant productivity expectations on NT Gas through cuts to NT Gas' proposed corporate overheads budget due to its assessment of the potential for 'double counting' of costs between local and corporate overheads as functions became more centralised. While NT Gas has established above that the AER's expectations of potential efficiencies do not arise with respect to overlap between local and corporate costs, NT Gas has identified a step change in costs that will arise from some centralisation of functions, and has proposed a reduction to its operations and maintenance forecast to reflect this change. Given this, NT Gas does not consider that it is appropriate to apply a further productivity expectation on NT Gas.

NT Gas further notes that use of a productivity adjusted LPI figure effectively double adjust for productivity gains.<sup>179</sup> Taken in concert with the negative step change discussed above, use of productivity adjusted LPI figures in respect of NT Gas' forecast labour costs would triple count future productivity gains. NT Gas does not consider that this would be consistent with the revenue and pricing principles which require that service providers be provided with a reasonable opportunity to recover at least the efficient costs the service provider includes in providing reference services.<sup>180</sup>

Further, NT Gas does not consider that such an approach would be consistent with the incentive properties of the gas access regime. One of the regime's key features is an *ex ante* setting of revenue based on efficient costs, with the service provider able to retain for a period any efficiency gains or savings made during the period. This is intended to provide the service provider with an incentive to pursue efficiency gains as these gains are not immediately returned to users. The application of an up-front, unspecified efficiency or productivity expectation is not consistent with this incentive-based approach. This argument has previously been made by GasNet in respect of

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<sup>177</sup> For example, Access Economics 2009, *Forecast growth in labour costs: Report by Access Economics Pty Limited to the Australian Energy Regulator*, 16 September, p 66 and Australian Energy Regulator 2009, *Queensland draft distribution determination 2010-11 to 2014-15: Draft Decision – Appendices*, 25 November, p 608

<sup>178</sup> Australian Energy Regulator 2010, *Victorian electricity network service providers distribution determination 2011-2015: Draft Decision – Appendices*, June, p 133

<sup>179</sup> Professor Jeff Borland 2011, *Labour cost escalation report*, p 2

<sup>180</sup> National Gas Law, section 24



efficiency gains for the Victorian Principal Transmission System<sup>181</sup>, and accepted by the ACCC in its final decision.<sup>182</sup>

The Deloitte Access Economics report prepared for the AER for the Northern Territory Government includes no detail as to how Deloitte Access Economics calculated its productivity adjustments applied to its 'real LPI' figures. As observed by Professor Borland, previous Access Economics reports prepared for the AER provide only limited information regarding the calculation of productivity gains, and the changes to expected productivity that Access Economics have forecast over time.<sup>183</sup> There is therefore limited information on which to assess Deloitte Access Economics' methodology for deriving its productivity adjusted measures.

NT Gas does not consider that the AER has demonstrated that NT Gas' proposed labour cost escalator does not comply with Rules 74, 79 or 91. This is the test that the AER must pass under Rule 40(2) in order for it not to approve NT Gas' proposed capital and operating expenditure forecasts, including proposed labour escalators.

NT Gas considers that its escalator is the best forecast or estimate possible in the circumstances as it has been developed in accordance with a methodology that utilises available information and also takes account of NT-specific utilities labour changes.

The escalators prepared by Deloitte Access Economics are subject to the same input data limitations as those developed by NT Gas, and do not, contrary to the AER's draft decision statements, reflect the imputed benefits of using NT utility LPI figures, as these do not exist. Nor is the use of a macroeconomic model a necessary precondition for satisfaction of Rules 74, 79 and 91. The AER's 'requirement' for a macroeconomic model is a rule of its own making, without showing why such a model gives superior results. On the contrary, in the absence of necessary inputs, NT Gas contends that a complex model is more likely to lead to erroneous results than a more simple methodology using known measures and judgement.

As a final point, NT Gas does not consider that the *ex ante* application of a productivity gain is consistent with an incentive based regulatory regime and the fact that a step change in resource requirements is already reflected in the AER's draft decision and NT Gas' revised proposal.

On these bases, NT Gas does not consider that the AER has shown that NT Gas' methodology to forecast escalators does not comply with rules 74, 79 and 91, and has therefore retained its methodology in this revised proposal.

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<sup>181</sup> APA Group 2007, *Response to the Commission's draft decision on proposed access arrangement for the Principal Transmission System*, 20 December, pp 38-41

<sup>182</sup> Australian Competition and Consumer Commission 2008, *Final Approval Revised access arrangement by GasNet Australia (operations) Pty Ltd and GasNet (NSW) Pty Ltd for the Principal Transmission System*, 25 June, p 9

<sup>183</sup> Professor Jeff Borland 2011, *Labour cost escalation report*, p 13



*Information released since preparation of the Deloitte Access Economics' forecast*

NT Gas has identified a number of reports released since the Deloitte Access Economics' report prepared for the AER that provide further support to NT Gas' forecast of real labour growth over the access arrangement period, as opposed to the productivity adjusted forecasts prepared by Deloitte Access Economics which see labour costs reduce in real terms over the period. In particular, Deloitte Access Economics has prepared forecasts for the Northern Territory Government released on 7 and 27 April 2011 that provide further information as to expected employment pressures in NT.

The NT Government's economic brief for the March Quarter 2011, prepared by Deloitte Access Economics states:

Deloitte Access Economics notes that the Territory's economic growth slowed in 2009-10 because the Territory was between major projects. However, Deloitte Access Economics states that "there are some megaprojects shimmering on the horizon" and forecasts a recovery in 2010-11, followed by strong growth through to 2014-15 [the forecast window].<sup>184</sup>

This assessment appears inconsistent with Deloitte Access Economics' assessment in its report for the AER that the NT economy is currently "between projects", with big construction works completed, by only smaller new works starting, "limiting the potential for the Territory's output growth to turn upward".<sup>185</sup>

Deloitte Access Economics' assessment that the NT is currently "between projects" appears a major driver of its forecast and is indeed the only NT-specific information contained in the Deloitte Access Economics report prepared for the AER. As an example, Deloitte Access Economics notes that the NT construction sector has eased back, and that "this is important, because the construction [sic] and mining sectors can have notably competitive impacts on wage costs for the utilities sector".<sup>186</sup> This is therefore a specified reason why Deloitte Access Economics has forecast a reduction in real labour growth in the NT over the access arrangement period.

The expected pick-up in construction activity in NT forecast by Deloitte Access Economics in its later papers for the NT Government will have a significant impact on wages due to the tightness of the NT labour market. As noted in the NT Government March 2011 Labour Force economic brief released on 7 April 2011, NT has only limited capacity to meet increased labour demand, with the lowest unemployment rate in Australia, and the year to March 2011 registering the lowest unemployment rate in the Territory since ABS records began. Given that this period overlaps with Deloitte Access Economics' assessment of 2009/10 being a relatively weak period for NT, labour pressures can only be expected to increase from current levels.

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<sup>184</sup> Northern Territory Government 2011, *Deloitte Access Economics March Quarter 2011 Economic Brief*, 27 April, p 1

<sup>185</sup> Deloitte Access Economics 2011, *AER: NT LPI Growth*, April, p 1

<sup>186</sup> Deloitte Access Economics 2011, *AER: NT LPI Growth*, April, p 2



NT Gas further notes that the availability of NT Gas labour will be most affected by increases in private construction investment, the market in which NT Gas competes for labour, which Deloitte Access Economics forecasts to grow by 18.6 per cent over the five years to 2014-15, with the biggest annual rise in expenditure expected in 2011-12 of 58.5 per cent.<sup>187</sup> It is therefore difficult to see how in this same period the Utilities measure will record a productivity-adjusted real labour cost reduction of 0.2 per cent.

This view is supported by the 2011-12 Federal Budget Overview papers, which note that:

Labour market constraints are likely to increase as the mining boom ramps up, with businesses not linked to the boom likely to find it relatively more difficult to attract and retain workers.

Price and wage pressures are also likely to emerge in some sectors as the labour market tightens.<sup>188</sup>

In total, from the recently released economic data for the Northern Territory and the Federal Government it is reasonable to conclude that NT Gas' labour costs will increase significantly over the access arrangement period, and that this increase will outstrip CPI. It is reasonable to conclude that the overall conditions, including the historically low unemployment rate, employment growth above trend, and growth in the competing private construction sector, will lead to wage growth greater than that experienced in the earlier access arrangement period. This makes NT Gas' forecast, which is in line with growth experienced over the earlier access arrangement period, a very conservative forecast and one that is supported by the most recently available evidence. In light of this, NT Gas has not adopted the AER's proposed labour escalators and has retained its own escalators, as it considers that these represent the best forecast or estimate possible in the circumstances (consistent with Rule 74), and lead to an operating expenditure forecast that is consistent with Rule 91.

## 7.4.2 Breakdown of labour costs

NT Gas proposed to apply its labour escalator to:

- outsourced labour as a component of capital expenditure;
- labour component of operations and maintenance operating expenditure
- corporate costs; and
- regulatory costs.

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<sup>187</sup> NT Government 2011, *Deloitte Access Economics March Quarter 2011 Economic Brief*, 27 April, p 4

<sup>188</sup> Australian Government 2011, 2011-12 Budget Overview, 10 May, p 6, accessed 24 May 2011 at [http://www.budget.gov.au/2011-12/content/overview/html/overview\\_06.htm](http://www.budget.gov.au/2011-12/content/overview/html/overview_06.htm)



The AER accepted NT Gas' breakdown between labour and other costs used to apply the labour escalator.<sup>189</sup> NT Gas has not revised these weightings in its revised proposal, and therefore these weightings form the basis of NT Gas' capital and operating expenditure forecasts for the access arrangement period.

NT Gas does not accept the AER's breakdown of labour into EGW, General and Construction sectors. NT Gas' proposed escalator has been calculated as a composite escalator, derived as discussed above by calculating the percentage increments awarded to employees in the previous 5 years. It is therefore appropriate to apply this value to all NT Gas labour.

## 7.5 Debt raising costs

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

**Table B.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	
NT Gas proposal	10.8 bppa	Implicit in WACC	(no explicit allowance)						
AER draft decision	10.9bppa	Opex line item	0.07	0.07	0.07	0.06	0.06	0.32	

The AER accepted NT Gas' estimate for debt raising costs, but did not accept NT Gas' proposed methodology which was to include these costs in the WACC (via the cost of debt) rather than in operating expenditure.

NT Gas accepts the AER's shifting of this expenditure to into its revised operating expenditure allowance. This is based on the AER's updated allowance of 10.9 basis points per annum.

## 7.6 Operating expenditure over the earlier access arrangement period

NT Gas has identified a minor error in its allocation of historic operating expenditure between the Operations and Maintenance category and the Overheads category that affects the 2001/02 to 2007/08 amounts provided in the original submission. NT Gas advised the AER of this error on 8 February 2011.<sup>190</sup>

<sup>189</sup> AER 2011, *Draft Decision*, p 113

<sup>190</sup> NT Gas 2011, *Email to AER*, 8 February



NT Gas has corrected this allocation error in this revised proposal and the accompanying access arrangement information. It should be noted that this error does not effect total operating expenditure reported over the earlier access arrangement period, or the base year calculation for forecast operating expenditure.

## 7.7 Revised forecast operating expenditure

NT Gas revised forecast operating expenditure, taking account of the discussion above, is set out in Table 7.1 below.

**Table 7.1 – Forecast operating expenditure over the access arrangement**

<b>\$ '000 (2010/11)</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>	<b>Total</b>
Operations & maintenance	8,810	10,481	8,940	8,977	11,051	48,258
Overheads	4,373	4,436	4,470	5,163	4,540	22,982
Sales & marketing	62	62	62	62	62	309
<b>Total</b>	<b>13,245</b>	<b>14,978</b>	<b>13,471</b>	<b>14,201</b>	<b>15,653</b>	<b>71,549</b>
Debt raising costs	65	72	77	76	74	365





**Table 7.2 – Operating expenditure over the earlier access arrangement period**

<b>\$ '000 (2010/11)</b>	<b>2001/02</b>	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11F</b>	<b>Total</b>
Operations & Maintenance	6,718	7,332	7,946	6,886	7,147	7,158	7,331	8,501	7,525	8,859	75,403
Overheads	1,772	1,980	1,866	1,603	1,629	1,572	1,094	1,421	1,362	1,982	16,281
Sales & Marketing	245	130	73	111	56	48	49	39	61	61	874
<b>Total</b>	<b>8,735</b>	<b>9,442</b>	<b>9,886</b>	<b>8,601</b>	<b>8,832</b>	<b>8,778</b>	<b>8,473</b>	<b>9,961</b>	<b>8,948</b>	<b>10,903</b>	<b>92,558</b>



## 8 Total revenue

**AER Amendment 8.1:** Amend the access arrangement information to delete Table 12.1 and replace it with the following:

**Table 8.3: Forecast total revenue requirements for the access arrangement (\$m, 2010–11, unless otherwise stated)**

	2011–12	2012–13	2013–14	2014–15	2015–16
Return on capital	9.4	9.9	9.8	9.7	9.5
Regulatory depreciation	3.5	2.9	3.1	3.3	0.9
Operating expenditure	11.3	13.3	11.8	12.1	15.2
Tax allowance	0.0	0.9	1.2	1.2	0.7
Total	24.2	27.0	25.9	26.3	26.3
Smoothed revenue path	24.7	25.3	26.0	26.7	27.3
<b>X factor tariff revenue(%)</b>	0.0	0.0	0.0	0.0	0.0

The AER's Amendment 8.1 is a summary amendment taking account of its requirements amendments for the capital base, depreciation, rate of return, taxation and operating expenditure discussed in the preceding chapters. The amendment also includes, however, acceptance of NT Gas' proposed price path with an initial change in tariffs applying in the first year of the access arrangement period, and an X-factor set at zero for the remaining years of the period, meaning that tariffs vary solely by CPI over the access arrangement period.<sup>191</sup>

The following sections set out the components of total revenue proposed by NT Gas in this revised proposal, taking account of the AER's amendments and the discussion in the previous chapters.

### 8.1 Return on capital

The required return on the capital base is discussed in chapter 5, and has been calculated using the revised capital forecasts set out in chapter 3. NT Gas; revised return on the capital base is summarised in Table 8.1 below.

**Table 8.1 – Return on capital**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Return on capital	11,192	12,663	13,855	14,078	13,986

<sup>191</sup> AER 2011, *Draft Decision*, pp 130-1



## 8.2 Regulatory depreciation

NT Gas' revised straight line depreciation over the access arrangement period is discussed in chapter 4. To calculate the amount of regulatory depreciation applicable to the revenue requirement, the amount of indexation of the capital base must be subtracted from the straight line depreciation. The indexation of the capital base is discussed in chapter 5. Together, these two amounts combine to derive the forecast regulatory depreciation as show in Table 8.2 below.

**Table 8.2 – Forecast depreciation over the access arrangement period**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Straight line depreciation	9,882	5,819	6,222	6,516	4,096
Indexation	2,639	2,986	3,267	3,319	3,298
Regulatory depreciation	7,243	2,834	2,955	3,197	798

## 8.3 Corporate income tax

NT Gas' calculation of corporate income tax is set out in chapter 6 above. The resulting corporate income tax allowance is reproduced here in Table 8.3.

**Table 8.3 – Corporate income tax allowance**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Tax allowance	2,782	1,779	1,910	1,985	1,242

## 8.4 Revenue requirement

Combining these components as required under Rule 76 derives a total revenue requirement as shown in Table 8.4 below.

**Table 8.4 – Total revenue requirement**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16
Return on capital	11,192	12,663	13,855	14,078	13,986
Regulatory Depreciation	7,243	2,834	2,955	3,197	798
Operating expenditure	13,652	15,834	14,620	15,803	17,854
Tax Allowance	2,782	1,779	1,910	1,985	1,242
Revenue requirement	<b>34,869</b>	<b>33,109</b>	<b>33,341</b>	<b>35,063</b>	<b>33,880</b>

The present value of this revenue requirement stream, discounted at the WACC of 10.90%, is \$126.2 million.





## 9 Pipeline demand and utilisation

The AER accepted NT Gas' forecasts for minimum, maximum and average demand and total volume by delivery point, user numbers, and capacity and utilisation of the pipeline as being forecast arrived at on a reasonable basis and representing the best forecast possible in the circumstances.<sup>192</sup>

In support of this conclusion, the AER's consultants, ACIL Tasman, considered that in the circumstances the methodology and assumptions used by NT Gas to develop the demand forecasts was sound, and no other viable approach would be likely to yield better or more reliable results.<sup>193</sup>

NT Gas has retained its forecasts for pipeline demand, user numbers capacity or utilisation in this revision proposal and therefore makes no further submission on this aspect of its forecast.

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<sup>192</sup> AER 2011, *Draft Decision*, p 138

<sup>193</sup> ACIL Tasman 2010, *Review of demand forecasts for Amadeus Gas Pipeline for the access arrangement period commencing 1 July 2011*, March, p 12





## 10 Reference Tariff

### 10.1 Allocation of revenue to the reference service

As described in chapter 2, NT Gas proposed a single reference service (the Firm service), and two non-reference services (Interruptible and Negotiable services). NT Gas has allocated all of its revenue to the reference service.

The AER accepted NT Gas' allocation of total revenue to the reference service as being consistent with Rules 93(1) and 93(2).<sup>194</sup>

NT Gas has retained this approach in this revised proposal.

### 10.2 Establishment of user classes and allocation of costs

NT Gas determined that there is a single class of user on the pipeline, and that all revenue should be allocated to that user class.<sup>195</sup> The AER determined that NT Gas' identification of user classes, and the allocation of direct and indirect costs to those user classes, was consistent with Rule 95(3)(b).<sup>196</sup> NT Gas has retained this approach in this revised proposal.

NT Gas proposed a single 'postage stamp' tariff for the Firm service (the reference service) to apply over the access arrangement period. This tariff structure replaced the zonal throughput-based tariff in place in the previous period. After detailed analysis of this proposal and alternative tariff structures, the AER concluded that this tariff structure was consistent with Rule 95(3) and the National Gas Law revenue and pricing principles. In particular, the AER found that the revised tariff structure encourages pipeline utilisation that is in the long term interests of users, prospective users and NT Gas.<sup>197</sup> NT Gas has retained this approach in this revised proposal.

### 10.3 Capacity based charging

As well as proposing a 'postage stamp' tariff structure for the access arrangement period, NT Gas also proposed to move from a throughput based tariff to capacity tariff. The AER accepted this proposal in its draft decision<sup>198</sup>. The AER further accepted that reference tariffs should be calculated based on the sum of forecast

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<sup>194</sup> AER 2011, *Draft Decision*, p 150-1

<sup>195</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 151

<sup>196</sup> AER 2011, *Draft Decision*, p 151

<sup>197</sup> AER 2011, *Draft Decision*, p 155

<sup>198</sup> AER 2011, *Draft Decision*, pp 155-6



MDQ at all of the existing delivery points.<sup>199</sup> NT Gas has retained this approach in this revised proposal.

## 10.4 Calculation of reference tariff

**AER Amendment 10.1:** Revise the 2011–12 reference tariff to \$0.5778 per GJ of delivery point MDQ.

The revenue requirement set out in Table 8.4 above has been smoothed in accordance with Rule 92(2) to present a smoothed price path for the calculation of the reference tariff. The smoothed revenue requirement is set out in Table 10.1 below.

**Table 10.1 – Smoothed revenue requirement**

\$ '000 (nominal)	2011/12	2012/13	2013/14	2014/15	2015/16F
Smoothed Revenue requirement	32,520	33,356	34,213	35,092	35,994

The present value of this smoothed revenue requirement, discounted at the WACC of 10.90%, is \$126.2 million.

This revenue requirement (assuming X-factors set at zero – discussed further in chapter 11) derives a 2011/12 tariff of \$0.7605/GJ.

<sup>199</sup> AER 2011, *Draft Decision*, p 156





# 11 Tariff variation mechanism

## 11.1 Annual tariff variation formula

### 11.1.1 Specification of the formula

**AER Amendment 11.1:** amend section 4.7.1 of the access arrangement proposal as follows:

The Reference Tariff for the Firm Service to apply on 1 July 2012 and on each subsequent 1 July will be adjusted according to the following formula:

$$\text{Reference Tariff}_n = \text{Reference Tariff}_b \times (\text{CPI}_n / \text{CPI}_b) \times (1-X)$$

Where:

*Reference Tariff<sub>n</sub>* is the Reference Tariff for the year (n) in which the Reference Tariff is to be determined

*Reference Tariff<sub>b</sub>* is the Reference Tariff for the Firm Service applicable at the Adjustment date of 1 July 2011

*CPI* means the Consumer Price Index (weighted average, Eight Capital Cities) published quarterly by the Australian Statistician. If the Australian Statistician ceases to publish the quarterly value of that Index, then CPI means the quarterly values of another Index which Service Provider reasonably determines most closely approximates that Index.

*CPI<sub>n</sub>* means the value of the CPI for the year ended March 31 in year n.

*CPI<sub>b</sub>* means the base CPI, being the CPI for the quarter ended March 31 2011.

X is 0.

The AER requires that NT Gas amend its access arrangement proposal to specify the specific CPI value to be used in the tariff variation formula.<sup>200</sup> The AER requires the CPI value to be value of the CPI for the year ended March 31 in year 'n'.

<sup>200</sup> AER 2011, *Draft Decision*, pp 162-3



This replaces NT Gas' proposal that the tariff variation formula specify that it uses the CPI value last published before the adjustment date 'n' at which the reference tariff is being calculated.<sup>201</sup>

NT Gas accepts the AER's required amendment to specify that March CPI values will be used in the annual tariff variation formula. NT Gas has varied the AER's amendment text, however, to be consistent with the formula for CPI<sub>b</sub>, which refers to CPI for the *quarter* ended March 2011.

NT Gas notes that this amendment creates an issue in the timing of tariff variation notifications that did not arise in NT Gas' original formulation. This issue, and the AER's proposed approach to address it, are discussed in section 11.1.2 below.

The AER's second amendment to this definition changed the reference to year 'n' such that the CPI value used in the tariff variation formula must be March CPI in the year for which the tariff as varied applies. This would be the CPI value published approximately 10 months following the relevant tariff variation date. NT Gas does not consider that this is the AER's intention in making this amendment, and has revised this definition back to its original formulation such that it refers to the March CPI value last published before the Adjustment Date "n" at which the Reference Tariff is being calculated.

Similarly, the AER's amendments to the definition of Reference Tariff<sub>n</sub> create ambiguity as to the year to which Reference Tariff<sub>n</sub> refers. NT Gas has revised this definition to make it clear that is the reference tariff to apply in year 'n'.

The AER's amendment to the definition for Reference Tariff<sub>b</sub> refers to the Reference Tariff for the Firm Service applicable at the Adjustment date of 1 July 2011. The AER notes on page 15 of its draft decision that due to its decision to accept late submissions from interested parties, the AER's final decision may be delayed until shortly after 1 July 2011. In this event, the AER states that the earlier access arrangement (and associated tariffs) will continue to have effect.<sup>202</sup>

NT Gas notes that if the AER's decision is delayed, then the AER's required amendment will mean that the tariff variation formula refers to the reference tariff applying in the last year of the earlier access arrangement period. NT Gas has amended this definition to refer to the reference tariff for 2011/12 as set out in schedule 1 of the access arrangement.

The AER has approved NT Gas' proposal to apply no real change in tariff over the access arrangement period (equating to an X factor set at zero) as satisfying Rule 97.<sup>203</sup> NT Gas has retained this approach in this revised proposal.

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<sup>201</sup> NT Gas 2010, *Access Arrangement for the Amadeus Gas Pipeline 01 July 2011 to 30 June 16, December*, clause 4.7.1

<sup>202</sup> AER 2011, *Draft Decision*, p 15

<sup>203</sup> AER 2011, *Draft Decision*, pp 163-4



## 11.1.2 Annual tariff variation process

**AER Amendment 11.3:** rename section 4.7.3 as ‘Tariff adjustment process for annual tariff variation’, and amend as follows:

NT Gas will notify the AER 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 NT Gas proposes variations to the Reference Tariffs (other than as a result of a Trigger Event) and those variations 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 AER.

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 NT Gas’s variation notice, the AER will inform NT Gas in writing of whether or not it has verified the proposed reference tariff.

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.

### *Banking of annual tariff variations*

NT Gas proposed to only notify the AER of tariff variations (related to both annual tariff variations and cost pass-through events) where capacity to provide the reference service is available.<sup>204</sup> This was intended to minimise administrative costs for NT Gas and the AER in preparing and reviewing tariff variations where the reference service is not available.<sup>205</sup>

NT Gas accepts the AER’s preference that reference tariffs be updated annually by the operation of the tariff variation formula. Given the simplicity of the required tariff variation, as well as the limited likelihood that the reference tariff will apply to additional users of the pipeline, NT Gas considers that this annual tariff variation

<sup>204</sup> NT Gas 2010, *Access Arrangement revision proposal*, clause 4.7.3

<sup>205</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 153



process should be as simple as possible, in order to avoid unnecessary administrative costs.

### *Oversight and approval*

The AER's amendment 11.3 requires NT Gas to submit its annual tariff variation notification to the AER at least 50 business days before the 1 July at which the tariff variation is expected to take place. The AER notes in its draft decision, however, that this requirement contradicts its earlier requirement under amendment 11.1 that the annual tariff variation formula use March CPI figures. The AER states:

The AER recognises that March quarter CPI will not usually be available 50 days prior to the adjustment date. To overcome this issue NT Gas should submit annual tariff variation proposals to the AER with 'placeholder' CPI figures, to be updated during the assessment period, when March quarter CPI is published.<sup>206</sup>

NT Gas has not accepted this amendment. NT Gas does not consider that the AER has adequately addressed requirements under Rule 97(3) to consider the possible effects of the reference tariff variation mechanism on administrative costs. This Rule requirement is not mentioned in the AER's consideration of this matter.

The AER's amendment effectively requires NT Gas to submit two reference tariff variation proposals to the AER in respect of a single year. This is driven by the AER's concern that 20 business days (4 weeks) is not sufficient for the AER to review the correct application of a single published variable (the March CPI figure for the relevant year) to a single reference tariff with only one charging component. NT Gas does not consider this to be a sufficient reason to impose additional administrative costs on NT Gas.

NT Gas further notes that the AER's requirement amendments in no way account for this requirement, and instead impose a requirement to provide the AER with a notification containing information that will not be available at the time the notification is made. NT Gas does not consider it appropriate for the AER to impose obligations on a service provider that it itself knows cannot be fulfilled. NT Gas has therefore amended the AER's amendment such that it must submit its annual tariff variation notification 40 business days before each 1 July of the access arrangement period from 1 July 2012, with the AER requirement to make a decision in respect of this notification within 20 business days.

### *Other matters*

NT Gas has, in the main, adopted the AER's other amendments to this section of the access arrangement. NT Gas has, however, made the following revisions:

- Removal of the reference to a trigger event, as the AGP access arrangement as originally drafted or amended does not include a trigger event;

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<sup>206</sup> AER 2011, *Draft Decision*, p 163



- Clarification 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; and
- Specifically stating that subsequent amendments to tariffs arising from 'late' decisions by the AER 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.

## 11.2 Cost pass through mechanism

### 11.2.1 Cost pass through events

**AER Amendment 11.2:** delete section 4.7.2 of the access arrangement proposal and include the following:

Subject to the approval of the AER 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 access arrangement information, in the years of the access arrangement 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;
- 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 the access arrangement period; and
- (b) substantially affects the manner in which NT Gas provides reference services; 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 the access arrangement period, the manner in which NT Gas is required to provide a reference service; or
  - (ii) imposing, removing or varying, during the course of the access arrangement period, minimum service standards applicable to reference services; or
  - (iii) altering, during the course of the access arrangement period, the nature or scope of the reference services, provided by NT Gas; and
- (b) materially increases or materially decreases the costs to NT Gas of providing reference services.

**Tax change event**—means:

A tax change event occurs if:



- (a) any of the following occurs during the course of the access arrangement period for NT Gas:
- (i) 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;
  - (ii) the removal of a relevant tax;
  - (iii) the imposition of a relevant tax; and
- (b) in consequence, the costs to NT Gas of providing reference services are materially increased or decreased.

A relevant tax is any tax payable by NT Gas, other than:

- (a) income tax and capital gains tax;
- (b) stamp duty, financial institutions duty and bank accounts debits tax;
- (c) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any tax; or
- (d) any tax that replaces or is the equivalent of or similar to any of the taxes referred to in paragraphs (a) to (b) (including any State equivalent tax).

**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), occurring during the access arrangement period, 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 NT Gas of providing a reference service.

**Insurer credit risk event**—means:

An event where the insolvency of the nominated insurers of NT Gas occurs, as a result of which NT Gas:

- (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 NT Gas'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 NT Gas 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 NT Gas'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 NT Gas's negligence, fault, or lack of care. This also excludes all liability arising from NT Gas's unlawful conduct, and excludes all liability and damages arising from actions or conduct expected or intended by NT Gas.

**Natural disaster event**—means:

Any major fire, flood, earthquake, or other natural disaster beyond the control of NT Gas (but excluding those events for which external insurance or self insurance has been included within NT Gas's forecast operating expenditure) that occurs during the access arrangement period and materially increases the costs to NT Gas 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 access arrangement period that the costs are incurred.

*Cost pass through event definitions*

NT Gas accepts in principle the AER's amendment replacing NT Gas' proposed 'generic' cost pass-through mechanism with a mechanism that specifies individual cost pass-through events. NT Gas does, however, seek further amendments to the AER's revised text deliver greater consistency with the National Gas Rules.

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

- Regulatory change event

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

NT Gas 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’.

NT Gas 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, NT Gas does not consider that the limitation of the regulatory change event to those events that both substantially affect the manner in which NT Gas provides reference services and materially increases or decreases costs is appropriate. The revenue and pricing principles require 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. NT Gas further considers that this drafting imposes an additional materiality threshold on regulatory change events.

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.

NT Gas has revised the Regulatory change event definition included in the access arrangement to reflect these concerns.

- Service Standard event

NT Gas considers that the requirements under the definition of a service standard event that the legislative or administrative act or decision *substantially* vary the manner in which the service provider is required to provide the reference services imposes an additional materiality requirement on cost pass through events.

NT Gas has revised the Service standard event definition included in the access arrangement to reflect these concerns.

- Insurance cap event

NT Gas considers that the definition of an insurance cap event should allow the recovery of public liability claims in excess of its public liability insurance. NT Gas is subject to significant incentives to act prudently, including:

- Licence obligations;
- Commercial prudence – acts of negligence, regardless of insurance coverage, have a cost to the business, both in financial and non-financial (reputational) terms; and



- Normal legal obligations (health and safety regulations, consumer protection law, etc).

NT Gas must also pay a significant deductible before any claim.

Negligence claims can be difficult to avoid, and acts or omissions can be determined, in hindsight, to constitute negligence. Public liability claims in excess of NT Gas' public liability cap have the potential to result in NT Gas' insolvency. NT Gas considers that it should be able to pass through public liability claims in excess of its public liability cap, given the significant incentives in place for NT Gas to avoid such claims arising.

NT Gas has revised the Insurance cap event definition included in the access arrangement to reflect these concerns.

- Insurer credit risk event

NT Gas 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 NT Gas.

NT Gas 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 NT Gas' insurers that leads to a material change in costs for NT Gas should be covered by this event. In verifying the cost pass through amount, it is expected that NT Gas would be required to demonstrate that the relevant insurer was an insurer of NT Gas. An upfront process to nominate NT Gas' insurers appears an unnecessary administrative burden for what is expected to be a relatively uncommon event.

- Major natural disaster event

NT Gas accepts the inclusion of a major natural disaster event in its access arrangement.

NT Gas has also revised the drafting of this clause to refer to NT Gas' 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.

NT Gas considers that two further cost pass through events should be added to the access arrangement.

The first of these is a specific cost pass through event 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.<sup>207</sup>

Due to uncertainty over the form of the carbon price mechanism, NT Gas 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.<sup>208</sup> This uncertainty was not clarified by the AER in its final decision.<sup>209</sup>

NT Gas considers that it would be unacceptable for NT Gas 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 NT Gas 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 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.

The second pass through event relates to potential insurer insolvency. NT Gas considers that it would be able to pass through losses resulting from the insolvency of an insurer where NT Gas has an unsatisfied claim against the insurer. NT Gas considers that the reasons for this pass through event are similar to those for including an insurer credit risk event.

NT Gas has revised its access arrangement to include these two cost pass through events.

### *Materiality threshold*

NT Gas 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 one per cent of smoothed revenue materiality threshold, but 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.

NT Gas has made a further revision to the AER's amendment text to include only one definition for the materiality threshold. As currently drafted, the AER's amendment has two slightly different definitions. NT Gas considers that it is appropriate for the materiality threshold to refer to the revenue requirement set out in the access

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<sup>207</sup> 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>

<sup>208</sup> Citipower Pty Ltd 2010, *Revised Regulatory Proposal, 2011 to 2015*, 21 July, pp 404-5

<sup>209</sup> Australian Energy Regulator 2010, *Victorian electricity distribution network service providers distribution determination 2011-15*, October, p 782



arrangement information, but only if that revenue requirement is amended to take account of the AER's final decision, should the AER decide not to approve this revised proposal.

#### *Timing of application of cost pass through event tariff change*

NT Gas accepts the AER's amendment that defers tariff changes associated with an approved cost pass-through event to the following 1 July. NT Gas 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. NT Gas 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.

NT Gas 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. NT Gas 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.

NT Gas also notes that this clause 4.7.3 can accommodate cost pass through events that occur in the final year of the access arrangement period, by allowing for the immediate pass through of costs in the remainder of the period resulting from a cost pass through event. In addition, NT Gas considers that this clause should make clear that costs associated with an approved cost pass through event should be able to be recovered in the next access arrangement period, particularly where the timing or quantum of costs make immediate recovery over a short period of time impractical, or contrary to the long term interests of consumers. Cost should also be able to be recovered over more than one year where the quantum of costs or the duration of an event means that costs are incurred over multiple years.

NT Gas considers that it is necessary to provide for the recovery of cost pass through events that occur towards the end of an access arrangement period. A situation where the service provider's recovery of material costs is dependent on the timing of an uncontrollable event is arbitrary and unacceptable. The definition of the events proposed by the AER allow for the recovery of material cost associated with the occurrence of events during the access arrangement period. NT Gas considers that consistent with these definitions, where a defined event occurs in the period, the costs of that event should be able to be recovered, even where that recovery occurs in a later period. NT Gas has revised its access arrangement to make this clear.



## 11.2.2 Cost pass through tariff variation process

**AER Amendment 11.4:** insert a new section after 4.7.3 in the access arrangement proposal as follows:

### **4.7.4 Tariff adjustment process for cost pass through events**

NT Gas 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, NT Gas will provide the AER with a statement, signed by an authorised officer of NT Gas, verifying that the costs of any pass through events are net of any payments made by an insurer or third party which partially or wholly offsets the financial impact of that event (including self insurance).

The AER must notify NT Gas of its decision to approve or reject the proposed variations within 30 business days of receiving the notification. This period will be extended for the time taken by the AER to obtain information from NT Gas, obtain expert advice or consult about the notification.

The AER will endeavour to make its decision on whether NT Gas should vary Reference Tariffs due to the occurrence of a cost pass through event within 90 business days of receiving a notification from NT Gas. However, if the AER determines the difficulty of assessing or quantifying the effect of the relevant cost pass through event requires further consideration, the AER may require an extension of a specified duration. The AER will notify NT Gas of the extension, and its duration, within 90 business days of receiving a notification from NT Gas.

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

NT Gas considers, however that the AER should also have discretion to extend the date on which NT Gas 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 NT Gas 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.

Further, the AER has revised NT Gas' proposed cost pass through mechanism to only allow the recovery of costs that have occurred.<sup>210</sup>

<sup>210</sup> AER 2011, *Draft Decision*, p 169



The AER's revision appears to assume that cost pass through events only relate to discrete events of short duration where costs are incurred at the time of the event and immediately after the event. Cost pass-through events, however, can lead to costs incurred over a period of time, for example changes to regulatory obligations, service standards or taxes. In these circumstances, NT Gas considers that it is appropriate for the costs of these events to be recovered in each remaining year of the access arrangement.

The AER's revisions to the cost pass through event mechanism do not currently allow for this to occur. Events must be notified within 90 days of occurrence. Where the event relates to ongoing costs or costs over a number of years, then the service provider would only be able to recover costs already incurred within 90 days – it would not be able to cover costs after that date in the same year, or in future years. This would leave NT Gas in a position where it cannot recover the costs of an approved pass through event.

NT Gas does not consider that this is in the long term interests of consumers as a material pass through event with a long term cost impacts could lead to insolvency of the service provider. NT Gas has revised its access arrangement to ensure that future costs can be recovered under a cost pass through event notification. The ability of the AER to extend the 90 day deadline for submission of notifications also assists in ensuring that the full costs of events can be recovered by the service provider.

### **11.3 Amendments to the access arrangement information**

**Amendment 11.5:** amend the access arrangement information to reflect amendments 11.1–11.4 as appropriate.

NT Gas has updated the access arrangement information to reflect the discussion above.



## 12 Non-tariff components

### 12.1 Terms and conditions

NT Gas proposed to revise its access arrangement terms and conditions to bring them in line with recent gas transportation agreements negotiated by APA Group with various parties.<sup>211</sup>

The AER did not accept NT Gas' proposed terms and conditions, and has required significant amendments as set out in Appendix C of the AER's draft decision.<sup>212</sup> In aggregate the AER concluded that its amendments were required as the AER agreed with submissions by PWC and Santos and Magellan that the proposed terms and conditions were weighted too much in favour of NT Gas, and did not reflect terms typical of a freely negotiated gas transportation agreement.<sup>213</sup>

NT Gas sets out its detailed response to submissions and the AER's amendments in Attachment H to this submission. General and overarching issues are discussed below.

#### 12.1.1 Application of the access arrangement terms and conditions to non-reference services

NT Gas' access arrangement proposed in December 2010 stated that the terms and conditions set out in the access arrangement applied to both Reference and non-Reference services. This was proposed to assist potential users understand the terms and conditions that will apply to non-reference services, however NT Gas notes that the Law and Rules do not require the access arrangement to specify terms and conditions to apply to non-reference services. Rule 48, which sets out the requirements for a full access arrangement, states:

- (1) A full access arrangement must:
  - (a) Identify the pipeline to which the access arrangement related and include a reference to a website at which a description of the pipeline can be inspected; and
  - (b) Describe the pipeline services the service provider proposes to offer to provide by means of the pipeline; and
  - (c) Specific the reference services; and
  - (d) Specify for each reference service:
    - (i) The reference tariff; and
    - (ii) The other terms and conditions on which the reference service will be offered.

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<sup>211</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 13

<sup>212</sup> AER 2011, *Draft Decision*, pp 177-8

<sup>213</sup> AER 2011, *Draft Decision*, p 178



NT Gas has therefore revised its access arrangement so that the terms and conditions set out in Schedule 3 of the revised access arrangement only apply to the reference services. NT Gas notes that other aspects of the access arrangement apply to all pipeline services (reference and non-reference services), such as the queuing requirements. The limitation of the application of detailed terms and conditions to reference services does not change areas where the access arrangement is required to apply to all pipeline services under the Rules.

NT Gas further notes that the limitation of the access arrangement detailed terms and conditions to reference services is consistent with changes required by the AER to those terms and conditions, for example the removal provisions to adjust rates and charges under the Transportation Agreement, instead relying on the reference tariff variation mechanism included in the access arrangement.<sup>214</sup>

NT Gas has made the necessary revisions to its access arrangement to limit the application of the terms and conditions to reference services. This involves changes to the body of the access arrangement and to a number of clauses in the terms and conditions. These changes are noted in the mark-up version of the access arrangement.

### 12.1.2 Liability regime in the access arrangement

The liability regime in the terms and conditions reflects the pipeline's position in the gas supply chain as the middle player between gas production and downstream users. The pipeline is an infrastructure service provider only. As a matter of principle, liability should sit with the party that controls the exposure to the risk. The pipeline has effectively no control over gas injections and withdrawals. It is the user that makes gas available for injection at the receipt point and takes gas at delivery points. The quality of gas injected is wholly within the control of the user either directly or through its contractual rights/obligations with the producer. Similarly, it is the user (either directly or through its contracts with its customers) that controls the quantity of gas withdrawn. Accordingly, risks associated upstream of the receipt point and downstream of the delivery point including as to gas quality and quantity, should sit with the user and not the pipeline service provider.

The proposed indemnity regime set out in NT Gas' proposed access arrangement reflects the fact that the service provider has no ability to limit its liability for losses directly through contract with parties that are most likely to suffer that loss. Users that contract for transportation services are not typically the end user of the transported gas. It is generally the customers of the users that are the end user of the gas. In the event of a delivery failure, end users are more likely to suffer loss than the pipeline user *per se*. Those end users may bring claims against the pipeline in common law which exposes the pipeline to potentially catastrophic losses in circumstances where its rate of return on the pipeline is not at all commensurate with the risk exposure. Given the pipeline service provider cannot contract directly with every end user so as to limit its liability, the indemnity regime in the proposed terms and conditions

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<sup>214</sup> AER 2011, *Draft Decision*, pp 230-2





effectively incentivises the pipeline user to limit liability for delivery failures in its contracts with end users.

Many of the AER's revisions to NT Gas' terms and conditions seek to change the liability arrangements, in general exposing NT Gas to greater liability. NT Gas' position in the supply chain, however, means that it is generally unable to limit its exposure to liability through contract. This increases NT Gas' risk exposure beyond that of other pipelines that have been able to limit their liability through contract, and beyond a level that reflects the AER's decision as to an allowable rate of return for the business. NT Gas considers that this outcome would be unacceptable, and that NT Gas does not earn a rate of return commensurate with its risk. NT Gas has therefore rejected or revised a number of the AER's revisions to its access arrangement. These are set out in the table at Attachment H.

## 12.2 Capacity trading requirements

**AER Amendment 12.1:** amend section 5.3(a) of the capacity trading requirements of the access arrangement proposal by deleting the term *without limitation*

**AER Amendment 12.2:** delete section 5.3(g) of the capacity trading requirements of the access arrangement proposal

**AER Amendment 12.3:** amend schedule 2 of the access arrangement proposal by including a definition of the term *reasonable commercial or technical grounds*

The AER's draft decision approves the majority of NT Gas' proposed capacity trading provisions set out in Part 5 of the access arrangement. The AER requires a number of minor revisions to these clauses as follows.

The AER requires NT Gas to insert a definition of reasonable commercial and technical grounds on which NT Gas may refuse a request from a user to substitute existing MDQ in relation to a receipt or a delivery point.

NT Gas has accepted this revision in part. NT Gas does not consider that it is feasible to provide an all encompassing definition in the access arrangement for reasonable commercial and technical grounds as these grounds can be specific to the situation. The inclusion of such a definition is not required under the Rules.<sup>215</sup> NT Gas has instead included an example of such grounds in the access arrangement to assist users to understand the potential scope of considerations NT Gas may have on assessing such a request. This approach is consistent with the AER's required revisions in respect of the APT Allgas access arrangement.<sup>216</sup>

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<sup>215</sup> Rule 106

<sup>216</sup> AER 2011, *APT Allgas access arrangement proposal: Draft Decision*, p 164



The AER requires NT Gas to remove the phrase ‘without limitation’ from clause 5.3(a) as it considers that the phrase implies recovery of costs beyond those considered to be reasonable costs.

NT Gas does not consider that the inclusion of ‘without limitation’ in clause 5.3(a) implies unlimited recovery of costs. The intent of the inclusion of this phrase was to make clear that NT Gas’ reasonable costs were not limited to the examples provided, being legal and internal costs. NT Gas considers that the inclusion of these examples improves clarity to users as to the potential scope of reasonable costs to be recovered from users. NT Gas has accepted the AER’s deletion of this phrase, and at the same time revised clause 5.3(a) to make clearer its intent as set out above.

The AER requires NT Gas to delete clause 5.3(g) from its access arrangement. Clause 5.3(g) limits the ability of a User to assign its receipt or deliver MDQ where it is in default under the transportation agreement. The AER requires deletion of this clause as it considers that it may restrict the efficient transfer of capacity between existing and potential users and, given that transfer does not affect the liabilities of a user to the service provider prior to the transfer taking place, that the limitation would not benefit either the service provider or the user.<sup>217</sup>

NT Gas has not accepted this change, but has clarified that the default must be a material default under the transportation agreement. For additional clarity, NT Gas has also included an additional provision in line with Rule 105(5) in its access arrangement that the transfer does not affect rights or liabilities that had accrued under, or in relation to, the contract before the transfer took affect.

## 12.3 Queuing requirements

**AER Amendment 12.4:** amend section 6.4 of the queuing requirements of the access arrangement proposal by replacing the date ‘5 February 2003’ with the commencement date of the access arrangement.

NT Gas accepts this amendment.

## 12.4 Extensions and expansions policy

### 12.4.1 Relevant requirements of the Law and Rules

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

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<sup>217</sup> AER 2011, *Draft Decision*, p 180



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.

#### 12.4.2 Purpose of the extension and expansion policy

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 section 18 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 section 95.

NT Gas 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.

NT Gas' response to the AER's proposed amendments to its extensions and expansions policy are made in the context of these Law and Rule provisions.

### 12.4.3 Extensions to the covered pipeline

**AER Amendment 12.5:** amend section 7.1 of the access arrangement proposal as follows:

If NT Gas proposes an 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.

A notification given by NT Gas under this section 7.1 must:

- a) be in writing
- b) state whether NT Gas intends for the proposed pipeline extension to be covered by this Access Arrangement
- c) describe the proposed pipeline extension and describe why the proposed extension is being undertaken and
- d) be given to the AER before the proposed pipeline extension comes into service.

NT Gas is not required to notify the AER under this section 7.1 to the extent that the cost of the proposed pipeline extension has already been included and approved by the AER in the calculation of Reference Tariffs.

After considering NT Gas's application, and undertaking such consultation as the AER considers appropriate, the AER will inform NT Gas of its decision on NT Gas's



proposed coverage approach for the 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.

NT Gas' extensions and expansions policy included differential approaches for determining whether the access arrangement will apply to extensions and expansions. In particular NT Gas specified that geographic extensions to the pipeline would only be covered where elected by the Service Provider, determined after consultation with the AER.<sup>218</sup> In respect of expansions, NT Gas specified that expansions to the covered pipeline would be covered, unless the service provider proposed, and the AER agreed, that the expansion should not be covered.

The AER's draft decision accepts that a differential approach should apply to extensions and expansions to the covered pipeline, and agreed that expansions to the pipeline should not be covered by default. The AER stated:

Consistent with its previous decisions [references provided] the AER considers that unlike extensions, all expansions to the pipeline should be covered by default.<sup>219</sup>

The AER determined that sections 7.1(a) – (d) related to extensions to the pipeline were reasonable and accepted these sections.<sup>220</sup> NT Gas considers that this means that the AER considers that these clauses are consistent with the national gas objective.

Given the AER's conclusion in the text, it is unclear as to the AER's intent in relation to amendment 12.5. In no place does the AER discuss this amendment and the reasons for it. On reviewing the AER's draft decision and the content of the AER amendment, NT Gas considers that the AER's amendment 12.5 is inconsistent with its discussion in the draft decision and with the Law and Rules.

Rule 59(4) requires the AER to include with its draft decision a statement of the reasons for its decision. The AER has not done this in relation to amendment 12.5. To the extent that the AER intends to maintain its amendments included in its draft decision in its final decision, NT Gas seeks from the AER reasons for its decisions and an opportunity to respond to those reasons. In the absence of this opportunity (such as would happen if the AER only provided reasons in its Final Decision) NT Gas considers that it will have been denied the opportunity to respond to the AER on the basis of the reasons of its amendments.

As discussed above, NT Gas does not consider that the Law or Rules place the AER in a position where it may determine whether a particular pipeline is a covered pipeline. This however, appears the intent behind the AER's amendments to clause 7.1, notwithstanding that the AER had otherwise determined that NT Gas' proposed clause 7.1 was reasonable. NT Gas has therefore not accepted the AER's revised

<sup>218</sup> NT Gas 2010, *Access Arrangement for the AGP*, December, clause 7.1

<sup>219</sup> AER 2011, *Draft Decision*, p 183

<sup>220</sup> AER 2011, *Draft Decision*, p 184



text included in amendment 12.5 and has retained clause 7.1(a) of its access arrangement.

As noted above, the AER does not discuss its required amendment 12.5 which seeks to revise clause 7.1. It is not clear from the amendment text whether the AER intends that clauses 7.1(b)-(d) be deleted and replaced by the text in amendment 12.5. NT Gas notes that the mirror clauses included in the EEP in relation to expansions to the pipeline (clauses 7.2(b) and (c)) have clearly been accepted by the AER, and that the AER had noted that it considered these clauses to be reasonable.<sup>221</sup> NT Gas further notes that these clauses would not be inconsistent with the AER's amendment to clause 7.1. NT Gas has therefore retained clauses 7.1(b)-(c) of its access arrangement in its revised proposal.

#### 12.4.4 Expansion to covered pipeline capacity

**AER Amendment 12.7:** amend section 7.2(a) of the access arrangement proposal by deleting the words ‘.. unless Service Provider proposes and the Regulator agrees that this Access Arrangement will not apply to the incremental Services provided as a result of that Expansion.’

As noted above, the AER accepted that a differential approach to the application of the access arrangement to extensions and expansions. The AER's draft decision also states that it considers sections 7.2(a)-(c) of NT Gas access arrangement proposal to be reasonable and that it has accepted these provisions. It is therefore unclear why the AER has required the deletion of part of clause 7.2(a) which gives discretion to the AER to agree to a proposal of the service provider that a particular expansion not be covered by the access arrangement. This is particularly perplexing as the AER has referred to this flexibility as a benefit to users in its discussion of the EEP in the draft decision stating:

Santos and Magellan had concerns about the non-coverage of incremental expansion in capacity and how this may give rise to discriminatory pricing between existing and new users...However, the AER is satisfied that section 7.2(a) of the proposed access arrangement contains a sufficient safeguard to prevent this from occurring in that the AER *would have to agree to the non-coverage of incremental pipeline expansion* above the existing capacity [emphasis added].<sup>222</sup>

NT Gas considers that the provision of this flexibility in determining whether expansions to pipeline capacity will not be subject to the access arrangement is consistent with access arrangements approved by the AER in recent decisions<sup>223</sup> and with the national gas objective. NT Gas has therefore retained this clause in its revised access arrangement accompanying this submission.

<sup>221</sup> AER 2011, *Draft Decision*, p 184

<sup>222</sup> AER 2011, *Draft Decision*, p 185

<sup>223</sup> See for example, AER 2010, Access arrangement for the ACT, Queanbeyan, and Palerang gas distribution network, 23 April, clause 7.6



NT Gas does not consider that the AER has provided reasons for its amendment 12.7, as it is required to do under Rule 59(4). To the extent that the AER intends to maintain its amendments included in its draft decision in its final decision, NT Gas seeks from the AER reasons for its decisions and an opportunity to respond to those reasons. In the absence of this opportunity (such as would happen if the AER only provided reasons in its Final Decision) NT Gas considers that it will have been denied the opportunity to respond to the AER on the basis of the reasons of its amendments.

#### 12.4.5 Imposition of reporting requirements

**AER Amendment 12.6:** amend section 7.1 of the access arrangement proposal as follows:

No later than 20 Business Days following the expiration of its financial year, NT Gas must notify the AER of all pipeline extensions during that financial year, including all extensions commenced, in progress and completed. The notice must describe each extension and set out why this was necessary.

**AER Amendment 12.8:** amend section 7.2 of the access arrangement proposal as follows:

No later than 20 Business Days following the expiration of its financial year, NT Gas must notify the AER of all pipeline expansions during that financial year, including all expansions commenced, in progress and completed. The notice must describe each expansion and set out why this was necessary.

NT Gas does not accept AER amendments 12.6 and 12.8, relating to the imposition of new reporting requirements in relation to extensions and expansions of the covered pipeline.

While NT Gas does not expect to undertake any extensions or expansion to the covered pipeline during the access arrangement period, extensions and expansions are relatively normal activities for other pipelines in response to new customers or growing demand from existing customers. As such, extensions and expansions are 'business as usual' activities. This is part of the reason why the Law and Rules include the requirements for an EEP in the access arrangement to provide an administrative shortcut for resolving coverage under the access arrangement for these activities.

NT Gas does not consider that it is necessary or appropriate for the AER to impose reporting requirements on such "business as usual" operations as it imposes a micromanagement burden that is inappropriate for an economic regulator in an incentive based regime. NT Gas objects to this imposition on the following grounds:

- Not consistent with the purpose of the access arrangement



The access arrangement is intended to set out the terms and conditions of the service provider's provision of reference services to users. As such, it forms the basis of a contract between the service provider and the user for the provision of reference services. In this context, it is not appropriate for the AER to use this instrument to impose reporting requirements between the service provider and the AER, particularly where the National Gas Law provides a clear mechanism for the AER to impose such reporting obligations. Through this proposed amendment, the AER is circumventing the National Gas Law information reporting requirements, and as such the AER's amendments are *ultra vires*.

- 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'.<sup>224</sup> 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. NT Gas 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 costs associated with the information requirements.

- 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. NT Gas 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; NT Gas 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.

- *Ad hoc* imposition of reporting requirements

NT Gas 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.

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

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<sup>224</sup> AER 2011, *Draft Decision*, p 184





#### 12.4.6 Specification of fixed principles

**AER Amendment 12.9:** delete section 7.4 of the extensions and expansions policy of the access arrangement proposal which relates to fixed principles.

NT Gas specified in its EEP that clauses 7.1(d) and 7.2(c) were fixed principles for a period of 15 years. Clause 7.1(d) and 7.2(c) relate to the exclusion of capital investment, operating costs and usage associated with an extension or expansion offered as a negotiated service from the calculation of the reference tariff.

The AER did not accept the specification of these clauses as fixed principles. While agreeing that costs associated with extensions and expansions offered as negotiated services should not be included in the calculation of reference services where these services are offered as negotiated services, the AER rejected this principle without providing any reason in its draft decision.<sup>225</sup> The AER did not demonstrate that NT Gas' proposal was inconsistent with the national gas objective, or that its amendments were more preferable.

The AER stated that it considered NT Gas' concern over regulatory certainty that underpinned its proposal to specify these clauses as fixed principles, and considered that the operation of clause 7.3 of the proposed access arrangement provides that during the access arrangement the reference tariff will not be affected by any extension or expansion.<sup>226</sup>

NT Gas agrees with the AER that the effect of clause 7.3 is to ensure that during the access arrangement the reference tariff will not be affected by any extension or expansion, however this protection was not the intent of the fixed principle. Fixed principles are intended to operate beyond the access arrangement period. NT Gas proposed that clauses 7.1(d) and 7.2(c) be fixed principles to ensure that capital investment, operating costs and usage associated with an extension or expansion offered as a negotiated service will not be included in the calculation of the reference tariff in future periods, hence the proposed persistence of the fixed principle for a period of 15 years. The AER's statement in relation to clause 7.3 does not address this concern.

As stated in its original proposal, NT Gas proposes these fixed principles "to allow it to reach agreement with a user or prospective user over the provision of incremental services by means of an extension or expansion on terms that mean that the costs of the extension or expansion can be recovered from an individual user" while ensuring that "commercial arrangements underpinning an extension or expansion provided as a negotiated service can be maintained for a period that allows the costs of that expenditure to be recovered from the relevant user or users".<sup>227</sup>

<sup>225</sup> AER 2011, *Draft Decision*, p 184

<sup>226</sup> AER 2011, *Draft Decision*, p 185

<sup>227</sup> NT Gas 2010, *Revision Proposal Submission*, December, p 14



In rejecting this proposal the AER has not addressed this concern and has not demonstrated that its alternative proposal is preferable having regard to the national gas objective. NT Gas has therefore retained clause 7.4 in its access arrangement revision proposal specifying that clauses 7.1(d) and 7.2(c) are fixed principles for a period of 15 years.

## 12.5 Commencement and review dates

### 12.5.1 Commencement of the access arrangement

**AER Amendment 12.10:** amend section 1.5 of the access arrangement proposal by replacing Rule 62 with Rule 64.

NT Gas does not accept this amendment. As noted by the AER, Rule 64 relates to circumstances where the AER refuses to approve an access arrangement proposal and imposes its own access arrangement.<sup>228</sup> While AER drafted access arrangement may have become more common in recent years, this was certainly not the case in the past, and is not a necessary outcome arising from the Rules. In circumstances where the AER approves an access arrangement proposal under Rule 62(2), it does not draft its own access arrangement in place of that proposed by the service provider. In these circumstances, the access arrangement will come into effect in accordance with Rule 62, as set out in NT Gas' access arrangement revision proposal.

As NT Gas' access arrangement is one it has drafted itself, it is appropriate that this clause refer to Rule 62. In the event that the AER does not approve this access arrangement and determines to draft and impose its own access arrangement, it is appropriate for the AER-drafted access arrangement to refer to commencement in accordance with Rule 64. NT Gas has therefore not accepted the AER's amendment 12.10.

NT Gas hopes that the AER has not prejudged NT Gas' revised access arrangement proposal at the draft decision stage and gives this proposal full consideration under the Rules and Law.

### 12.5.2 Revisions submission date

**AER Amendment 12.11:** Amend the first paragraph of section 1.6 of the access arrangement proposal by replacing 1 January 2016 with 1 July 2015, or four years from the commencement date of this Access Arrangement, whichever is the later.

<sup>228</sup> AER 2011, *Draft Decision*, p 187



NT Gas accepts the AER's amendment which changes its proposed revisions commencement date to 1 July 2015, or four years from the commencement date of the access arrangement. This change has been reflected in the revised access arrangement accompanying this submission.

### 12.5.3 Other revisions to the access arrangement

**AER Amendment 12.12:** amend section 1.6 of the access arrangement proposal by deleting the last paragraph beginning with “Service Provider may, at any other time...”

The AER requires deletion of the paragraph in NT Gas' access arrangement proposal related to revisions submitted to the AER under Rule 65. NT Gas does not accept this deletion as it considers that this clause provides important information to users and prospective users as to the potential scope for revisions to the access arrangement prior to the next revisions commencement date.

Part of the AER's concern was that the clause presupposed AER acceptance of a revision proposal (whether it relate to material or non-material amendments).<sup>229</sup> NT Gas does not consider that this clause presupposes the AER's approval of variations to the access arrangement, as it refers to those revisions commencing in accordance with the Rules. As pointed out by the AER, the Rules include scope for the AER not to approve variations, and this is encompassed in the meaning of this clause.

The AER also notes a concern that variations may be material or non-material, and the AER's ability to approve a variation without consultation. NT Gas does not consider that this paragraph makes a distinction between material or non-material variations (where the AER appears to assume the intent is to refer to non-material variations), and that in both cases variation will (or will not) commence in accordance with the Rules. NT Gas therefore does not consider that this clause is inconsistent with Rule 65.

In its conclusion to this section, the AER notes a further concern as to the clause's consistency with Rule 51, which relates to the acceleration of revision submission date after the occurrence of a trigger event.<sup>230</sup> The AER's discussion provides no further context as to why NT Gas' clause would be inconsistent with Rule 51. The access arrangement (either as proposed by NT Gas or amended by the AER) does not include any trigger events, and therefore there is no scope for revisions to the access arrangement to come into effect in accordance with (or as a result of) Rule 51. NT Gas therefore considers that there is no inconsistency between its clause referring the revisions submitted to the AER under Rule 65, and Rule 51.

<sup>229</sup> AER 2011, *Draft Decision*, p 188

<sup>230</sup> AER 2011, *Draft Decision*, p 188



NT Gas further notes that this identical clause was included in the ActewAGL gas distribution access arrangement imposed by the AER in April 2010<sup>231</sup>, and the revision proposal lodged by APT Allgas in September 2010<sup>232</sup> and accepted by the AER in its Draft Decision released February 2011<sup>233</sup>.

NT Gas has therefore not accepted the AER's amendment as it considers that it is in the interest of users and prospective users to understand the potential scope for revisions to this access arrangement to apply before the revisions commencement date stated in the access arrangement, and that this clause effectively conveys this potential, and is consistent with other parts of the Rules, in particular Rules 51 and 65.

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<sup>231</sup> AER 2010, *Access arrangement for the ACT, Queanbeyan, and Palerang gas distribution network, 1 July 2010 – 30 June 2015*, 23 April Clause 1.18

<sup>232</sup> APT Allgas Energy Pty Limited 2010, *Access Arrangement, effective 1 July 2011 to 30 June 2016*, September, clause 1.4

<sup>233</sup> AER 2011, *APT Allgas Access arrangement proposal for the Qld gas network 1 July 2011 – 30 June 2016: Draft Decision*, February, pp169-71



## **Attachment A – Models**

A.1 – Revised Roll Forward Model – confidential

A.2 – Revised Tax Roll Forward Model – confidential

A.3 – Revised Post Tax Revenue Model – confidential

These models are provided separately

# **Attachment B – NT Gas March 2011 submission to the AER**

Provided as a separate document



## **Attachment C – Project Management Costs – detailed cost breakdown – confidential**

Provided as a separate document







## **Attachment D – Australia Ratings Report**

Provided as a separate document





## **Attachment E – Marsh Pty Ltd insurance estimate – NT Gas – confidential**

Provided as a separate document





## **Attachment F – Step change adjustment to operations and maintenance expenditure – confidential**

Provided as a separate document



# **Attachment G – IDM Partners Report – NT Gas operating resources review – confidential**

Provided as a separate document



# **Attachment H – Access Arrangement terms and conditions – NT Gas response**

Provided as a separate document