Final decision–Public

Access arrangement proposal

ACT, Queanbeyan and Palerang gas distribution network

1 July 2010–30 June 2015

March 2010

Contents

Final decision

In accordance with r. 62 of the National Gas Rules (NGR), the Australian Energy Regulator (AER) refuses to approve the revised access arrangement proposal for the ACT, Queanbeyan and Palerang gas distribution network submitted by the partnership between ACTEW Distribution Limited and Jemena Networks (ACT) Pty Ltd trading as ActewAGL Distribution (ActewAGL). The final decision sets out the AER's consideration of the revised access arrangement proposal and the revisions it has incorporated into the revised access arrangement proposal and revised access arrangement information. The AER has formulated the revisions with regard to the matters set out in r. 64(2) of the NGR.

AER's proposed access arrangement

The AER proposes the revisions to the revised access arrangement proposal and revised access arrangement information set out in the final decision. These revisions are included in the access arrangement and access arrangement information proposed by the AER and attached as appendix C to the final decision. The AER has formulated the proposed access arrangement and access arrangement information with regard to the criteria set out in r. 64(2) of the NGR.

The AER will make a decision in respect of the access arrangement and access arrangement information proposed by it set out in the annexure to the final decision is expected to be made by 23 April 2010.

Shortened forms

access arrangement information	ActewAGL, *Access arrangement information for the ACT, Queanbeyan and Palerang gas distribution network*, June 2009
access arrangement period	1 July 2010 to 30 June 2015
access arrangement proposal	ActewAGL, *Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network*, June 2009
ActewAGL	a partnership between ACTEW Distribution Limited and Jemena Networks (ACT) Pty Ltd trading as ActewAGL Distribution
AER	Australian Energy Regulator
Code	National Third Party Access Code for National Gas Pipeline Systems
draft decision	AER, *Draft decision*, *ActewAGL Access arrangement proposal for the ACT, Queanbeyan and Palerang gas distribution network*, 1 July 2010–30 June 2015, November 2009
earlier access arrangement	access arrangement for 1 January 2005 to 30 June 2010 inclusive
earlier access arrangement period	1 January 2005 to 30 June 2010 inclusive
ICRC	Independent Competition and Regulatory Commission
NGL	National Gas Law
NGR	National Gas Rules
revised access arrangement information	ActewAGL, *Addendum to access arrangement information for the ACT, Queanbeyan and Palerang gas distribution network*, January 2010
revised access arrangement proposal	ActewAGL, *Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network*, January 2010

1 Introduction

1.1 Background

ActewAGL Distribution (ActewAGL) is a partnership of ACTEW Distribution Ltd and Jemena Network (ACT) Pty Ltd who, through the partnership jointly own, control and operate the Australian Capital Territory (ACT), Queanbeyan and Palerang gas distribution network (ActewAGL gas distribution network).[1] ActewAGL contracts out the operation of its gas distribution network to Jemena Asset Management Pty Limited (JAM) under a distribution asset management services agreement.[2]

ActewAGL's gas distribution network comprises 4200 km of pipeline, delivers around 7.5 PJ of gas annually and supplies gas to 112 000 customers primarily in the districts of the ACT, Queanbeyan and Palerang.[3]

ActewAGL's gas distribution network is supplied by gas sourced from the Cooper Basin via a lateral pipeline from the Moomba-Sydney Pipeline (MSP).[4] ActewAGL's gas distribution network is also supplied by gas sourced from Longford from the Eastern Gas Pipeline (EGP).[5]

ActewAGL's gas distribution network is classified as a covered distribution pipeline.[6]

1.2 Draft decision

On 11 November 2009, the Australian Energy Regulator (AER) issued the Draft decision: ActewAGL access arrangement proposal for the ACT, Queanbeyan and Palerang gas distribution network, 1 July 2010–30 June 2015 (draft decision) on ActewAGL's access arrangement for the ACT, Queanbeyan and Palerang gas distribution network, June 2009 (access arrangement proposal). The AER held a public forum on the draft decision on 17 November 2009.

1.3 Revised access arrangement proposal

On 6 January 2010 ActewAGL submitted the access arrangement for the ACT, Queanbeyan and Palerang gas distribution network (revised access arrangement proposal) to the AER and the addendum to access arrangement information for the ACT, Queanbeyan and Palerang gas distribution network (revised access arrangement information) that identifies the amendments set out in the draft decision accepted by ActewAGL and the reasons for ActewAGL not accepting particular amendments proposed by the AER. ActewAGL provided additional information to support the

1 ActewAGL, *Access arrangement information*, June 2009, pp. 9–10.

2 ActewAGL, *Access arrangement information*, June 2009, p. 21.

3 ActewAGL, *Access arrangement information*, June 2009, pp. xiii, 12, 13, 75–76.

4 ActewAGL, *Access arrangement information*, June 2009, p. 13.

5 ActewAGL, *Access arrangement information*, June 2009, p. 13.

6 AEMC, *List of natural pipelines – descriptions and classifications*, viewed 3 February 2010, <http://www.aemc.gov.au/Gas/Scheme-Register/Pipeline-list-summary.html>.

revised access arrangement proposal during the consultation period on the draft decision and the revised access arrangement proposal.[7]

1.4 Principal components of the revised access arrangement proposal

ActewAGL's revised access arrangement proposal incorporates a number of changes from the access arrangement proposal:

- a slightly lower weighted average cost of capital (WACC) of 11.08 per cent reflecting changed financial market circumstances since the initial proposal, but which is still higher than the AER's draft decision of 10.14 per cent
- lower net capital expenditure of $94.1 million ($2009–10) which reflects the removal of security of supply capital expenditure for the proposed Hoskinstown to Fyshwick loop (HFL) project
- operating expenditure increasing to $136.6 million ($2009–10) associated with a compressor project on the MSP lateral, to replace the HFL project.

1.5 Outcome of the AER's review of the revised access arrangement proposal

The AER does not approve the revised access arrangement proposal for the reasons set out in this decision.[8]

Following consideration of the revised access arrangement proposal, the AER has reduced the total revenue by $51.2 million ($2009–10) to $278.7 million ($2009–10) over the access arrangement period. The final decision approves $84.7 million ($2009–10) over the next five years. This is a 32.7 per cent increase in net capital expenditure from the earlier access arrangement period.

As a consequence, tariffs will increase for the average residential customer by 7.0 per cent (or 5.1 per cent in real terms) from 1 July 2010. This represents an increase of 52 cents per week for the average residential customer's gas bill.

Residential tariffs are expected to increase on average by 2.9 per cent per annum (in real terms) over the remainder of the access arrangement period. Future tariff variations may also include the effects of cost pass throughs over the access arrangement period.

1.6 Next steps

The National Gas Rules (NGR) provide that if the AER does not approve an access arrangement proposal it must propose an access arrangement or revisions to the access arrangement for the relevant pipeline.[9]

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7 ActewAGL, *ActewAGL Distribution submission on ACT access arrangement revision proposal*, 12 February 2010 (ActewAGL, *Submission to the AER*, 12 February 2010).

8 NGR, r. 62(2) and r. 62(2)(4).

The AER has prepared an access arrangement proposal incorporating the outcomes of its final decision.[10] This has been formulated having regard to the matters that the National Gas Law (NGL) and the NGR require an access arrangement to include, ActewAGL's access arrangement proposal and the AER's reasons for refusing to approve that proposal.[11]

The AER will make a decision in respect of its access arrangement proposal within two months after the final decision.[12] The AER expects to make this decision on 23 April 2010.

1.7 Chapter summaries

Introduction

Pipeline services

The AER approves the revised access arrangement proposal regarding pipeline services. ActewAGL incorporates all amendments set out in chapter 2 of the draft decision in the revised access arrangement proposal.

PART A – Total revenue (building block components)

Capital base

Opening capital base

The revised access arrangement proposal proposes an opening capital base of $278 million ($nominal) for the access arrangement period. ActewAGL's estimation of the opening capital base is shown in Table 1.

Table 1: Revised opening capital base ($m, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
Opening capital base	225.9	233.8	239.3	250.4	255.6	266.8	278.0
Capital expenditure	9.8	7.2	11.1	7.6	8.6	15.5	
Depreciation	7.3	8.0	8.6	8.4	8.8	9.2	
Adjustment for inflation	5.4	6.3	8.7	5.9	11.3	4.9	
Closing capital base	233.8	239.3	250.4	255.6	266.8	278.0[a]	

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 17.
a: Closing capital base for 2009–10 includes an adjustment for difference between actual and forecast capital expenditure in the period before the earlier access arrangement period.

9 NGR, r. 64(1).

10 NGR, r. 64.

11 NGR, r. 64(2).

12 NGR, r. 64(4).

The AER approves an opening capital base of $278.1 million, reflecting the difference in the forecast inflation rate applied by the AER for 2009–10 to that proposed by ActewAGL.

The AER approves ActewAGL's proposal to capitalise regulatory costs of $1.45 million ($2009–10) as a transitional measure from the National Third Party Access Code for Natural Gas Pipeline Systems (Code) to the NGR.

Projected capital base

ActewAGL proposes a projected capital base of $318.4 million ($2009–10), which is shown in Table 2.

Table 2: Revised projected capital base ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Opening capital base	278.0	302.9	318.8	319.7	318.8	na
Forecast capital expenditure[a]	34.2	27.0	12.9	11.6	12.2	97.9
Forecast depreciation	9.3	11.1	12.0	12.5	12.7	57.6
Closing capital base	302.9	318.8	319.7	318.9	318.4	na

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 34.
na: Not applicable.
a: Capital expenditure for the purpose of estimating the capital base excludes disposals and capital contributions and includes six months return on capital.

The AER does not approve total capital expenditure of $97.9 million proposed in the revised access arrangement proposal. The AER has not approved:

- $5 million ($2009–10) for a trunk receiving station and water bath at Watson
- the cost escalators for polyethylene and the Carbon Pollution Reduction Scheme (CPRS).

The AER approves total capital expenditure of $87.6 million ($2009–10).

Depreciation

The AER approves ActewAGL's methodology to estimate depreciation and considers the depreciation schedule meets the requirements of the NGR.

Rate of return

The revised access arrangement proposal accepts the AER's methodology in estimating the inflation forecast. The revised access arrangement proposal also conditionally accepts the averaging period used in the draft decision to estimate the risk-free rate. However, the revised access arrangement proposal does not accept the draft decision to set the equity beta, market risk premium (MRP) and debt risk premium used to estimate the WACC.

ActewAGL proposes a nominal vanilla WACC of 11.08 per cent in the revised access arrangement proposal. The AER estimates a nominal vanilla WACC of 9.72 per cent for ActewAGL, based on market data in the specified averaging period. The AER also estimates different values for the nominal risk-free rate, equity beta, market risk premium and updates the debt risk premium using the AER's methodology. Table 3 summarises the WACC parameter values proposed in the revised access arrangement proposal and those approved in the final decision.

Table 3: WACC parameters

Parameter	Revised access arrangement proposal	Final decision
Nominal risk-free rate (%)	5.50 [a]	5.63 [b]
Inflation (%)	2.48 [a]	2.52 [c]
Real risk-free rate (%)	2.94	3.03 [b]
Equity beta	1.0	0.80
Market risk premium (%)	7.5	6.5
Debt risk premium (%)	4.30	3.35 [b]
Debt to total assets (gearing) (%)	60	60
Nominal return on equity (%)	13.00	10.83 [b]
Nominal return on debt (%)	9.80	8.98 [b]
Nominal vanilla WACC (%)	11.08	9.72 [b]

a: ActewAGL has adopted the risk-free rate and inflation forecast decided in the draft decision. ActewAGL, *Revised access arrangement information*, January 2010, pp. 37–39, 45–46.

b: These figures have been updated using data for the 20 business days averaging period ending on 12 March 2009.

c: This figure has been updated using the latest data from the RBA statement on monetary policy dated 4 February 2010, p. 58.

Taxation

The revised access arrangement proposal incorporates the amendments required in the draft decision in relation to taxation. However, due to changes required to other building block components, the AER requires ActewAGL to apply the estimated cost of corporate income taxation set out in chapter 6 of the final decision.

The final decision approves a gamma value of 0.65.

Incentive mechanism

The revised access arrangement proposal incorporates the majority of amendments required in the draft decision in relation to ActewAGL's proposed incentive mechanism. However, the revised access arrangement proposal does not incorporate the draft decision amendment requiring capital expenditure to be excluded from the incentive mechanism.

The final decision does not approve the incentive mechanism in the revised access arrangement proposal because it incorporates capital expenditure.

Fixed principles

The revised access arrangement proposal incorporates the majority of amendments required in the draft decision in relation to fixed principles. However, the revised access arrangement proposal retains a fixed principle relating to the proposed incentive mechanism for capital expenditure.

The final decision does not approve the fixed principle relating to the proposed incentive mechanism for capital expenditure and removes the associated fixed principle.

Operating expenditure

The revised access arrangement proposal, proposes operating expenditure for the access arrangement period of $136.6 million ($2009–10), which is $49.6 million[13] higher than the estimated operating expenditure in the earlier access arrangement period.

The final decision does not approve ActewAGL's forecast operating expenditure and reduces it by $24.2 million ($2009–10) to $112.4 million ($2009–10) or 17.7 per cent. This represents an increase in operating expenditure in real terms of approximately 29.1 per cent compared to the period 1 July 2005 to 30 June 2010.

Table 4 sets out the operating expenditure approved in the final decision.

Table 4: Final decision on forecast operating expenditure ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Controllable costs	14.8	16.7	17.1	16.8	17.0	82.3
Non-controllable costs	5.9	5.9	6.0	6.1	6.2	30.1
Total operating expenditure	20.7	22.6	23.1	22.9	23.2	112.4

Total revenue

The revised access arrangement proposal proposes total revenue for each year of the access arrangement period as set out in Table 5.

13 Estimated using total operating expenditure for the five year period 2005–06 to 2009–10 instead of the six year period covering the earlier access arrangement period.

Table 5: Revised total revenue and X factors ($m, nominal, unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	30.8	34.4	37.1	38.1	39.0
Depreciation	2.6	4.0	4.6	5.3	5.6
Operating and maintenance	21.6	30.0	31.3	31.8	32.9
Corporate income taxation	1.1	1.4	1.5	1.6	1.6
Incentive mechanism payments	na	na	na	na	na
Total	54.4	61.9	70.6	80.8	92.8
X factor tariff revenue (%) [a b]	–10.9	–10.9	–10.9	–10.9	–10.9

Source: ActewAGL, *Access arrangement information*, January 2010, p. 71.
na: Not applicable.
a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factors are indicative only.

The AER does not approve the revised total revenue. The final decision estimates total revenue over the access arrangement period to be $278.7 million ($2009–10) compared to $329.8 million ($2009–10) proposed in the revised access arrangement proposal. The reduction in total revenue is based on the AER's assessment of the building block components against the relevant NGR criteria. The total revenue approved in the final decision and relevant X factors are summarised in Table 6.

Table 6: Final decision on total revenue requirements and X factors ($m, nominal, unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	27.0	29.5	31.8	32.6	33.4
Depreciation	2.5	3.6	4.2	4.8	5.1
Operating and maintenance	21.2	23.8	24.9	25.3	26.2
Corporate income taxation	0.8	1.0	1.1	1.2	1.2
Incentive mechanism payments	0	0	0	0	0
Total	51.5	57.8	61.9	63.9	65.9
X factor tariff revenue (%) [a b]	-4.96[a]%	-4.96%	-4.96%	-4.96%	-4.96%
Smoothed revenue path	51.4	55.2	59.8	65.0	70.7

na: Not applicable.
a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factors are indicative only.

PART B- Tariffs

Demand forecasts

ActewAGL's demand forecasts for the access arrangement period are outlined in Table 7. These demand forecasts support ActewAGL's proposed capital expenditure and operating expenditure forecasts.

Table 7: Proposed forecast load and customer numbers (units as stated)

	2010–11[a]	2011–12[a]	2012–13[a]	2013–14[a]	2014–15[a]
Tariff customers (no.)	119 711	123 429	127 030	130 284	133 420
Tariff load (TJ)	6545	6525	6565	6642	6736
Contract customers (no.)	41	41	41	41	42
Contract load (TJ)	1166	1171	1179	1192	1210
Total load (TJ)	7711	7696	7744	7834	7946

Source: ActewAGL, *Access arrangement information*, June 2009, pp. 91, 92.
a: Forecast.
no.: Number.

The AER approves the proposed demand forecasts.

Reference tariffs

The revised access arrangement proposal proposes two tariff classes: tariff and contract. The final decision approves these tariff classes.

The final decision approves the average increase in tariffs (including meter services for residential customers of 7.0 per cent as at 1 July 2010 (in nominal terms) and by 2.9 per cent in real terms over the remaining years of the access arrangement period. Tariffs for contract customers will increase by 7.8 per cent (in nominal terms) as at 1 July 2010 and will rise in line with CPI over the remaining years of the access arrangement period. These estimated tariffs do not take into account the impact of cost pass throughs.

Tariff variation mechanism

ActewAGL proposes two tariff variation mechanisms, a tariff variation formula mechanism and a cost pass through mechanism. The revised access arrangement proposal proposes changes to the notification and assessment procedures for both tariff variation mechanisms.

The final decision extends the AER's decision making time to a maximum of 90 business days for assessing the cost pass through mechanism. The AER does not approve the revised access arrangement proposal to adjust tariffs for unascertainable costs associated with cost pass through events and amend definitions for cost pass through events. The final decision does not approve the proposal to adjust tariffs for foregone revenue and for cost pass through events that occurred in the earlier access arrangement period.

PART C- Non-tariff terms and conditions of access

Non–tariff components

The AER does not approve the revised access arrangement proposal for the extensions and expansions policy and trigger events. Instead the AER includes an extensions and expansions policy that does not automatically cover certain extensions.

The AER includes a trigger event for certain changes to the NGL and NGR, and the commencement in operation in ACT of the National Energy Retail Law and National Energy Retail Rules.

ActewAGL proposes and the AER approves a review submission date of 30 June 2014 and a revision commencement date of 1 July 2015.

2 Pipeline services

2.1 Introduction

This chapter considers the pipeline services set out in the revised access arrangement proposal.

The AER's analysis and consideration of the revised access arrangement proposal in relation to pipeline services is set out in chapter 2 of the draft decision.

2.2 Revised access arrangement proposal

ActewAGL has incorporated all amendments set out in chapter 2 of the draft decision in the revised access arrangement proposal.

2.3 AER's analysis and considerations

The AER considers, as set out in chapter 2 of the draft decision and noting ActewAGL's incorporation of amendments in chapter 2 of the draft decision, that ActewAGL's description of pipeline services complies with r. 48(1)(b)–(c) of the NGR.

The AER notes a minor typographical error in Box H.2 of the revised access arrangement information. The word 'period' is missing between the words 'ICRC in the' and 'before approval' from paragraph four under the heading of '12.3 Revisions to Part 3–General terms and conditions for access'.

2.4 Conclusion

The AER approves the ActewAGL's revised description of pipeline services and specification of reference services as these comply with r. 48(1)(b)–(c) of the NGR.

2.5 Revisions

The AER proposes the following revision:

Revision 2.1: amend Box H.2 in the access arrangement information to include under the heading '12.3 Revisions to Part 3–General terms and conditions for access' the word 'period' between the words 'ICRC in the' and 'before approval'.

Part A—Total revenue (building block components)

3 Capital base

3.1 Introduction

This chapter sets out the AER's consideration and analysis of the revised access arrangement proposal in relation to the opening capital base and projected capital base for ActewAGL.

The AER's analysis and consideration of the access arrangement proposal in relation to the opening capital base and projected capital base are set out in chapter 3 of the draft decision.[14]

The opening capital base forms the initial value of the projected capital base.[15] This chapter considers the components of the opening capital base and projected capital base, including the capital expenditure proposed by ActewAGL.

The AER's consideration of ActewAGL's depreciation schedule is set out in chapter 4 of the final decision.

3.2 Revised access arrangement proposal

3.2.1 Opening capital base

Table 3.1 shows the opening capital base in the revised access arrangement proposal. The proposed opening capital base of $278 million ($nominal)[16] is slightly higher than the $277.1 million ($nominal) approved in the draft decision.[17]

Table 3.1: Revised opening capital base ($m, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
Opening capital base	225.9	233.8	239.3	250.4	255.6	266.8	278.0
Capital expenditure	9.8	7.2	11.1	7.6	8.6	15.5	
Depreciation	7.3	8.0	8.6	8.4	8.8	9.2	
Adjustment for inflation	5.4	6.3	8.7	5.9	11.3	4.9	
Closing capital base	233.8	239.3	250.4	255.6	266.8	278.0[a]	

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 17.
a: Closing capital base for 2009–10 includes an adjustment for difference between actual and forecast capital expenditure in the period before the earlier access arrangement period.

14 AER, *Draft decision*, November 2009, pp. 24–50.

15 NGR, r. 78.

16 ActewAGL, *Revised access arrangement information*, January 2010, p. 17.

17 AER, *Draft decision*, p. 47.

3.2.1.1 Capital expenditure

The revised access arrangement proposal does not incorporate the draft decision requirement to remove the regulatory costs of $1.45 million ($2009–10).[18]

ActewAGL submits that the draft decision highlights a transitional problem that has arisen because the previous regulator, the Independent Competition and Regulatory Commission (ICRC), adopted a different approach. The ICRC had previously allowed the capitalisation of regulatory costs.[19] ActewAGL submits it has a reasonable expectation that its regulatory costs will be added to the opening capital base, consistent with the approach adopted by the ICRC. ActewAGL submits that the draft decision therefore denies it the opportunity to recover those costs.[20]

ActewAGL notes that capital expenditure is defined in the NGR[21] as costs and expenditure of a capital nature incurred in providing pipeline services. ActewAGL further notes that in its draft decision the AER did not consider that ActewAGL's regulatory costs were of a capital nature.[22]

ActewAGL submits that the term 'of a capital nature' is not defined in the NGR. ActewAGL considers that the essential nature of capital expenditure is that of future benefits accruing over time. In this regard regulatory costs, unlike many other operating expenditures, are not regular annual costs but have a life related to a five-year regulatory cycle. Regulatory costs are analogous to capital expenditure on an intangible asset, depreciated over five years.[23]

ActewAGL notes that in its recent determination on ActewAGL's electricity distribution network, the AER allowed the capitalisation of such regulatory costs.[24]

3.2.1.2 Adjustment to the capital base for inflation

ActewAGL accepts the methodology in the draft decision for adjusting the capital base. The revised inflation rates are shown in Table 3.2.[25]

Table 3.2: Revised inflation rates for adjusting the capital base (%)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
Inflation rates	2.34	2.67	3.54	2.33	4.35	1.79

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 16.

18 ActewAGL, *Revised access arrangement information*, January 2010, pp. 13–15.

19 ICRC, *Final decision, Review of access arrangement for ActewAGL natural gas system in ACT, Queanbeyan and Yarrowlumla*, October 2004, p. 123.

20 ActewAGL, *Revised access arrangement information*, January 2010, pp. 14–15.

21 NGR, r. 69.

22 ActewAGL, *Revised access arrangement information*, January 2010, p. 14.

23 ActewAGL, *Revised access arrangement information*, January 2010, pp. 14–15.

24 ActewAGL, *Revised access arrangement information*, January 2010, pp. 15.

25 ActewAGL, *Revised access arrangement information*, January 2010, pp. 15–16.

3.2.1.3 Adjustment for capital expenditure before the earlier access arrangement period

ActewAGL accepts the methodology in the draft decision to adjust the capital base for capital expenditure at the commencement of the earlier access arrangement period. The revised access arrangement proposal, proposes $12 747, instead of $14 276 that is approved in the draft decision, to reflect updated inflation rates for estimating the opening capital base.[26]

3.3 Projected capital base

Table 3.3 shows the estimation of the projected capital base in the revised access arrangement proposal. The proposed projected capital base of $318.4 million ($2009–10)[27] exceeds the amount of $307.0 million ($2009–10) included in the draft decision.[28] The reasons for this difference are outlined below.

Table 3.3: Revised projected capital base ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Opening capital base	278.0	302.9	318.8	319.7	318.8	na
Forecast capital expenditure	34.2	27.0	12.9	11.6	12.2	97.9
Forecast depreciation	9.3	11.1	12.0	12.5	12.7	57.6
Closing capital base	302.9	318.8	319.7	318.8	318.4	na

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 34.
na: Not applicable.

3.3.1 Capital expenditure

The revised access arrangement proposal proposes total capital expenditure of $97.9 million ($2009–10)[29], which is higher than the amount of $84.1 million ($2009–10) approved in the draft decision.[30]

3.3.1.1 Security of supply

ActewAGL accepts the requirement in the draft decision to remove $134 million ($2009–10) from forecast capital expenditure for the Hoskinstown to Fyshwick loop (HFL), which is proposed to address the security of supply concerns for the ActewAGL gas distribution network. [31]

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26 ActewAGL, *Revised access arrangement information*, January 2010, p. 16.

27 ActewAGL, *Revised access arrangement information*, January 2010, p. 34.

28 AER, *Draft decision*, p. 49.

29 ActewAGL, *Revised access arrangement information*, January 2010, p. 34.

30 AER, *Draft Decision*, p. 49.

31 ActewAGL, *Revised access arrangement information*, January 2010, p. 19.

Instead in the revised access arrangement proposal, ActewAGL proposes the installation of a compressor (the compressor project) on the Dalton to Watson lateral (part of the Moomba to Sydney Pipeline (MSP)).[32]

The compressor is proposed to be owned and operated by East Australian Pipeline Pty Ltd (EAPL),[33] the owner of the MSP.[34] The forecast capital expenditure for the compressor is $32 million ($2009–10), compared with the expected costs of the HFL of $134.7 million ($2009–10).[35]

The revised access arrangement proposal includes operating expenditure of $4.87 million ($2009–10) per annum for compression services to be provided by the APA Group, plus a further $0.6 million ($2009–10) per annum to the APA Group for operating and maintaining the compressor.[36] The $4.87 million ($2009–10) corresponds to depreciation of the compressor over an economic life of 15 years and a return on the value of the asset of $32 million ($2009–10).[37]

The revised access arrangement proposal outlines that the installation of a compressor on the Dalton to Watson lateral will require the construction of a new trunk receiving station (TRS) and a new water bath heater at Watson to accommodate increased pressure and flows to the network in 2011–12. Forecast capital expenditure for this project is $5 million ($2009–10) and forecast operating expenditure is $0.6 million ($2009–10).[38]

To support its proposal, ActewAGL submits a report by the Centre for International Economics (the CIE report)[39] that assesses the economic value of reducing the risk of a gas supply outage. ActewAGL also submits supplementary information on this issue[40] and report by Zincara (the Zincara report) that reviews Jemena's input assumptions to determine the probability of upstream supply failure to the ActewAGL gas distribution network.[41]

3.3.1.2 Cost escalators

The revised access arrangement proposal applies real input cost escalators to escalate input costs used to estimate forecast capital expenditure over the access arrangement period. The revised access arrangement proposal does not accept the draft decision's

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32 ActewAGL, *Revised access arrangement information*, January 2010, pp. 18–24.

33 EAPL is a part of the APA Group.

34 ActewAGL, *Revised access arrangement information*, January 2010, p. 19.

35 ActewAGL, *Revised access arrangement information*, January 2010, pp. 19–21.

36 ActewAGL, *Revised access arrangement information*, January 2010, p. 20.

37 ActewAGL, *Revised access arrangement information*, January 2010, p. 52.

38 ActewAGL, *Revised access arrangement information*, January 2010, p. 20.

39 ActewAGL, *Revised access arrangement information*, January 2010, appendix C, CIE, Economic value of reducing the risk of a gas supply outage – a threshold benefit–cost analysis, 24 December 2009, (CIE report).

40 ActewAGL, email to the AER, 19 February 2010.

41 ActewAGL, email to the AER, 19 February 2010, attachment D, Zincara, *ActewAGL Gas Network Security of Supply*, 30 January 2010 (Zincara report).

amendments 3.3 and 3.4 for cost escalators. Instead the revised access arrangement proposal proposes the following escalators as shown in Table 3.4.[42]

Table 3.4: Revised real cost escalation factors (%)

	2009	2010	2011	2012	2013	2014
EBA EGW labour	1.2	1.9	1.3	1.5	1.9	2.3
Contract EGW labour	0.9	1.2	1.5	2.7	3.8	3.7
Aluminium	–16.7	46.7	11.9	1.4	0.2	0.4
Steel	–28.5	45.6	17.0	1.7	–2.4	–1.9
Polyethylene	–9.1	25.7	7.7	–1.9	–2.8	–2.4
Effect of emissions trading scheme:						
Aluminium	0.0	0.0	0.1	0.4	0.3	0.0
Steel	0.0	0.0	0.3	1.1	0.7	0.1
Polyethylene	0.0	0.0	0.1	0.4	0.3	0.0

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 31.
EBA: Enterprise bargaining agreement.
EGW: Electricity, gas and water.

ActewAGL submits that the draft decision on cost escalators is inconsistent with the AER's limited discretion in approving capital expenditure, as set out in r. 40(2) of the NGR. ActewAGL submits that as methodology proposed by ActewAGL for cost escalators is accepted in the draft decision[43] the AER is limited to updating the inputs for that methodology but cannot apply its own methodology.[44]

ActewAGL also submits that the AER has misinterpreted the meaning of in the circumstances in r. 74(2)(b) of the NGR. ActewAGL submits that in the circumstances refers to the circumstances at the time of the service provider's proposal, not at the time of the draft or final decisions.[45]

Labour, aluminium and steel

The revised access arrangement proposal updates the escalators for labour, aluminium and steel to take account of recent market developments and changes in the economic outlook, using the methodology contained in access arrangement proposal.[46]

42 ActewAGL, *Revised access arrangement information*, January 2010, pp. 24–31.

43 NGR, r. 40(2) and r. 79(6).

44 ActewAGL, *Revised access arrangement information*, January 2010, pp. 29–30.

45 ActewAGL, *Revised access arrangement information*, January 2010, p. 29.

46 ActewAGL, *Revised access arrangement information*, January 2010, pp. 24–25.

Polyethylene

ActewAGL submits a report by the Competition Economics Group (the CEG cost escalator report)[47] to address the two concerns raised in the draft decision regarding the use of the cost escalator for polyethylene, namely:

- ActewAGL's approach leads to double counting of inflation
- ActewAGL provides insufficient evidence of the relationship between the prices of crude oil and nylon–11 (which ActewAGL submits is a reasonable substitute for polyethylene).[48]

ActewAGL submits that the CEG cost escalator report addresses the first concern by using forecast crude oil price movements expressed in nominal dollars. Further, ActewAGL submits that the CEG cost escalator report addresses the second concern by putting forward further evidence of the relationship between crude oil and nylon–11 prices by obtaining a long term monthly pricing history for crude oil and thermoplastic resins (of which polyethylene is one) from the United States Bureau of Labour Statistics from July 1991 to October 2009.[49]

Carbon Pollution Reduction Scheme

ActewAGL does not agree with the draft decision that does not approve the proposed cost escalators to account for the introduction of the Carbon Pollution Reduction Scheme (CPRS).[50]

First, ActewAGL does not agree that the impact of the CPRS is already factored into the escalators. ActewAGL submits that the futures prices used to develop the proposed escalators are based on US dollar prices in world markets of the relevant basic commodity (aluminium, steel and crude oil). ActewAGL submits that even if investors in these markets fully factored in the expected impact of an Australian CPRS on world prices, this would not have a significant effect on those prices. Therefore the impact of the CPRS is not captured in the escalators prior to the CPRS adjustment being made.[51]

Second, ActewAGL does not agree that the costs associated with the CPRS should be treated as a pass through event. ActewAGL submits that it would be difficult to:

- isolate and attribute increased costs to the operation of the CPRS as distinct from other factors that also result in higher costs
- quantify the cost effects into a single event which satisfies the materiality threshold, since the cost effects would be spread across multiple contracts

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47 ActewAGL, *Revised access arrangement information*, January 2010, appendix E.1, CEG, *Escalation factors affecting expenditure forecasts*.

48 ActewAGL, *Revised access arrangement information*, January 2010, p. 25.

49 ActewAGL, *Revised access arrangement information*, January 2010, pp. 25–26.

50 ActewAGL, *Revised access arrangement information*, January 2010, pp. 26–28.

51 ActewAGL, *Revised access arrangement information*, January 2010, p. 26.

- identify a trigger to allow costs pass through claims.[52]

3.3.2 Adjustment to the capital base for inflation

The revised access arrangement proposal accepts the methodology in the draft decision to adjust the capital base for inflation and uses an inflation rate of 2.48 per cent.[53]

3.3.3 Capital redundancy

The revised access arrangement proposal accepts the draft decision requirement to delete the proposed capital redundancy policy.

3.3.4 New capital expenditure for the reference tariff policy

The revised access arrangement proposal incorporates most of the draft decision to amend or delete certain clauses in its reference tariff policy relating to capital expenditure. The revised access arrangement proposal does not accept the amendment to recognise that under certain circumstances capital contributions may be added to the capital base. This is because the amendment may create confusion among users and prospective users as the revised access arrangement proposal states that ActewAGL does not intend to roll capital contributions into the capital base.[54] To clarify the issue, ActewAGL proposes to include the following footnote to clause 4.19 of its access arrangement:[55]

> Rule 82(3) only permits capital expenditure to be rolled into the capital base if this Access Arrangement contains a mechanism which prevents ActewAGL from benefitting, through increased revenue, from the User's contribution to the capital base. As of the Commencement Date, ActewAGL does not have such a mechanism. Accordingly, ActewAGL cannot increase the Capital Base for capital contributions pursuant to rule 82.

3.4 AER's analysis and considerations

The AER's analysis and consideration of the revised access arrangement proposal in relation to the capital base is set out below.

3.4.1 Opening capital base

3.4.1.1 Capital expenditure

Regulatory costs

ActewAGL's earlier access arrangement represents a transitional arrangement under schedule 1 of the NGR. While ActewAGL makes no submission that the ICRC approved forecast regulatory costs as capital expenditure, the AER understands that ActewAGL may have had an expectation that the costs would be capitalised.

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52 ActewAGL, *Revised access arrangement information*, January 2010, p. 27.

53 ActewAGL, *Revised access arrangement information*, January 2010, p. 46.

54 ActewAGL, *Revised access arrangement information*, January 2010, p. 124.

55 ActewAGL, *Revised access arrangement proposal*, p. 22; ActewAGL, *Revised access arrangement information*, January 2010, p. 124–125.

The AER maintains that forecast regulatory costs represent operating expenditure and notes that ActewAGL has changed its approach in the access arrangement period and proposes regulatory costs as operating expenditure. The AER considers that the proposed approach for the access arrangement period from 1 July 2010 to 30 June 2015 is consistent with the requirements of r. 91 and r. 69 of the NGR. Nevertheless, the AER approves the inclusion of these costs in the opening capital base as a transitional measure between the Code and the NGR on this occasion. It does so on the basis that in the past the ICRC has treated ActewAGL's regulatory costs as capital expenditure and ActewAGL's proposed recoupment of these regulatory costs in the access arrangement period is consistent with this past treatment. The AER considers that this treatment is one-off, specific to ActewAGL's circumstances and does not provide a precedent for other service providers.

3.4.1.2 Adjustment to the capital base for inflation

The AER approves ActewAGL's inflation rates up to 2008–09, but considers that as ActewAGL has accepted the methodology outlined in the draft decision, the proposed inflation rate of 1.79 per cent for 2009–10 is no longer the best forecast or estimate possible in the circumstances.[56] As a consequence, the AER estimates an inflation rate of 1.82 per cent for 2009–10.[57] This takes into account the actual inflation rate for the period December 2008 to December 2009. This is despite ActewAGL's submission that interprets the meaning of the term 'in the circumstances' in r. 74(2)(b) of the NGR as relevant to the circumstances at the time of the service provider's proposal. The methodology used by the AER uses the most up to date input information. The AER proposes the inflation rates to adjust the capital base for inflation as set out in revision 3.1.

3.4.1.3 Adjustment for capital expenditure before the commencement of the earlier access arrangement period

As a consequence of the adjustment to the capital base for inflation set out in section 3.4.1.2, the AER estimates an amount of $12 276 ($nominal)[58] to adjust the capital base for changes to actual capital expenditure before the commencement of the earlier access arrangement period. The AER revises the capital base for capital expenditure before the earlier access arrangement as set out in revision 3.2.

3.4.1.4 Summary on opening capital base

In light of the AER's consideration of the revised inflation rates and the adjustment for capital expenditure before the commencement of the earlier access arrangement period, the AER does not consider that the proposed opening capital base is consistent with r. 77 or r. 74(2) of the NGR. The AER proposes to revise ActewAGL's opening capital base as set out in revision 3.3.

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56 NGR, r. 74(2).

57 Australian Bureau of Statistics, 6401–Consumer price index, December 2009.

58 This compares to $12 747 ($ nominal) proposed by ActewAGL; ActewAGL, *Revised access arrangement information*, January 2010, p. 16.

3.4.2 Projected capital base

3.4.2.1 Forecast capital expenditure

Security of supply

The access arrangement proposal proposes the HFL to address the security of gas supply concerns brought about by:

- disruptions to gas supply upstream
- increasing peak winter demand
- under nominations by shippers.[59]

The draft decision does not approve the capital expenditure for the HFL of $134 million ($2009–10).[60]

The revised access arrangement proposal proposes the construction of a compressor on the Dalton to Watson lateral of the MSP and a new TRS and a new water bath heater at Watson (together the compressor project) to address the security of supply issue.[61]

The revised access arrangement proposal includes the CIE report which provides a cost–benefit analysis of the compressor project.[62]

The CIE report considers that the probability of a supply failure resulting in a disruption to gas supply is quite low. The probability is estimated to start in 2009 at around 0.0059 per year, increasing to 0.0123 by 2029.[63]

The CIE report concludes that the present value of the expected outage costs is $14.1 million (assuming a mix of residential and commercial customers are affected). The CIE report further concludes that this is the maximum benefit that could be obtained from investments to increase system security and it is the maximum amount that can be justified on a cost–benefit basis to increase security.[64] This compares with ActewAGL's estimation of the present value of the costs of the compressor project of $42 million.[65]

The CIE report also concludes that as the risk of disruption to supply is expected to increase over time, the willingness of customers to pay for enhanced security will also

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59 ActewAGL, *Access arrangement information*, June 2009, pp. 120–122.

60 AER, *Draft decision*, pp. 32–36.

61 ActewAGL, *Revised access arrangement information*, January 2010, pp. 18–24.

62 ActewAGL, *Revised access arrangement information*, January 2010, appendix C.

63 CIE report, pp. 5, 9.

64 CIE report, p. 5.

65 ActewAGL, *Revised access arrangement information*, January 2010, p. 21.

increase. Projects that mitigate risks that are not easily justified today may become so in the near future.[66]

On the basis of the Zincara report, ActewAGL revises the value of the benefits in the CIE report of $14.1 million to $22.3 million.[67] The Zincara report assumes that there is no difference in the likely failure rates between the Eastern Gas Pipeline and the MSP (CIE assumes a higher probability of failure on the MSP on the basis of age and condition).[68] The Zincara report supports its conclusion with evidence of a study in the USA involving only three pipelines.[69] In response to the Zincara report, CIE states that the value of $22.3 million is within the range presented in the CIE report (which sets out a range of benefits from $7 million to $28 million).[70] Given that the study relied on the Zincara report involves only three US pipelines, the AER does not consider that the revised maximum benefit of $22.3 million necessarily provides a better estimate than the $14.1 million set out in the CIE report.

Given that the cost of the compressor project exceeds the value of the maximum benefit, ActewAGL submits other reasons to justify the compressor project include:

- the CIE report has not been able to quantify all the relevant risks, such as potential under-nomination by shippers and the operation of the Short Term Trading Market (STTM)
- declining reserves in Victoria will make ActewAGL's gas distribution network more dependent on gas supply from the MSP
- an outage of two weeks' duration, compared to five days assumed in the CIE report, more than doubles the CIE report's estimate of the cost of an outage of $14.1 million to $24.8 million.[71]

The AER has a number of concerns with the compressor project proposal which are outlined below.

First, ActewAGL does not provide information to demonstrate that the proposed capital expenditure complies with the new capital expenditure criteria set out in r. 79 of the NGR nor that the proposed operating expenditure complies with the criteria governing operating expenditure set out in r. 91 of the NGR.

Second, the CIE report suggests to the AER that timing of the construction of the compressor project may be inappropriate for the access arrangement period. In reaching this view the AER notes:

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66 CIE report, p. 17.

67 ActewAGL, *Supplementary information on security of supply risks for the ActewAGL distribution gas network*, 12 February 2010, pp. 1–2.

68 Zincara report, p. 5.

69 Zincara report, pp. 5–6.

70 ActewAGL, email to the AER, 19 February 2010, attachment E; CIE, *Economic value of reducing the risk of supply outage – Response to review comments by Zincara*, 11 February 2010, pp. 5–6.

71 ActewAGL, *Revised access arrangement information*, January 2010, pp. 22–23.

- the current cost estimate of the compressor project of $42 million[72] ($2009–10) exceeds the maximum benefit of $14.1 million[73] estimated by the CIE report and ActewAGL's revised estimate of the benefit of $22.3 million[74]

- the CIE report suggests that projects that are not readily justified today may become so in the future

- the CIE report notes that the probability of a supply outage is quite low.[75]

Third, the majority of ActewAGL's proposed forecast costs associated the compressor project are operating expenditure, totalling $5.52 million ($2009–10) per annum commencing in 2011–12. Were the AER to approve the project and in the event that it was deferred from the access arrangement period, or it did not proceed at all, users would still pay this amount through higher tariffs during the access arrangement period. There are no provisions in the NGL or NGR that would allow users to recover this amount from ActewAGL in the event that the compressor project did not proceed in the access arrangement period. This reinforces the need to ensure the benefits of the proposed capital expenditure outweigh the costs for the compressor project in the access arrangement period.

Fourth, the AER is not convinced that this is a matter for it to decide in the context of its consideration of the access arrangement for ActewAGL's gas distribution network. The risk that ActewAGL is attempting to mitigate is a risk associated with the upstream supply of gas. This raises the issue of whether ActewAGL is responsible for managing this risk. If ActewAGL decides to manage this risk, the question then is who should bear these risks the owner or the users of ActewAGL's gas distribution network.

The AER[76] and the report by Wilson Cook (Wilson Cook report)[77] have similar concerns with the HFL project. As outlined in the Wilson Cook report on the HFL project, these concerns include:

- ActewAGL does not demonstrate what contingency ought to be provided for

- whether it is appropriate for ActewAGL, as the owner of a distribution network, to expend a significant amount of capital expenditure to address upstream supply issues.[78]

In the draft decision the AER considers that some events that have occurred recently (such as the commissioning of the Queensland South Australian and NSW Link) and

72 ActewAGL, *Revised access arrangement information*, January 2010, p. 21.

73 CIE report, p. 5. The AER has assumed the figure is denominated in $2009–10.

74 ActewAGL, *Supplementary information on a security of supply risks for the ActewAGL Distribution gas network*, 12 February 2010, p 12. The AER has assumed the figure is denominated in $2009–10.

75 CIE report, p. 9.

76 AER, *Draft decision*, pp. 32–36.

77 Wilson Cook & Co, *Review of expenditure of ACT and NSW Gas DNSPs, ActewAGL distribution's network*, 29 October 2010 (Wilson Cook report).

78 Wilson Cook report, pp. 10–13.

ActewAGL had introduced certain measures (such as improved information concerning nominations from shippers) that reduced the risk of a disruption to the supply of gas to ActewAGL's distribution network.[79]

The AER considers in light of the concerns mentioned above and raised in the Wilson Cook report in relation to the HFL project, that the issues are similar for the compressor project. The AER maintains that ActewAGL does not address these issues raised in the draft decision. In this respect the AER is not convinced that the upstream security of supply is a risk that ActewAGL is responsible for managing and that users and prospective users of ActewAGL's gas distribution network should fund the solution.

As an observation, the AER notes that while ActewAGL will pay for the costs of the compressor over time through payments to EAPL, EAPL will retain ownership of the asset.[80] This means that the costs of the compressor will be reflected in the capital base for the MSP and represent an increase in capital costs to the APA Group, which conceivably will be passed on to users of the MSP. If this is the case, this raises an opportunity for the APA Group to recoup more than the costs of the compressor, which would be inconsistent with the NGO and r. 89(d) of the NGR. As well as the payments received from ActewAGL the APA Group could recover its increased capital costs through higher tariffs to other users of the MSP. In this regard the AER notes that part of the MSP is no longer regulated while the remainder is subject to light regulation. Except in cases of an access dispute, the AER does not have a role in approving tariffs on the MSP. If the AER were to approve the costs for the compressor project, the AER would consider that these payments by ActewAGL over time would be akin to capital contributions. These contributions would need to be taken into account so that users of the MSP were not also paying for the costs of the compressor.

Summary on security of supply

For the reasons outlined above, the AER considers that ActewAGL has not demonstrated that the revised capital expenditure for the compressor project is that which would be incurred by a prudent gas distribution network service provider acting efficiently in accordance with good industry practice to achieve the lowest sustainable cost of delivering services in accordance with r. 79 of the NGR.

3.4.2.2 Cost escalators

The revised access arrangement proposal outlines that if the AER approves a service provider's methodology then only estimates using that methodology should be allowed.[81] The revised access arrangement proposal outlines that 'in the circumstances' in r. 74(2)(b) of the NGR refers to the time when the service provider submits its proposal.[82]

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79 AER, *Draft decision*, pp. 33–34.

80 ActewAGL, *Revised access arrangement information*, January 2010, p. 19.

81 ActewAGL, *Revised access arrangement information*, January 2010, pp. 29–30.

82 ActewAGL, *Revised access arrangement information*, January 2010, p. 29.

Taking into account ActewAGL's submission, the AER considers that a service provider's methodology should contain a mechanism that will allow for estimates or forecasts to be revised in accordance with the most up-to-date information.[83] Given the lead time between the submission of a service provider's proposal and the date of commencement of an access arrangement (about 12 months), it is conceivable that without such a mechanism a forecast or estimate may become so out-of-date that it cannot represent the best forecast or estimate possible in the circumstances.[84]

Labour, aluminium and steel

ActewAGL submits that its revised cost escalators for labour, aluminium and steel take into account changing economic conditions.[85]

The AER has examined the cost escalators for labour and considers they incorporate relevant data on actual wages and rely on a number of independent forecasts from professional economic forecasters.

The AER has examined the cost escalators proposed by ActewAGL for aluminium and steel and considers they rely on market data where available and rely on averages of various professional forecasts where market data is not available.

For these reasons, the AER considers that ActewAGL's revised forecasts for labour aluminium and steel have been arrived at on a reasonable basis[86] and represent the best forecast possible in the circumstances[87] and meet the requirements of the new capital expenditure criteria.[88]

Polyethylene

In the draft decision, the AER raises two concerns with the derivation of the proposed cost escalator for polyethylene:

- insufficient evidence is presented of the relationship between nylon-11 and polyethylene prices
- parameters used in the econometric model are estimated using one set of data, based on nominal prices, while forecasts from the model were made using a different set of data based on real prices, resulting in double counting of inflation.[89]

The AER considers that the CEG report on cost escalators has addressed the second issue raised by the AER but has not addressed the first.

The key relationship that needs to be demonstrated is one between polyethylene and nylon-11 prices. However, the CEG report presents no evidence of any relationship

83 NGR, r. 74(2)(b).

84 NGR, r. 74(2)(b).

85 ActewAGL, *Revised access arrangement information*, January 2010, p. 24.

86 NGR, r. 74(2)(a).

87 NGR, r. 74(2)(b).

88 NGR, r. 79.

89 AER, *Draft decision*, pp. 38–40.

between polyethylene and nylon-11 prices. Instead, the CEG report's econometric model is based on the relationship between thermoplastic resin prices and crude oil prices.[90] This raises two concerns. First, the econometric model forecasts changes in thermoplastic resin prices, not polyethylene prices. Polyethylene is only one of many thermoplastics.[91] The CEG report does not demonstrate a relationship between polyethylene and thermoplastic resin prices.[92] Second, the fundamental driving factor behind the CEG report's forecast real cost escalators for nylon-11 is crude oil prices.[93] However, unlike polyethylene which is derived from crude oil, nylon-11 is derived from castor oil.[94]

The only evidence presented in the CEG report to support the relationship between polyethylene and nylon-11 prices is the theoretical argument that the two materials are substitutes.[95] No evidence is provided that the price of nylon-11 moves in line with changes in the price of polyethylene. Economic theory does indicate that, in a competitive market, prices of substitutes move together.[96] This happens as increased prices of one of the goods leads to increased demand for the other good. However, the CEG cost report indicates that there is only one supplier of nylon-11 in Australia.[97] Economic theory indicates that changes in demand for substitutes in a monopoly market do not necessarily lead to the same change in price that would be expected in a competitive market.[98] This means that, in a monopoly market, prices of substitutes do not necessarily move together.

In light of the above, the AER considers that the proposed cost escalator for polyethylene is not arrived at on a reasonable basis as required by r. 74(2)(a) of the NGR, as ActewAGL has not proven empirically or theoretically the assumed economic relationship between substitutes underlying the forecast. The AER does not consider that ActewAGL's proposed cost escalator for polyethylene results in capital expenditure that would be incurred by a prudent service provider operating efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of providing services.[99]

Carbon pollution reduction scheme

The draft decision raises two issues about the proposed CPRS cost escalator. These are:

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90 CEG report, p. 11.

91 MatWeb, *Polyester engineering property data*, viewed 17 March 2010, <www.matweb.com/reference/polyester.aspx>.

92 CEG report, pp. 9–13.

93 CEG report, p. 11.

94 Ogunniyi, D. S.,'Castor oil, a vital industrial raw material', *Bioresource technology*, Vol. 97, No. 9, June 2006.

95 CEG report, pp. 10–11.

96 Quirmbach, H. C., 'Comparative statics for oligopoly; demand shift effects', *International Economic Review*, Vol. 29. No. 3. August 1988, p. 453.

97 CEG report, p. 10.

98 Quirmbach, H. C., 'Comparative statics for oligopoly, demand shift effects', *International Economic Review*, Vol. 29. No. 3. August 1988. p. 453.

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

- there is uncertainty regarding the timing and final form of the CPRS
- the use of data from futures markets already includes the estimated cost of the CPRS.[100]

The CEG report on cost escalators acknowledges the uncertainty surrounding the introduction of the CPRS.[101] Nevertheless, ActewAGL and the CEG report on cost escalators consider that the estimates of the impact of the CPRS on capital expenditure represent the best estimates possible in accordance with r. 74(2)(b) of the NGR.[102]

Regarding the second point noted above, the CEG report on cost escalators gives reasons why the futures costs used do not incorporate costs for the CPRS. The CEG report on cost escalators states that the futures prices and professional forecasts used to develop the escalators are based on US dollar prices in world markets for the relevant basic commodities (aluminium, steel and crude oil). The CEG report on cost escalators further states that even if investors in these markets fully factor in the expected impact of the CPRS on world prices it would not have a substantive impact on those commodity prices. The CEG report on cost escalators clarifies that the impact of the CPRS was factored into prices of the finished products purchased by ActewAGL.[103]

To address the difficulties associated with the use of a pass through mechanism for the effect of CPRS on its input prices, ActewAGL suggests the following approach. The cost pass through event approved in the draft decision will be used to pass through changes in costs derived by applying the CPRS escalators once the CPRS is introduced. ActewAGL qualifies this by submitting that the mechanism would only be appropriate if there remains considerable uncertainty over the introduction of such a scheme during the access arrangement period. ActewAGL submits that it is almost certain that a scheme will be introduced during the access arrangement period and a CPRS cost escalator should be factored into input costs.[104] The AER does not consider that the approach proposed by ActewAGL is appropriate and that the incurred costs or forecast costs to be considered under a CPRS cost pass through event need to be considered at the time the event occurs.

Notwithstanding ActewAGL’s submission and the CEG report, the AER remains of the view that, given the uncertainty over the timing and the final form of the CPRS, and its consequent effect on costs, ActewAGL’s forecasts of the effects of the CPRS on its proposed cost escalators is not arrived at on a reasonable basis, contrary to r. 74(2)(a) of the NGR. The AER does not consider that ActewAGL’s proposed cost escalator for the CPRS results in capital expenditure that would be incurred by a prudent service provider operating efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of providing services.[105] Instead, the

100 AER, *Draft decision*, p. 40–41.

101 CEG report, p. 14.

102 ActewAGL, *Revised access arrangement information*, January 2010, p. 28; CEG report, p. 15.

103 CEG report, pp. 14–15.

104 ActewAGL, *Revised access arrangement information*, January 2010, p. 27–28.

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

AER considers that the appropriate approach for dealing with the effects on costs of the CPRS, including any applicable cost escalators, is to consider these costs under the approved cost pass through mechanism.

3.4.2.3 Summary on forecast capital expenditure including cost escalators

The AER does not consider that ActewAGL's forecast capital expenditure complies with r. 79 or r. 74(2) of the NGR.

The AER does not approve ActewAGL's proposed capital expenditure of $5 million ($2009–10) for the construction of a trunk receiving station and water bath heater at Dalton.

The AER approves ActewAGL's proposed cost escalators for labour, steel and aluminium, as these comply with r. 74(2) and r. 79 of the NGR.

The AER does not approve the cost escalators for polyethylene and the CPRS as these do not comply with r. 74(2) and r. 79 of the NGR.

The AER proposes to revise ActewAGL's forecast capital base as set out in revisions 3.6 and 3.7.

3.4.3 Adjustment to the capital base for inflation

The AER approves the methodology in the revised access arrangement proposal for adjusting the capital base for inflation. However, the AER considers that ActewAGL's forecast inflation rate of 2.48 per cent[106] does not represent the best forecast or estimate possible in the circumstances.[107] The AER estimates an inflation rate of 2.52 per cent using the most up-to-date RBA forecasts.[108]

3.4.4 Depreciation

As a consequence of the AER's proposed revisions to ActewAGL's forecast capital expenditure under r. 79 of the NGR and adjustment to the capital base for inflation outlined under r. 74(2). The AER proposes revisions to ActewAGL's forecast depreciation under r. 78 of the NGR. As noted in chapter 4 of this final decision, the method employed by ActewAGL to derive the remaining asset lives is impacted by changes to the opening capital base. As a consequence of ActewAGL's methodology, there are minor differences between the remaining asset lives approved in this final decision compared with the revised access arrangement.

The AER proposes to revise the forecast depreciation as set out in revision 3.8.

3.4.5 New capital expenditure for the reference tariff policy

While the AER notes the intent of ActewAGL's proposed footnote to clause 4.19 of the revised access arrangement proposal, it considers it is inconsistent with r. 82(3) of the NGR, as it fails to state that it is capital expenditure including the capital

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106 ActewAGL, *Revised access arrangement information*, January 2010, p. 46.

107 NGR, r. 74(2).

108 RBA, *Statement on monetary policy*, 4 February 2010.

contribution that may be rolled into the capital base. The AER proposes to revise the access arrangement as set out in revision 3.10.

3.5 Conclusion

Opening capital base

The AER does not approve the revised opening capital base as it does not comply with r. 77(2) of the NGR. The AER's proposed revisions 3.1, 3.2 and 3.3 are set out below.

Projected capital base

In light of the AER's proposed revisions to ActewAGL's forecast capital expenditure including cost escalators, depreciation and inflation rate, the AER considers that the projected capital base does not comply with r. 79 of the NGR, r. 78 of the NGR or r. 74(2) of the NGR. The AER proposes to revise ActewAGL's projected capital base as set out in revision 3.9.

The AER does not approve the revised projected capital base as it does not comply with r. 78 of the NGR. The AER's proposed revisions 3.4, 3.5, 3.6, 3.7, 3.8, and 3.9 are set out below.

New capital expenditure for the reference tariff policy

The AER does not approve the revised footnote to clause 4.19 of the revised access arrangement as it does not comply with r. 82(3) of the NGR.

The AER's proposed revision 3.10 is set out below.

3.6 Revisions

The AER proposes the following revisions:

Revision 3.1: delete Table 3.1 of the revised access arrangement information and replace it with the following:

Table 3.5: Inflation rates for adjusting the capital base (%)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
Inflation rates	2.34	2.67	3.54	2.33	4.35	1.82

Revision 3.2: delete the amount of $12 747 on page 16 of the revised access arrangement information and replace it with $12 726.

Revision 3.3: delete Table 3.2 of the revised access arrangement information and replace it with the following**:**

Table 3.6: Derivation of the opening capital base at 1 July 2010 ($m, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
Opening capital base	225.9	233.8	239.3	250.4	255.6	266.8	278.1
Capital expenditure	9.8	7.2	11.1	7.6	8.6	15.5	
Depreciation	7.3	8.0	8.6	8.4	8.8	9.2	
Adjustment for inflation	5.4	6.3	8.7	5.9	11.3	5.0	
Closing capital base	233.8	239.3	250.4	255.6	266.8	278.1[a]	

a: Closing capital base for 2009–10 includes an adjustment for difference between actual and forecast capital expenditure in the period before the earlier access arrangement period.

Revision 3.4: delete Table 3.3 of the revised access arrangement information and replace it with the following:

Table 3.7: Real escalation factors for ActewAGL capital expenditure (%)

	2009	2010	2011	2012	2013	2014
EBA EGW labour	1.2	1.9	1.3	1.5	1.9	2.3
Contract EGW labour	0.9	1.2	1.5	2.7	3.8	3.7
Aluminium	–16.7	46.7	11.9	1.4	0.2	0.4
Steel	–28.5	45.6	17	1.7	–2.4	–1.9
Polyethylene	0	0	0	0	0	0

Revision 3.5: delete Table 3.4 of the revised access arrangement information and replace it with the following:

Table 3.8: Effect of emissions trading scheme on escalation factors (%)

	2009	2010	2011	2012	2013	2014
Aluminium	0.0	0.0	0.0	0.0	0.0	0.0
Steel	0.0	0.0	0.0	0.0	0.0	0.0
Polyethylene	0.0	0.0	0.0	0.0	0.0	0.0

Revision 3.6: delete Table 3.5 of the revised access arrangement information and replace it with the following:

Table 3.9: Forecast net capital expenditure including contributions and disposals 2010–11 to 2014–2015

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Distribution system capital expenditure:						
Market expansion	8.83	7.21	7.06	6.18	5.8	35.08
Capacity development	5.41	15.49	0.66	0.31	2.35	24.23
Stay in business	11.47	2.22	3.61	4.08	3.18	24.56
Total distribution system capital expenditure	25.72	24.91	11.33	10.57	11.33	83.86
Non system capital expenditure:						
IT System	0.32	0.31	0.44	0.1	0	1.17
Total non system capital expenditure	0.32	0.31	0.44	0.1	0	1.17
Capital contributions	0.06	0.06	0.06	0.06	0.06	0.29
Equity raising costs	0	0	0	0	0	0
Disposals	0	0	0	0	0	0
Total capital expenditure	25.98	25.16	11.71	10.61	11.26	84.72

Revision 3.7: delete Table 3.6 of the revised access arrangement information and replace it with the following:

Table 3.10: Forecast capital expenditure 2010–11 to 2014–15 by asset type (gross) ($m, real, 2008–09)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Distribution system:						
TRS & DRS – Valves & Regulators	12.59	4.08	0.42	0.93	0.42	18.44
HP Mains (inc DRS & TRS)	0.98	11.53	-	-	1.47	13.97
MP Mains	4.81	3.51	3.56	2.59	2.87	17.33
Meters – Tariff	3.75	2.77	4.33	4.09	3.77	18.70
Meters – Contract	0.63	0.20	0.22	0.32	0.22	1.59
MP Services	2.97	2.83	2.81	2.64	2.59	13.83
HP Services	-	-	-	-	-	-
Non system:						
IT System	0.32	0.31	0.44	0.10	-	1.17
Total capital expenditure	26.04	25.22	11.78	10.67	11.33	85.03

Revision 3.8: delete Table 3.8 of the revised access arrangement information and replace it with the following:

Table 3.11: Economic depreciation 2010–2011 to 2014–15 ($m, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Straight line depreciation	9.5	11.2	12.4	13.2	13.8	60.1
Inflation adjustment	-7.0	-7.6	-8.2	-8.5	-8.6	-40.0
Economic depreciation	2.5	3.6	4.2	4.8	5.1	20.1

Revision 3.9: delete Table 3.9 of the revised access arrangement information and replace it with the following:

Table 3.12: Projected capital base 2010–2011 to 2014–15 ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Opening capital base	278.1	295.7	311.0	311.7	310.6	na
Plus forecast capital expenditure	26.9	26.0	12.1	11.0	11.7	87.6
Less forecast depreciation	9.3	10.7	11.5	12.0	12.2	55.6
less forecast disposals	0.0	0.0	0.0	0.0	0.0	0
Closing capital base	295.7	311.0	311.7	310.6	310.1	na

na: Not applicable.

Revision 3.10: delete the footnote to clause 4.19 of the revised access arrangement proposal and replace it with the following:

> Rule 82(3) of the NGR only permits capital expenditure (including a capital contribution made by a user, or part of such a capital contribution) to be rolled into the capital base if this Access Arrangement contains a mechanism which prevents ActewAGL from benefitting, through increased revenue, from the User's contribution to the capital base. As of the Commencement Date, ActewAGL does not have such a mechanism. Accordingly, ActewAGL cannot increase the Capital Base for capital contributions pursuant to rule 82 of the NGR.

Revision 3.11: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 3.1 to 3.10.

4 Depreciation

4.1 Introduction

This chapter sets out the revised access arrangement proposal and the AER's consideration of the proposed depreciation schedules and asset lives.

Depreciation over the earlier access arrangement period is one of the determinants of the opening capital base.

Depreciation over the access arrangement period is a component of the projected capital base and one of the building blocks that determine total revenue.

The AER's analysis and consideration relevant for the access arrangement proposal for ActewAGL's depreciation schedule are located in chapter 4 of the draft decision.[109]

4.2 Revised access arrangement proposal

The revised access arrangement proposal applies the same methodology to estimate depreciation as approved in the draft decision.[110] The revised access arrangement proposal does not revise the straight line methodology for estimating depreciation.[111]

The revised access arrangement proposal proposes changes to the asset lives to those submitted in the access arrangement proposal[112] to account for the effects of inflation on the opening capital base.[113]

The value of depreciation is considered in chapter 3 of the final decision. For information purposes, the estimated depreciation proposed for the earlier access arrangement period is shown in Table 4.1.

Table 4.1: Revised depreciation for the earlier access arrangement period ($m, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
Depreciation	7.3	8.0	8.6	8.4	8.8	9.2

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 17.

Table 4.2 outlines the forecast depreciation for the access arrangement period.

109 AER, *Draft decision*, pp. 51–55.

110 ActewAGL, *Revised access arrangement information*, January 2010, p. 16.

111 ActewAGL, *Access arrangement information*, June 2009, p. 140.

112 ActewAGL, *Revised access arrangement information*, January 2010, p. 33.

113 ActewAGL, *Revised access arrangement information*, January 2010, p. 33.

Table 4.2: Revised forecast depreciation for the access arrangement period ($m, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Depreciation	9.5	11.7	12.9	13.8	14.3

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 34.

4.3 AER's analysis and considerations

This section addresses ActewAGL's revised asset lives and depreciation schedule.

4.3.1 Asset lives

The differences in remaining lives in the revised access arrangement proposal compared to the access arrangement proposal are set out in Table 4.3.

Table 4.3: Differences between the original proposal and the revised proposal for ActewAGL's proposed remaining lives (years)

Asset category	Standard life	Access arrangement information	Revised access arrangement information	Difference
Primary (HP) mains	80.0	64.85	64.85	0.00
HP services	50.0	32.53	32.50	0.03
MP mains	50.0	29.83	29.86	–0.03
MP services	50.0	39.71	39.22	0.49
Regulators, valves (TRS, SRS)	15.0	10.86	10.90	–0.04
Contract meters	15.0	12.98	12.94	0.04
Tariff meters	15.0	11.03	11.44	–0.41
IT system	5.0	3.66	3.66	0.00
Regulatory costs	5.0	3.87	3.87	0.00

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 33 and ActewAGL, *Access arrangement information*, June 2009, pp. 141–142.

The standard life of each of the asset categories has not changed between the access arrangement proposal and the revised access arrangement proposal. In explaining the change to the remaining lives between the access arrangement proposal and the revised access arrangement proposal, ActewAGL submits:

- it has updated its capital expenditure in the earlier access arrangement to take account of actual capital expenditure for 2008–09 of $8.6 million (previously forecast of $8.7 million)

- it has updated inflation to incorporate the most up-to-date data.[114]

Rule 89(1)(c) of the NGR states that the depreciation schedule should be designed to allow for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets, not the value of an asset. The AER notes that the effect on the remaining asset lives of the adjustment to inflation is an anomaly based on the estimation of asset lives in the earlier access arrangement period. Consistent with r. 89(1)(c) of the NGR, however, the AER would not expect an adjustment to inflation to change the remaining asset lives because changes to inflation are not a factor that impacts the expected economic life of an asset.

Nevertheless, ActewAGL's approach to estimating remaining asset lives was allowed by the ICRC under the Code and so the AER considers that it is a transitional issue between the Code and the NGR.

Further, the AER considers ActewAGL's revised asset lives are only slightly different to those approved by the AER in the draft decision and do not materially affect tariffs and forecast revenue.

For these reasons, the AER considers the revised remaining lives are consistent with the depreciation criteria set out in r. 89(1) of the NGR.

That said, the AER considers for future access arrangements, ActewAGL will need to propose a methodology where asset lives are not impacted by the effects of inflation.

Summary

The AER approves the revised asset lives as these comply with r. 89 of the NGR.

4.3.2 Depreciation schedule

The AER approves the depreciation schedule for the access arrangement period as it complies with r. 88 and r. 89 of the NGR.[115]

However, the relevant values for the depreciation schedule to be included in the schedule need to be updated to reflect the AER's analysis and consideration set out in chapter 3 of the final decision. For information purposes, the depreciation approved for the earlier access arrangement period is shown in Table 4.4.

Table 4.4: Final decision on depreciation for the earlier access arrangement period ($'000, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
Depreciation	7.3	8.0	8.6	8.4	8.8	9.2

The depreciation approved for the access arrangement period is shown in Table 4.5.

114 ActewAGL, *Revised access arrangement information*, January 2010, p. 16; ActewAGL, *Access arrangement information*, June 2009, p. 138; ActewAGL, email to the AER, 22 February 2010.

115 AER, *Draft decision*, p. 55.

Table 4.5: Final decision on forecast depreciation for the access arrangement period ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Depreciation	9.5	11.2	12.4	13.2	13.8

4.4 Conclusion

Subject to the revisions to the capital based outlined in chapter 3 of the final decision, the AER approves the revised depreciation schedule as it complies with r. 88 and r. 89 of the NGR.

5 Rate of return

5.1 Introduction

The revised access arrangement proposal accepts the AER's methodology in estimating the inflation forecast, which is used to index the capital base and derive nominal total revenue. The revised access arrangement proposal conditionally accepts the averaging period proposed by the AER to estimate the risk-free rate.[116] However, the revised access arrangement proposal does not accept the draft decision about the equity beta, market risk premium (MRP) and debt risk premium used to estimate the weighted average cost of capital (WACC).[117]

This chapter sets out the AER's consideration of issues raised in the revised access arrangement proposal including the averaging period used to estimate the risk-free rate, equity beta, market risk premium and debt risk premium.

The AER's consideration of the approach to establishing the building block cost of taxation, including the estimate of imputation credits (gamma) is set out in chapter 6 of the final decision.

5.2 Revised access arrangement proposal

The revised access arrangement proposal does not accept the draft decision on the equity beta, market risk premium and debt risk premium.[118] The revised access arrangement proposal maintains using an average of Bloomberg BBB and CBASpectrum BBB+ fair value curves to estimate the debt risk premium.[119]

The revised access arrangement proposal conditionally accepts the dates of the averaging period to estimate the risk-free rate and debt risk premium as approved in the draft decision.[120]

A summary of the revised access arrangement proposal on the WACC parameters is presented in Table 5.1.

116 ActewAGL, *Revised access arrangement information*, January 2010, pp. 38–46.

117 ActewAGL, *Revised access arrangement information*, January 2010, pp. 39, 45–46.

118 ActewAGL, *Revised access arrangement information*, January 2010, pp. 39–46.

119 ActewAGL, *Revised access arrangement information*, January 2010, pp. 43–45.

120 ActewAGL, *Revised access arrangement information*, January 2010, p. 38.

Table 5.1: **Revised WACC parameters**

Parameter	Revised access arrangement proposal
Risk-free rate (%)	5.50
Inflation (%)	2.48
Real risk-free rate (%)	2.94
Equity beta	1.0
Market risk premium (%)	7.5
Debt risk premium (%)	4.30
Debt share of total value (gearing) (%)	60
Nominal return on equity (%)	13.00
Nominal return on debt (%)	9.80
Nominal vanilla WACC (%)	11.08

Source: ActewAGL, *Revised access arrangement information*, January 2010, pp. 37–39, 45–46.

5.3 Submissions

Jemena Gas Networks (NSW) Ltd (Jemena) makes a submission on the use of the Fama–French three–factor model (FFM) to estimate the cost of equity.[121]

5.4 Risk-free rate

5.4.1 Revised access arrangement proposal

The revised access arrangement proposal estimates a nominal risk-free rate of 5.50 per cent over the 20 day averaging period ending on 11 December 2009. The revised access arrangement proposal recognises that this rate will be updated closer to the time of the final decision.[122]

The revised access arrangement proposal accepts the averaging period approved in the draft decision subject to the following condition (the averaging period condition).[123] If

121 Jemena, *Jemena Gas Networks – Submission on ActewAGL draft decision*, 22 December 2009 (Jemena, *Submission on ActewAGL decision*, 22 December 2009) and an attached report by NERA Economic Consulting, *Review of Da, Guo and Jagannathan empirical evidence on the CAPM, A report for Jemena Gas Networks*, 21 December 2009 (NERA, *Review of Da, Guo and Jagannathan*, 21 December 2009). Source paper is Z. Da, R. Guo and R. Jagannathan, 'CAPM for estimating the cost of equity capital, interpreting the empirical evidence', *NBER working paper series*, 2009, paper number 14889 (Da, Guo and Jagannathan, 'CAPM, Interpreting the evidence', 2009, *NBER working paper 14889*). This matter is considered in detail in, AER, *Draft decision, Jemena access arrangement proposal for the NSW gas network, 1 July 2010 – 30 June 2015*, 10 February 2010, pp. 354–360 (appendix A, Jemena submission on the Da, Guo and Jagannathan working paper).

122 ActewAGL, *Revised access arrangement information*, January 2010, p. 39.

123 ActewAGL, *Revised access arrangement information*, January 2010, p. 38.

prior to release of the final decision, there is another extraordinary event which results in returns during the access arrangement period which are not unbiased estimates of expected returns, the averaging period is to be set prior to the event. ActewAGL submits that this is consistent with the Australian Competition Tribunal (Tribunal) decision.[124]

5.4.2 AER's analysis and considerations

The AER notes that the averaging period condition proposed by ActewAGL for accepting the averaging period specified in the draft decision does not define 'another extraordinary event' or criteria for how such an occurrence might be assessed. In any case, taking into account the prevailing conditions in the market for funds, the AER considers that using the averaging period specified in the draft decision for ActewAGL will provide an unbiased estimate of expected returns.

As outlined in the draft decision, the AER approves ActewAGL's proposal to interpolate between the two nearest CGS, TB122 and TB126, to determine a yield consistent with a 10-year maturity and to use the 20 business day averaging period to estimate the risk-free rate.[125] The draft decision states that the AER will update the risk-free rate and use the 20 business day averaging period closer to the final decision date.[126]

For this final decision, the AER adopts a 20 business day averaging period commencing 15 February 2010 and ending 12 March 2010. Using this averaging period and CGS yields with a 10-year maturity the nominal risk-free rate is 5.63 per cent (effective annual compounding rate).

5.5 Debt risk premium

5.5.1 Revised access arrangement proposal

The revised access arrangement period estimates the debt risk premium of 5.50 per cent using the averaging period of 20 business days from 16 November to 11 December 2009, which is the same averaging period used to estimate the nominal risk-free rate.[127] The revised access arrangement proposal proposes using an average of the Bloomberg BBB and CBASpectrum BBB+ fair value curves to estimate the debt risk premium. ActewAGL maintains its view that using the average of the Bloomberg 10-year BBB fair yield and the CBASpectrum 10-year BBB+ fair yield would result in the best forecast possible in the circumstances.

The revised access arrangement proposal outlines that the AER has not described its preferred method for estimating a 10-year bond rate using the Bloomberg fair yield data. When estimating the 10-year BBB fair yield using the Bloomberg as a data source, ActewAGL extrapolates the Bloomberg 7-year BBB fair yield by adding the

124 ActewAGL, *Revised access arrangement information*, January 2010, p. 38.

125 ActewAGL, *Access arrangement information*, June 2009, pp. 149–151.

126 AER, *Draft decision*, November 2009, pp. 57–59.

127 ActewAGL, *Revised access arrangement information*, January 2010, pp. 43–45.

difference between the Bloomberg 10-year AAA fair yield and the Bloomberg 7-year AAA fair yield.[128]

ActewAGL submits that it is not convinced that the AER's method to decide on which fair value curve to use to estimate the benchmark debt risk premium as set out in the draft decision provides a reliable estimate. ActewAGL has concerns, in particular, about the exclusion of bonds from the data sample in the AER's analysis, due to the identification of 'structural breaks' in the data, based on the Chow test.[129]

ActewAGL submits that in the access arrangement proposal it assumes a credit rating of BBB+ for estimating the debt risk premium, consistent with established regulatory practice.[130] This indirectly assumes that the AER will approve the proposed equity beta, compensating for the higher systematic risk a gas distribution business faces relative to an electricity distribution business. ActewAGL notes that in the draft decision, the AER is not convinced that gas businesses face this higher systematic risk.

ActewAGL submits that, if the AER does not adjust the equity beta for the proposed higher systematic risk in gas distribution relative to electricity distribution, it should instead receive additional operating expenditure to account for the high cash flow volatility it faces.[131]

5.5.2 AER's analysis and considerations

In order to estimate the benchmark debt risk premium the AER must decide which data source (Bloomberg, CBASpectrum or an average of the two) in respect of the fair value curve is to be used. In this section the AER's standard methodology to select between these data sources is outlined. Refinements and augmentations to the approach are considered (the AER notes that most of the issues raised in the revised access arrangement proposal are considered in the draft decision). Finally, the method, including any refinements or augmentations, is applied to select a data source and estimate the benchmark debt risk premium.

The AER considers that ActewAGL's assumption for a credit rating of BBB+ to estimate the debt risk premium in the access arrangement proposal, business specific risk for determining the credit rating and cash flow volatility are already addressed in detail in the draft decision.[132]

5.5.2.1 The AER's standard methodology to select a fair value curve

As outlined in the draft decision, the data source used to estimate the debt risk premium is selected by:

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128 ActewAGL, *Revised access arrangement information*, January 2010, pp. 44–45.

129 ActewAGL, *Revised access arrangement information*, January 2010, p. 45.

130 ActewAGL, *Access arrangement information*, June 2009, p. 153.

131 ActewAGL, *Revised access arrangement information*, January 2010, pp. 43–45; appendix B (confidential).

132 AER, *Draft decision*, November 2009, pp. 62–69, 195–226.

- step 1: defining a population of corporate bonds that closely reflect the characteristics of bonds that would be issued by the benchmark service provider[133]

- step 2: considering whether any of these bonds should be excluded from the analysis on the basis that the yields for these bonds are not representative of their credit rating

- step 3: comparing the observed yields of this sample of bonds to the fair value curves of CBASpectrum, Bloomberg and an average of the two curves, in order to determine which curve aligns most closely to the observed yields.

The population of bonds is defined as BBB+ fixed rate corporate bonds, with a term to maturity over two years, issued in Australia by Australian companies with observations available from Bloomberg, CBASpectrum and UBS over the averaging period. The AER excludes bonds from the population where information is not available from all three data sources to ensure consistency and completeness of the data used in later steps.

The AER then considers whether any of the bonds in the population should be excluded from the analysis because the yields for the particular bonds are not representative of their credit rating. To do this the AER inspects graphs of yields of the sample of bonds over time to identify any obvious anomalies. If anomalous bonds are identified then that bond's yields are tested using the Chow test. The Chow test is used to identify whether the anomaly is statistically significant, which may indicate an outlier.

The Chow test is commonly used to determine the existence of a sudden and permanent change in the data sets—it compares two time periods to determine if they have the same explanatory factors.[134] If the change is statistically significant then the AER considers relevant market developments to assess whether a fundamental shift in the market perception of the business has occurred. A bond may be excluded from the sample and assessed as an outlier after consideration of these matters.

The bonds left after excluding such outlying bonds are referred to as the sample of bonds. The sample of bonds is used to conduct the comparison of observed yields to the fair value curves of CBASpectrum, Bloomberg and an average of the two curves. The comparison is conducted using the weighted sum of squared errors.[135] The

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133 BBB+ fixed rate corporate bonds, with a term to maturity over two years, issued in Australia by Australian companies with observations available from Bloomberg, CBASpectrum and UBS over the averaging period.

134 G. Chow, 'Tests of equality between sets of coefficients in two linear regressions', *Econometrica*, July 1960, vol. 28(3).

135 The weighted sum of squared errors is defined as:

$$WSSE = \frac{1}{n}\sum_{i=1}^{n}\left\{\left[\sum_{j=1}^{t_i}\left(Observed_{i,j} - Fair_{i,j}\right)^2\right]\frac{1}{t_i}\right\}$$

Where:

n is the number of bonds in the sample

t_i is the number of observations for the i^{th} bond

$Observed_{i,j}$ is the j^{th} observed yield for the i^{th} bond, taken from either Bloomberg, CBASpectrum or UBS weighted sum of squared errors is a mathematical formula which provides a measure of how closely each fair value curve fits to observed bond yields. A smaller value indicates a better fit.

A similar approach to that described above was reviewed by the Tribunal which found that there was no compelling case for departing from the AER's methodology.[136] The Tribunal also noted that the AER needs to reconsider the data sources and methodology in future determinations.[137] The AER has since reconsidered its methodology and has made some refinements. Further refinements are described below.

The AER considers that selecting a fair value curve that most closely aligns to the observed yields in the sample of bonds is a reasonable approach to estimating a benchmark debt risk premium for a rate of return commensurate with prevailing market conditions, as required by r. 87 of the NGR.

5.5.2.2 Refinements and augmentations to the AER's standard methodology

The revised access arrangement proposal raises some issues in response to the draft decision. These are:

- the extrapolation of Bloomberg's BBB fair value curve from a term of seven years to 10 years
- increasing the number of bonds in the population
- methods to determine which bonds in the population should be excluded from the sample of bonds for analysis. This involves testing for outliers.

The AER's consideration of these three issues is outlined below.

Extrapolation of Bloomberg's BBB fair value curve

On 9 October 2007 Bloomberg ceased publishing values for the BBB fair value curve beyond a term of eight years. This required the AER to establish a method to extrapolate the fair value curve from a term of eight to 10 years. In order to do this the AER added the spread between Bloomberg's eight and 10-year A fair value estimates to the Bloomberg eight year BBB fair value estimate.[138]

On 19 August 2009 Bloomberg ceased publishing both its BBB and A rated fair yield estimates beyond a term of seven years. This means that the AER can no longer use the Bloomberg A fair value curve to extrapolate Bloomberg's BBB fair value curve to 10 years.

$Fair_{i,j}$ is the j^{th} fair yield for the i^{th} bond, taken from either Bloomberg, CBASpectrum or an average of the two.

136 Australian Competition Tribunal, *Application by Energy Australia and other* [2009] ACompT8, November 2009, p. 39.

137 Australian Competition Tribunal, *Application by Energy Australia and other* [2009] ACompT8, November 2009, p. 39.

138 Bloomberg's BBB fair value estimates are assumed to approximate BBB+ fair values estimates due to the estimation technique employed and the market being disproportionately weighted with BBB+ rated bonds.

The AER considers a number of possible data sources for overcoming this data limitation. The data sources are:

- Bloomberg's AA and AAA fair value curves
- Bloomberg's CGS fair value curve
- Bloomberg's semi-government fair value curves (NSW, VIC, QLD and WA)
- Bloomberg's interest rate swaps curve
- a linear extrapolation based on the spread between the Bloomberg five and seven year BBB fair value estimates.

For the first four of these sources the difference between the seven and 10-year yield is used to extrapolate Bloomberg's BBB fair value curve to a term of 10 years. For the last source the difference in the term to maturity between the yields is only two years so the spread is multiplied by 1.5 to estimate a three year spread.

The AER evaluates these options by comparing each extrapolated 10-year fair value curve to the Bloomberg BBB fair value curve over the period from 10 November 2005 to 9 October 2007. This period is selected because it represents the most recent period for which the Bloomberg 10-year BBB fair value curve is available.

The difference between the extrapolated curve and the actual Bloomberg BBB fair value curve on each day during the period is squared and averaged over this period. This measurement is called the mean squared difference. A lower mean squared difference indicates a more accurate extrapolation. That is, the lowest mean squared difference indicates the best estimate of the fair value curve possible in the circumstances.[139] The results of this analysis are shown in Table 5.2.

139 NGR, r. 74(2)(b).

Table 5.2: Results of testing of extrapolation methods

	Mean squared difference
Bloomberg AA	na[a]
Bloomberg AAA	0.0025
Bloomberg CGS	0.0041
Bloomberg NSW	0.0048
Bloomberg VIC	0.0053
Bloomberg QLD	0.0047
Bloomberg WA	0.0049
Bloomberg interest swaps	0.0047
Linear	0.0122

na: Not available.
a: This data is unavailable as Bloomberg did not publish a AA fair value curve over the required term of maturities during the period under consideration.

Based on this analysis, the AER considers that the spread between Bloomberg's AAA seven and ten year fair value estimates provides a reasonable approach to extrapolating Bloomberg's BBB fair value curve to a term of 10 years.

Increasing the number of bonds in the sample

A recent report from Country Energy's consultant, the Competition Economists Group (the CEG report on the bond sample) states that the sample of bonds used by the AER in its analysis only includes bonds with a term to maturity of between two and six years. For this reason, the CEG report on the bond sample outlines that the AER's method of testing selects the fair value curve which most accurately reflects observed yields between two and six years but not necessarily bonds with a maturity of 10 years. The CEG report on the bond sample outlines that the AER's test may not select the best estimate for a bond with a maturity of 10 years if there are systematic differences present in either bond yields or fair value curves for bond terms greater than six years.

To address this issue the CEG report on the bond sample suggests that the number of bonds in the population could be increased to include:[140]

- bonds which have observations available from at least one of Bloomberg, UBS and CBASpectrum
- floating rate bonds which have had their yields converted to fixed rates using prevailing swap rates

140 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates: A report for Country Energy*, January 2010, pp. 20–26 (CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010).

- bonds with other credit ratings.[141]

Bonds with data available from one or two sources
As discussed above, the AER's standard methodology uses data on all observed BBB+ bond yields from three data sources: CBASpectrum, Bloomberg and UBS. Each data source has information available for different bonds. The AER's standard methodology excludes bonds from the sample of bonds where information is not available from all three data sources. This is done to ensure consistency and completeness of the sample of bonds data. The CEG report on the bond sample outlines that the sample of bonds should not be restricted on this basis.[142]

The AER maintains its consideration that bonds for which information cannot be derived from the three data sources should be excluded from the sample of bonds. The same degree of confidence cannot be given to bonds with less data available. It is also preferable to maintain a stable and consistent sample when testing the fair value curves as it allows for comparability between tests.

Floating rate bonds
The CEG report on the bond sample also proposes including floating rate bonds in the sample by using swap rates to convert the floating yields to equivalent fixed rate yields.[143] The AER accepts that there is a mathematical basis for the proposed conversion between floating and fixed rates[144] and the CEG report on the bond sample demonstrates that in practice such a conversion provides reasonable results.[145] However, the AER considers that there are several issues in using floating rate bonds as a substitute for fixed rate bonds in the sample for analysis which means that this practice is not appropriate.

First, the AER considers that converted floating rate bonds are not perfect substitutes for fixed rate bonds. This is illustrated in figure 2 in the CEG report on the bond sample which compares the fixed and converted floating rate bonds and shows that the two yields for bonds issued by the same company with the same term to maturity are similar but not identical.[146]

Second, the AER notes that in producing their fair value curves Bloomberg and CBASpectrum aim to reflect the rates on fixed rate bonds, not floating or converted floating rate bonds. This means that neither of the fair value curves are necessarily going to closely align to observed yields on floating rate bonds. Comparing the fair value curves to observed yields on floating rate bonds using the AER's standard method is, essentially, attempting to measure how well each fair value curve meets a criteria which are different from its original purpose.

Third, the AER considers that including converted floating rate bonds in the sample for analysis will lead to each converted bond being given the same weight as each

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141 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates,* January 2010, pp. 20–26.

142 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates,* January 2010, pp. 20–26.

143 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. pp. 22–26.

144 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. pp. 12–14.

145 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. pp. 12–14.

146 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. p. 14.

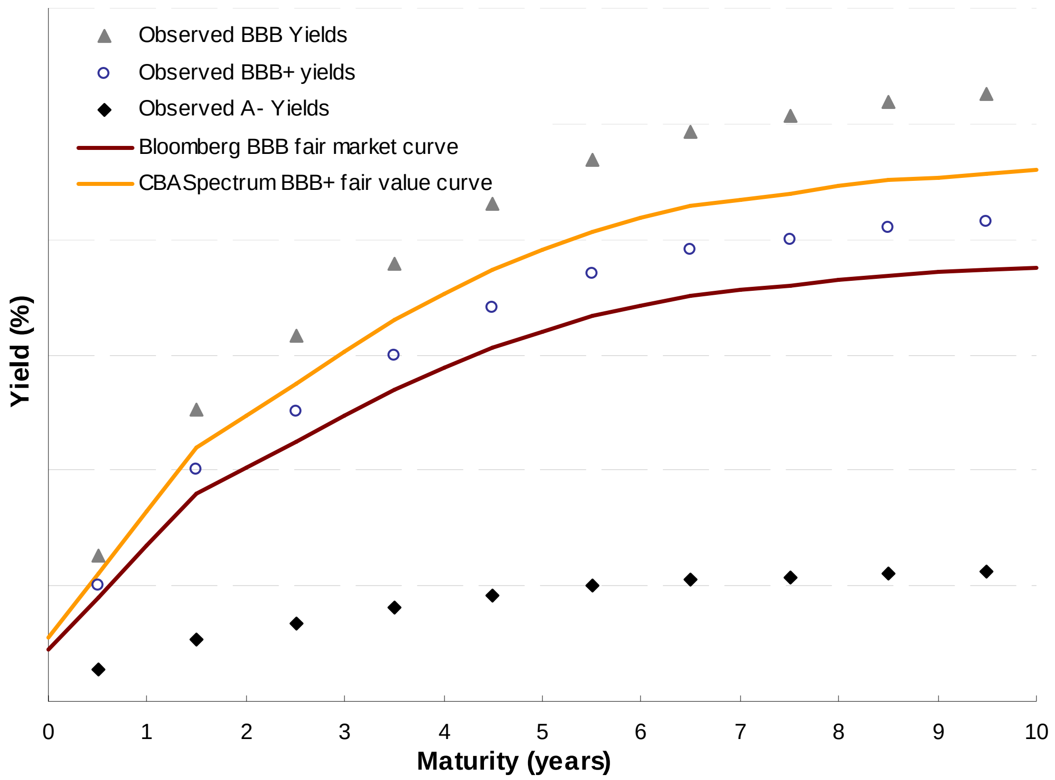
fixed rate bond in the analysis. The AER does not consider this to be appropriate given that converted floating rate bonds are not perfect substitutes for fixed rate bonds which comprise the sample of bonds that are used to estimate the benchmark debt risk premium.

For these reasons, the AER considers that it is not appropriate to include converted floating rate bonds in the sample of bonds used for the AER's standard methodology to select the fair value curve.

Bonds with other credit ratings

The CEG report on the bond sample also outlines that the sample size for bonds can be increased to include bonds with different credit ratings.[147] As outlined in the draft decision, the AER considers that the credit rating of the benchmark service provider is BBB+. Inclusion of bonds with different credit ratings would potentially give equal weight to bonds with higher or lower credit ratings than the benchmark. Any adjustments made to account for the different credit ratings require subjective judgments. This can be illustrated using the following hypothetical example as shown in Figure 5.1.

Figure 5.1: Hypothetical selection of yields and fair value curves



Source: AER analysis.

In this example the two fair value curves are equidistant from the observed yields on the BBB+ bonds. This means that an average of the two fair value curves will be selected by the AER's analysis as this best reflects the observed market yields. When

147 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. pp. 25–26.

bonds with other credit ratings are included in the sample, using the weighted sum of squared errors, the fair value curve which lies closer to the A– yields will be selected as the curve that best reflects the observed yields. This means that, in this hypothetical example, including the non BBB+ bonds would lead to the selection of the Bloomberg fair value curve. Therefore, the AER considers that the introduction of additional observed yields for bonds with different credit ratings may not result in the selection of the fair value curve which best fits the observed yields. The AER considers that including bonds in the sample with credit ratings that are not consistent with the benchmark is inappropriate as it may not lead to the selection of the best estimate possible in the circumstances as required by r. 74(2)(b) of the NGR.

The AER will therefore initially use the same standard methodology that has been used in its most recent decisions[148] to select a fair value curve for use in estimating the debt risk premium. Graphs containing the bond data suggested in the CEG report on the bond sample will then be presented and the reasonableness of the information contained will be considered. These are discussed further below.

Conclusion on increasing the number of bonds in the sample

The AER considers that the CEG report on the bond sample outlines that a range of bonds contain valuable information which the AER can have regard to in order to ensure that the selected fair value curve generally reflects the available information from the financial market. However, for the reasons outlined above, the AER considers that the CEG report on the bond sample which increases the sample size to include bonds not available from all three data sources, floating rate bonds and bonds with other credit ratings, has limitations and should not be applied in the bond sample analysis to determine which fair value curve is used to estimate the benchmark debt risk premium.

Determining which bonds to exclude from the sample

As outlined above under the AER's standard methodology to select a fair value curve, even though a bond may be eligible for inclusion in the sample of bonds because it has certain characteristics[149] it may be excluded from the sample if it is identified as not being representative of a BBB+ rated bond. This may be the case if the observed yield on the bond makes it an outlier. The CEG report on the bond sample includes an additional approach to determine whether the observed yield on a particular bond is an outlier.

The CEG report on the bond sample proposes that statistical tests for considering outlying bonds should be conducted based on spreads to CGS, not absolute bond yields. The CEG report on the bond sample proposes three statistical tests to determine whether the observed yield on a bond is an outlier, these are:[150]

148 AER, *Draft decision*, November 2009, pp. 67–68, 215–226 and AER, *Draft decision, Country Energy Access arrangement proposal 1 July 2010 – 30 June 2015*, November 2009, pp. 50–51, 171–183 (AER, *Draft decision: County Energy access arrangement proposal*, November 2009).

149 BBB+ fixed rate corporate bonds, with a term to maturity over two years, issued in Australia by Australian companies with observations available from Bloomberg, CBASpectrum and UBS over the averaging period.

150 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010, pp. 16–18.

- Chauvenet's test—an observation is an outlier if it lies outside a confidence interval of the mean with a level of significance of 1/2n where n is the number of observations in the sample

- classic outlier test—an observation is an outlier if it lies further than two standard deviations from the mean

- box plot test—an observation is an outlier if it exceeds the 75th percentile by 1.5 times the interquartile range or lies below the 25th percentile by 1.5 times the interquartile range.

The AER considers that the proposed approach in the CEG report on the bond sample of testing the spreads to CGS and not absolute yields, is appropriate and the AER has augmented its methodology for identifying outliers to include this suggestion.[151]

The AER also considers that the three tests suggested in the CEG report on the bond sample can be used to augment the AER's approach to identifying outliers. The AER applies this augmented test for outliers below.

5.5.2.3 Selection of the fair value curve using the AER's methodology

Step 1 of the AER's methodology is to identify, the population of BBB+ bonds from which the sample of bonds is drawn. For the final decision, the relevant population of BBB+ bonds is set out in Table 5.3.

Table 5.3: Population of BBB+ rated corporate bonds

Issuer	Matures on	ISIN
Coles Myer	25 July 2012	AU300CML1014
Snowy Hydro	25 February 2013	AU000SHL0034
GPT	22 August 2013	AU300GPTM218
Wesfarmers	11 November 2014	AU3CB0126860
Santos	23 September 2015	AU300ST50076
Babcock and Brown Infrastructure	9 June 2016	AU300BBIF018

Source: Bloomberg, CBASpectrum, UBS Rate sheet February 2005–12 March 2010.

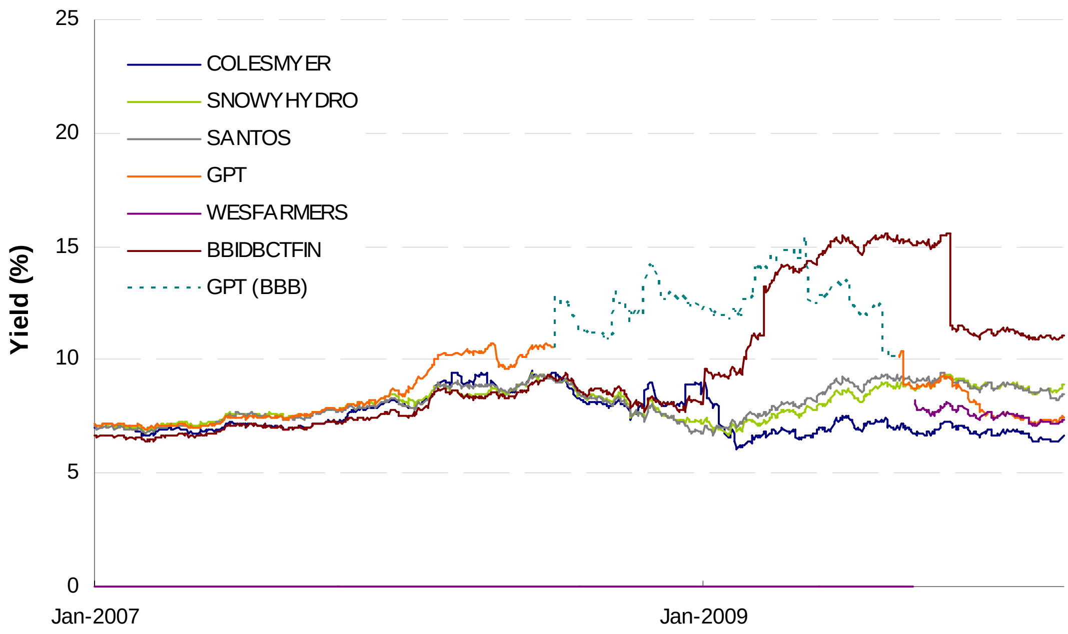
In step 2, as outlined above, prior to selecting the appropriate fair value curve, the AER identifies outliers in the population of bonds, to determine the relevant sample of bonds for analysis. The AER notes ActewAGL's concern about the exclusion of bonds from the AER's sample, due to the identification of 'structural breaks' in the data, based on the Chow test.[152]

151 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010, pp. 15–16.

152 ActewAGL, *Revised access arrangement information*, January 2010, p. 45.

On examination of the data, the AER considers that the period beginning in early 2009 may represent a structural change impacting the underlying value of the Babcock and Brown Infrastructure (BBI) bond.

Figure 5.2: Yields on the population of BBB+ bonds, UBS



Source: UBS, Rate sheet January 2007–12 March 2010.

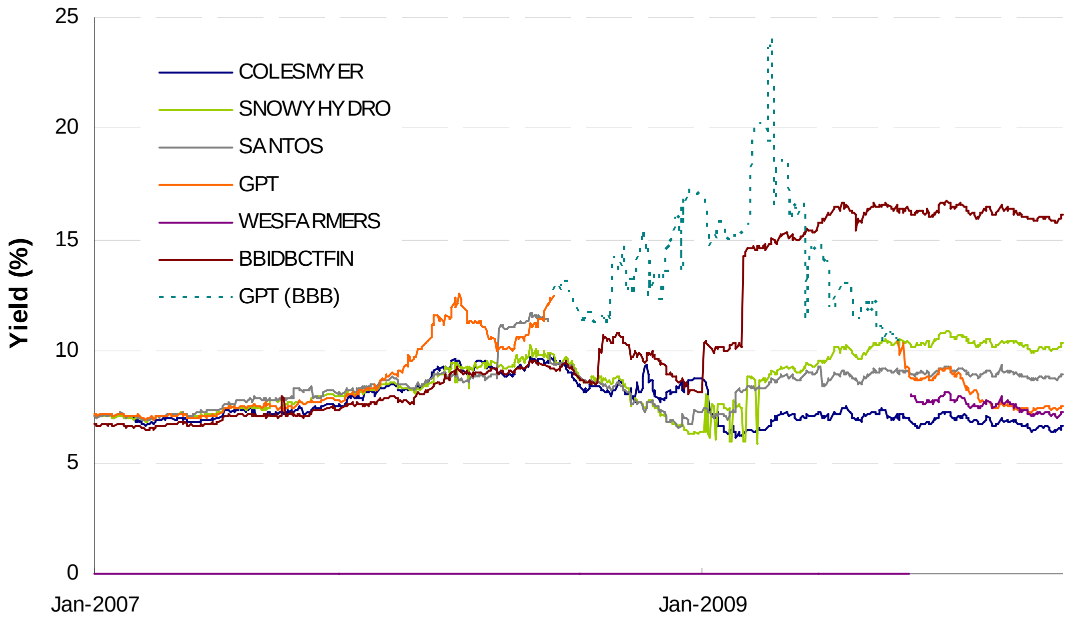
As shown in Figure 5.2, based on data from UBS, the average observed yield for the BBI bond was around 7.5 per cent between January 2007 and December 2008 but this increased significantly to around 13 per cent between December 2008 and March 2010. Based on this initial inspection, the Chow test on the spread between the yields on the BBI bond and CGS indicates that the change in yield is statistically significant. The AER also considers market developments in late 2008 and early 2009, which include the voluntary suspension of trading in Babcock and Brown shares and attempts to de–link Babcock and Brown and its associated companies, are likely to affect the reliability of the observed yield for the BBI bond.[153]

Using the augmentations to the AER's standard methodology as suggested in the CEG report on the bond sample, the Chauvenet's test, the classical outlier test and the box plot test all indicate that after late 2008, the yield on the BBI bond is an outlier when compared to other bonds in the population.

As an additional consideration, the AER also compared the UBS data with the data from CBASpectrum, as shown in Figure 5.3. This review shows that the BBI yield observed from CBASpectrum also exhibits a structural change in early 2009, although it does not exhibit the second period of structural change in late 2009 that is observed in the UBS data.

153 Babcock and Brown, *Suspension from official quotation*, 12 January 2009.

Figure 5.3: Yields on the population of BBB+ bonds, CBASpectrum



Source: CBASpectrum.

The AER considers that this provides additional evidence that even in late 2009 there is significant divergence in yields for the BBI bond, as reported by CBASpectrum and UBS, suggesting the observed yield for this bond is unreliable and cannot be included in the sample for analysis.

As a result of this analysis, including the AER's standard method of identifying outliers as well as the use of the augmented tests proposed in the CEG report on the bond sample, the AER considers that the BBI bond should be excluded from the sample of BBB+ rated bonds that is used in the comparison of fair value curves to observed yields.

Once step 2 of the AER's methodology is complete and the sample of bonds is identified, the AER undertakes step 3 to test the sample of observed bond yields against the fair value estimates from Bloomberg and CBASpectrum.

Table 5.4 outlines the average bond yields observed from Bloomberg, CBASpectrum and UBS, and average fair value estimates for the sample of bonds over the averaging period, 15 February to 12 March 2010.

Table 5.4: Sample of BBB+ bonds—observed yields and fair values between 15 February to 12 March 2010 (per cent)

Issuer	Average observed yield			Average fair value	
	Bloomberg	CBASpectrum	UBS	Bloomberg	CBASpectrum
Coles Myer	6.55	6.53	6.48	7.32	7.23
Snowy Hydro	8.48	10.17	8.69	7.51	7.55
GPT	7.32	7.47	7.36	7.73	7.72
Wesfarmers	7.27	7.18	7.25	8.35	8.05
Santos	8.64	8.82	8.44	8.84	8.27

Source: Bloomberg, CBASpectrum, UBS, AER analysis.

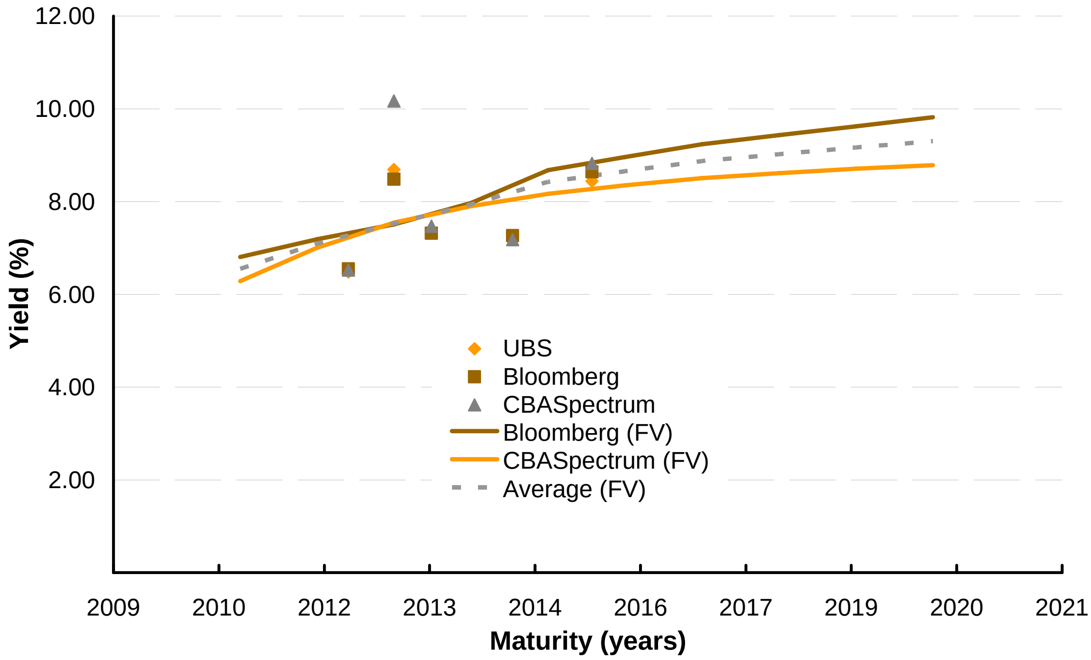
The observed yields were compared to the Bloomberg BBB fair value curve, the CBASpectrum BBB+ fair value curve and an average of the two curves using the weighted sum of squared errors. Table 5.5 and figure 5.4 show the results.

Table 5.5: Fair value and observed yield analysis using weighted sum of squared errors between 15 February to 12 March 2010 (per cent)

		Fair value source		
		Bloomberg	CBASpectrum	Average
Observation source	UBS	0.73	0.54	0.61
	Bloomberg	0.61	0.48	0.52
	CBASpectrum	1.83	1.70	1.74

Source: Bloomberg, CBASpectrum, UBS, AER analysis.

Figure 5.4: Fair value and observed yield analysis based on BBB+ bond sample



Source: Bloomberg, CBASpectrum, UBS, AER analysis.

CBASpectrum's BBB+ fair value curve best matches the observed yields. This is because CBASpectrum's BBB+ fair value curve has the smallest weighted sum of squared errors no matter which data source is used for the observed bond yields. The weighted sum of squared errors is a mathematical formula which provides a measure of how closely each fair value curve fits to observed bond yields. A smaller value indicates a better fit. Therefore, the AER considers that CBASpectrum's BBB+ fair value curve provides estimates which are more closely aligned to observed yields for a sample of BBB+ bonds.

The CEG report on the bond sample suggests that other data from the bond market contains additional information that may be considered for the sample of bonds. These are:

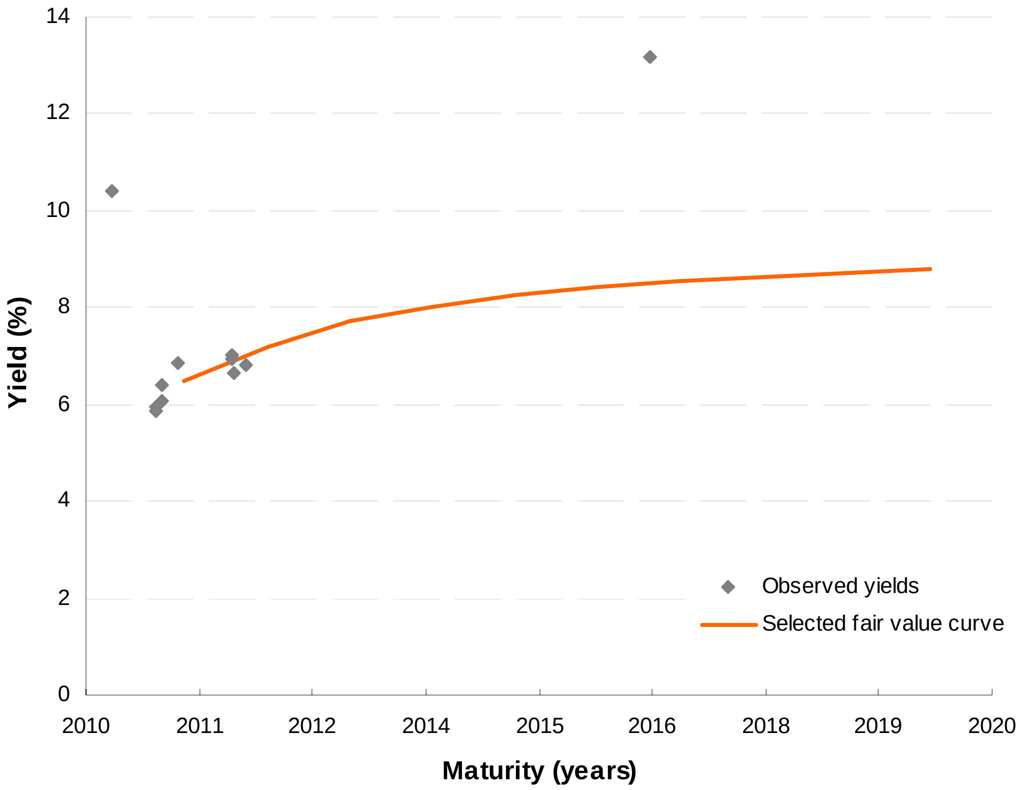
- BBB+ bonds observed from only one or two data sources (such as Bloomberg, CBASpectrum or UBS)
- floating rate bonds converted to fixed rate bonds
- A– and BBB rated bonds.

For the reasons given above the AER does not consider it appropriate to include these bonds in the sample used in its analysis. The data for these bonds is, however, presented below.

In general it would be expected that the selected fair value curve should closely align to the observed yields of bonds available from only one or two data sources as well as floating rate bonds converted to fixed rate bonds. It should also generally be expected to lie between the observed yields of A– and BBB rated bonds.

Figure 5.5 shows the selected fair value curve and yields of BBB+ bonds available from only one or two data sources.

Figure 5.5: Selected fair value curve compared to yields on BBB+ bonds with data available from one or two sources

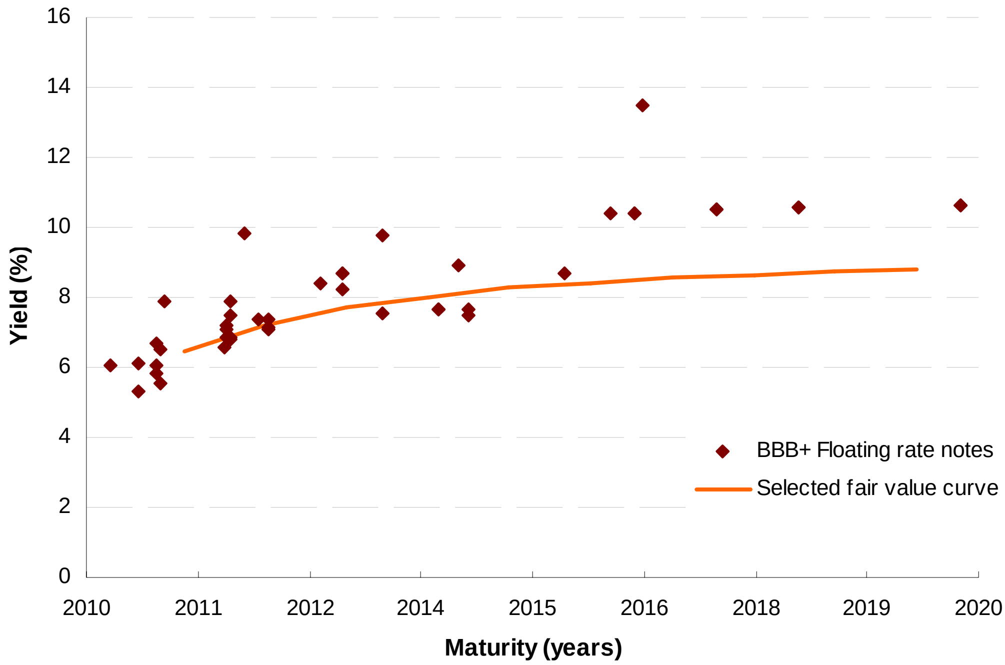


Source: Bloomberg, CBASpectrum, UBS, AER analysis.

The AER considers that the selected fair value curve closely aligns to the yields on a majority of the observations. However, the AER notes that most of these bonds have a shorter term to maturity and there are some potential outliers. The AER considers that the extra data from yields on BBB+ bonds available from one or two data sources do not provide any additional information that can be used to draw a meaningful conclusion.

Figure 5.6 shows the selected fair value curve and yields of floating rate BBB+ bonds after their yields are converted to fixed rate BBB+ bonds.

Figure 5.6: Selected fair value curve compared to yields on converted BBB+ floating rate bonds



Source: Bloomberg, CBASpectrum, UBS, AER analysis.

The AER considers that the selected fair value curve aligns with the yields on a majority of the observations. As discussed above, the AER considers that converted floating rate notes are not perfect substitutes for fixed rate bonds and do not reflect debt issued by the benchmark service provider. The AER also notes that the bonds with longer dated terms to maturity are issued by BBI, AXA and Reliance Rail. BBI has already been identified as an outlier and excluded from the AER's analysis. The AXA bond is a perpetual bond that is callable after eight years, the option for AXA not to pay the principle in 8 years time means that the bond is likely to have a higher yield.[154] Recent market commentary also indicates that Reliance Rail may currently be experiencing concerns about its credit rating.[155] The AER therefore considers that the observations presented in figure 5.6 do not provide any new or reliable information.

Figure 5.7 shows the selected fair value curve and the observed yields of A– and BBB rated bonds.

Figure 5.7: Selected fair value curve compared to yields on A– and BBB bonds

154 CEG, *Estimating the cost of 10 year BBB+ debt during the period 17 November to 5 December 2008*, p. 25.

155 Reliance Rail, *Reliance Rail media statement*, 10 March 2010.

Source: Bloomberg, CBASpectrum, UBS, AER analysis.

The AER considers that the observations in figure 5.7 do not show any clear pattern. It would be expected that the yields on A– rated bonds should lie below the yields on BBB rated bonds, for a given term to maturity. Further, for a given credit rating, the yield for a bond with a shorter term to maturity would be expected to be lower than the yield for a bond with a longer term to maturity. These expectations are not reflected in figure 5.7. Given that the observed yields do not reflect reasonable expectations it is difficult to compare the selected fair value curve to the observed yields. The AER therefore considers that limited weight can be placed on any conclusions drawn from the comparison.[156]

On balance, the AER considers that these observations do not provide additional information that can be considered to be arrived at on a reasonable basis. The testing approach described above and applied by the AER to a sample of bonds remains the best available means to select the fair value curve for the purposes of estimating the benchmark debt risk premium.

5.5.3 Summary on debt risk premium

Based on its analysis conducted over the averaging period, using the AER's methodology, augmented for additional tests as suggested in the CEG report on the bond sample, the AER considers that CBASpectrum's fair value curve provides estimates which are more closely aligned to observed yields for a sample of BBB+ bonds. This analysis takes into account updated information from bond markets which was not raised as an issue in the revised access arrangement proposal. The AER's

156 NGR, r. 74(2)(a).

approach has been put in place to reduce the need for an arbitrary selection of the data source used to estimate the debt risk premium. The AER considers that its approach results in an estimate of the benchmark debt risk premium that is arrived at on a reasonable basis and represents the best estimate possible in the circumstances, as required under r. 74(2) of the NGR. The AER's approach to estimating the debt risk premium is also consistent with r. 87(1) of the NGR, which requires the rate of return on capital to be commensurate with prevailing market conditions and the risks involved in providing reference services.[157]

The benchmark debt risk premium is estimated by averaging the yield on a 10 year corporate bond over the averaging period of 20 business days between 15 February 2010 and 12 March 2010 (to match the period used for estimating the risk-free rate). The resulting debt risk premium is 3.35 per cent. Adding this debt risk premium to the risk-free rate of 5.63 per cent provides a return on debt of 8.98 per cent, which is 0.82 per cent below that proposed in the revised access arrangement proposal.[158] The AER's proposed revisions are set out in section 5.10.

The AER notes that the revised access arrangement proposal includes a contingent operating expenditure for financial risk and preparedness, if the AER does not approve an equity beta of 1.0.[159] The AER considers this issue in appendix A.

5.6 Market risk premium

5.6.1 Revised access arrangement proposal

The revised access arrangement proposal does not accept the draft decision and maintains its proposal for a MRP of 7.5 per cent based on a report by the Competition Economists Group (CEG DGM report) submitted with its original access arrangement proposal,[160] and a CEG dividend growth model (original CEG DGM).[161]

The revised access arrangement proposal states that global financial conditions have improved since the submission of its original access arrangement proposal.[162] ActewAGL submits an updated version of the original CEG DGM to reflect market circumstances as at December 2009 (the updated CEG DGM).[163] The revised access arrangement proposal also responds to the three criticisms of the original CEG DGM made by the AER in the draft decision:

- the AER considers the nature of the dividend growth model (DGM) requires the estimation of CGS yields to use a long-run average,[164] but ActewAGL submits

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157 Rule 87 of the NGR is a full discretion rule.

158 ActewAGL, *Revised access arrangement information*, January 2010, p.147.

159 ActewAGL, *Revised access arrangement information*, January 2010, p. 44 and appendix B (confidential).

160 CEG, *The market risk premium and relative risk for ActewAGL: A report for ActewAGL*, June 2009 (CEG, *MRP and relative risk for ActewAGL*, June 2009).

161 ActewAGL, *Revised access arrangement information*, January 2010, p. 39.

162 ActewAGL, *Revised access arrangement information*, January 2010, pp. 40–41.

163 ActewAGL, *Revised access arrangement information*, January 2010, p. 41; CEG, DGM market modelling December 2009.xls, submitted an attachment to ActewAGL, email to the AER, 16 February 2010.

164 AER, *Draft decision*, November 2009, pp. 211.

that the use of a short-run average for CGS yields is appropriate because it reflects the averaging period used in the regulatory process[165]

- the AER considers that the discounting of dividend payments is incorrectly implemented,[166] but ActewAGL submits that the discounting of dividend payments is correct because of the simplifying assumption that dividends are received evenly across the year.[167] Further, ActewAGL states that if the alternative assumption—that dividends were received at the end of the year—was adopted, the estimated MRP would rise

- the AER considers that the DGM should continue in perpetuity,[168] but ActewAGL submits that extension of the DGM beyond 125 years is immaterial.[169]

The revised access arrangement proposal states that the updated CEG DGM supports:[170]

- a best estimate of the MRP over the next six years of 10 per cent, based on the assumption that the MRP will return to the long-term average of 6 per cent after this time

- a lower bound estimate of the MRP of 6.5 per cent, using the lower bound of the long-term dividend growth assumption

- a range of other MRP estimates between 6.3 and 8.7 per cent (with an average of 7.5 per cent) based on a longer period (10 years) before the MRP returns to the long-term average of 6 per cent.

The revised access arrangement proposal maintains that the MRP of 7.5 per cent from its original access arrangement proposal,[171] which was conservative relative to DGM estimates produced at the time, remains a valid estimate of the MRP for the next access arrangement period.[172]

5.6.2 AER's analysis and considerations

The draft decision does not approve the proposed MRP of 7.5 per cent and instead approves an MRP of 6.5 per cent consistent with the MRP estimated in the WACC review.[173]

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165 ActewAGL, *Revised access arrangement information*, January 2010, p. 40.

166 AER, *Draft decision*, November 2009, pp. 211.

167 ActewAGL, *Revised access arrangement information*, January 2010, p. 40.

168 AER, *Draft decision*, November 2009, pp. 211.

169 ActewAGL, *Revised access arrangement information*, January 2010, pp. 40.

170 ActewAGL, *Revised access arrangement information*, January 2010, p. 41.

171 ActewAGL, *Access arrangement information*, June 2009, p. 151.

172 ActewAGL, *Revised access arrangement information*, January 2010, p. 41.

173 AER, *Draft decision*, November 2009, pp. 64–66.

The revised access arrangement proposal notes the AER's concern over the reliability of the forecast dividends underlying cash-flow measures of the MRP such as the original CEG DGM.[174] In response, ActewAGL states:

> …the report by CEG was based on dividend forecasts from all analysts connected to Bloomberg for the ASX 200 companies, implying hundreds of professional financial analysts, who on a daily basis follow the companies in question.[175]

The AER observes that the CEG DGM report states that some of the dividend forecasts were more than two months old, contradicting the implication that all forecasts are made 'on a daily basis'.[176] Further, a significant proportion of the 200 companies in question have no Bloomberg forecast at all—19 companies in the original DGM, increasing to 25 companies in the updated CEG DGM. Even for the largest stocks, which presumably have the most analyst coverage, there is no indication of the spread of projections, and the simple average figure reported may mask highly variable dividend forecasts. The AER considers that these issues justify its concern over the reliability of these dividend forecasts.

The AER also makes the following observations when comparing the updated CEG DGM with the earlier version:

- ActewAGL justifies the use of the short-run average risk-free rate by noting this rate would apply to the business entity if the regulatory decision was made at that time.[177] The AER maintains its concerns set out in the draft decision that this is internally inconsistent with other model parameters,[178] noting that CGS yields are used in order to estimate the long-term ongoing MRP in perpetuity, and therefore using a short-run average rate would be inappropriate, given the long-term parameterisation of the model.

- The AER notes that dividends in the updated DGM are still not estimated into perpetuity, and that the theoretically correct approach is to do so. Further, the CEG DGM report states this extension occurs into perpetuity, despite the fact that the original CEG DGM does not implement this approach.[179]

- The updated DGM continues to model the payment of dividends continuously throughout the year. The AER notes this simplifying assumption for modelling purposes overestimates the present value of dividend payments received. Most listed companies pay two equal dividends biannually—at six months and twelve months into the year—so a simple averaging approach would be to model receipt at nine months into the year, not the six month point as implemented in the

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174 AER, *Draft decision*, November 2009, p. 213.

175 ActewAGL, *Revised access arrangement information*, January 2010, p. 39.

176 CEG, *MRP and relative risk for ActewAGL*, June 2009, pp 14–15, paragraph 46.

177 ActewAGL, *Revised access arrangement information*, January 2010, p. 40.

178 AER, *Draft decision*, November 2009, pp. 211.

179 CEG, *MRP and relative risk for ActewAGL*, June 2009, p. 15, paragraph 50.

original CEG DGM and the updated CEG DGM.[180] Further, there is no account for the material lag between the period where dividends are earned and the payment of dividends, which can be up to three months.

- The revised access arrangement proposal indicates that making adjustments in the updated CEG DGM to reflect delayed payment of dividends—either as a result of biannual dividend payment or the lag in dividend receipt—would increase the estimated MRP, since the value of dividends received in the first year would increase.[181] This is not correct—the higher implied dividend allowance in the first year is smaller in magnitude than the additional discounting of future payments. This amounts to a fundamental overstatement of in-flows in both the original CEG DGM and the updated CEG DGM.

The AER notes that the updated CEG DGM contains further inaccuracies:

- formula errors when calculating market capitalisation and aggregate dividend forecasts,[182] such that firms without dividend forecasts are included and firms with dividend forecasts are excluded[183]
- the lower bound estimate of long-run dividend growth is based on the real yield for the longest dated inflation indexed CGS,[184] which was 2.8 per cent (not 3.2 per cent) at 9 December 2009.[185]

After correcting for these errors the updated CEG DGM generates the following estimates:

- an MRP between 5.0 per cent and 6.0 per cent, if the currently observed MRP is not a temporary aberration, but instead is expected to remain at this level in perpetuity
- an MRP between 2.6 per cent and 5.9 per cent, if the current MRP will return to the long-run average MRP of 6 per cent after 5 years
- an MRP between 3.9 per cent and 6.0 per cent, if the current MRP will return to the long-run average MRP of 6 per cent after 10 years.

The AER considers that problems inherent in any DGM have not been addressed in the revised access arrangement proposal or the updated CEG DGM. These include:[186]

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180 R. Brealey, S. Myers, G. Partington and D. Robinson, *Principles of Corporate Finance*, McGraw–Hill: Sydney, Australia, pp. 450–451.

181 ActewAGL, *Revised access arrangement information*, January 2010, p. 40.

182 See the sum formula in cell C205, and the dividend forecast summation in columns V to Z. See CEG, DGM market modelling December 2009.xls, submitted as an attachment to ActewAGL, Email to the AER, 16 February 2010.

183 This is inconsistent with the methodology described in CEG, *MRP and relative risk for ActewAGL*, June 2009, p. 14, paragraphs 44–45.

184 CEG, *MRP and relative risk for ActewAGL*, June 2009, p. 17, paragraphs 54–55.

185 This is Treasury Indexed Bond 407, with a maturity date of 20 September 2025. RBA, *Indicative mid rates of selected Commonwealth Government Securities*, Table F 16, sequence FCMIYSEP25D, viewed 1 March 2010, <http://www.rba.gov.au/statistics/tables/xls/f16.xls>.

- reliance on contentious assumptions, such as:[187]
  - markets are perfectly priced at all times
  - forecast dividend distributions accurately reflect market expectations.
- forecasts are highly variable:[188]
  - small, plausible changes to inputs and assumptions produce large changes in MRP estimates
  - even if consistent inputs are used, implausibly large changes in MRP are estimated across short periods of time.

Table 5.6 demonstrates the variability in the MRP projections for the original CEG DGM, the updated CEG DGM and the AER corrections for both models. In addition the AER corrections to the updated CEG DGM compare two scenarios for the risk free rate.

186 AER, *Final decision, electricity transmission and distribution network service providers, review of the weighted average cost of capital (WACC) parameters,* May 2009, pp. 218–220 (AER, *Final decision, WACC Review*. May 2009).

187 AER, *Draft decision*, November 2009, pp. 213–214.

188 AER, *Draft decision*, November 2009, pp. 211–213.

Table 5.6: Variability in DGM based estimates of the MRP

		CEG Submission		After AER corrections		
	Date	**Jun 2009**	**Dec 2009**	**Jun 2009**	**Dec 2009**	
Scenario	**Risk free rate**	**4.9**	**5.6**	**6.9**	**5.6**	**6.7**
Current MRP is permanent	Lower bound	8.3	6.5	6.0	6.1	5.0
	Upper bound [a]	8.9	7.1	6.6	7.1	6.0
Return to long-run MRP after 2015	Lower bound	11.3	7.6	6.0	6.1	2.6
	Upper bound [a]	13.0	10.0	7.8	10.3	5.9
Return to long-run MRP after 2020	Lower bound	13.9	7.1 b	6.0	6.2	3.9
	Upper bound [a]	16.7	8.7	7.3	8.5	6.0

Source: AER analysis; CEG, *The market risk premium and relative risk for ActewAG, : Attachment to CEG's DGM report*, submitted to the AER on 1 July 2009; CEG, DGM market modelling December 2009.xls (ie. the updated CEG DGM), submitted as an attachment to ActewAGL, email to the AER, 16 February 2010.

a: The CEG DGM report labels this the 'best estimate', but it is based on the long run average annual rate of real growth in gross domestic income, and so therefore is the highest possible MRP.

b: ActewAGL states that this lower bound is 6.3 per cent, but the AER's calculations using the unadjusted spreadsheet model produce a value of 7.1 per cent. See ActewAGL, *Revised access arrangement information*, January 2010, p. 41; CEG, DGM market modelling December 2009.xls, submitted as an attachment to ActewAGL, email to the AER, 16 February 2010.

Table 5.6 shows that, after correcting for the errors noted by the AER, the lower bound MRP estimates in December 2009 are all below 6.5 per cent. Further, using the AER's preferred long-run average risk-free rate of 6.7 per cent in this analysis,[189] even the upper bound estimates for MRP are 6 per cent or lower.

189 The AER clarifies that its preference is to use a long-term risk-free rate in the DGM to match the long-term nature of the analysis. See AER, *Draft decision*, November 2009, p. 211; AER, *Final decision, WACC review*, May 2009, p. 218 and this is the long-term risk–free rate using Bloomberg CGS rates (sequence C12710Y, mid rates). This average has dropped from 6.9 per cent (measured from 1991 to July 2009) to 6.7 per cent (measured from 1991 to 12 March 2010).

Table 5.6 also shows that if either the original CEG DGM or the updated CEG DGM is used without the AER corrections, the MRP estimates in December 2009 vary significantly from those estimated in June 2009. For any given assumption about long-term MRP behaviour, the lower bound in June 2009 is above the upper bound in December 2009. That is, in six months the estimates have changed so dramatically that the ranges do not overlap. The AER has previously observed similar swings in DGM estimates of the MRP occurring without apparent change in economic conditions.[190] Such large variation gives reason to doubt the reliability of DGM estimates of the MRP, even as a 'point in time' estimate.

The AER notes the concerns in the draft decision about the use of transient MRP estimates to indicate the future MRP.[191] For internal consistency with other WACC parameters, the MRP should be estimated for the same 10-year period as the risk-free rate.[192] Further, the MRP must be set at a level to provide appropriate investment incentives over the long-term.[193] In these circumstances, a reasonable approach is to use a long-term historical estimate, which provides regulatory certainty and takes into consideration prevailing market conditions and the risks involved in providing the reference services.[194] The AER notes that it has maintained this long-term approach to MRP estimation even at times—and Table 5.6 suggests this may be such a time—when short-term DGM-based projections of the MRP are below 6 per cent.[195]

The AER considers that the updated DGM submitted by ActewAGL does not provide reliable evidence that an MRP of 7.5 per cent is the best estimate as required by r. 74 of the NGR. Based on the above considerations, and consistent with the draft decision and the WACC review,[196] the AER considers that an estimate of 6.5 per cent provides the best forward looking long-term estimate of the MRP, which also takes into account prevailing market conditions in the immediate post global financial crisis period and the risks involved in providing the reference services.[197]

5.7 Equity beta

5.7.1 Revised access arrangement proposal

The revised access arrangement proposal does not accept the draft decision and maintains the proposal for an equity beta of 1.0.[198] The revised access arrangement proposal outlines that gas networks face higher risk than electricity networks and this additional risk should be reflected in a higher equity beta.[199]

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190 AER, *Final decision, WACC review*, May 2009, pp. 218–220.

191 AER, *Draft decision*, November 2009, pp. 211–213.

192 AER, *Final decision, WACC review*, May 2009, p. 187.

193 NGL, s. 23.

194 AER, *Draft decision*, November 2009, pp. 213–214.

195 AER, *Final decision, WACC review*, May 2009, p. 237.

196 AER, *Final decision, WACC review*, May 2009, pp. 175–243; AER, *Draft decision*, November 2009, pp. 64–66 (section 5.7), 193–226 (appendix B (confidential)).

197 NGR, r. 87 (1).

198 ActewAGL, *Revised access arrangement information*, January 2010, pp. 41–43.

199 ActewAGL, *Revised access arrangement information*, January 2010, pp. 41–43.

The revised access arrangement proposal submits that the following international regulatory precedents set a higher equity beta for gas networks than electricity networks:

- a New Zealand Commerce Commission (NZCC) decision for the 2004 gas control inquiry[200]
- a submission by LECG to the same NZCC regulatory process (the LECG submission)[201]
- a PricewaterhouseCoopers (PWC) report commissioned for the United Kingdom's Office of Gas and Electricity Markets (OFGEM) Distribution Price Control Review 5.[202]

The revised access arrangement proposal also responds to several points made in the draft decision:

- The AER states that volatility in several business metrics (based on confidential analyses of ActewAGL's cash flow, customer numbers and expected revenue as submitted by ActewAGL) does not justify a higher equity beta since these business metrics are several steps removed from the business' return.[203] ActewAGL states that in the presence of fixed costs, these business metrics have a direct impact on business returns and are therefore relevant to the assessment of beta.[204]
- The AER states that the variability inherent in any DGM means that the implied equity beta—derived from comparison between two DGMs—cannot be considered a reliable estimate.[205] ActewAGL submits that the AER's adjustments in the draft decision to the original CEG DGM are either incorrect or immaterial, and that on this basis the implied equity beta derived from original CEG DGM comparison is relevant.[206]

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200 ActewAGL, *Revised access arrangement information*, January 2010, p. 42. Source document is NZCC, *Final report*, *Gas Control Inquiry*, 29 November 2004, viewed 3 March 2010, <http://www.comcom.govt.nz//RegulatoryControl/GasPipelines/ContentFiles/Documents/Public%20Version%20Final%20Report%2029%20November%202004.pdf>.

201 ActewAGL, *Revised access arrangement information*, January 2010, pp. 42–43. Source document is LECG, *Response to the Commerce Commission's Gas Control Inquiry Draft Framework Paper, Estimation of the Weighted Average Cost of Capital, Prepared on behalf of NGC Holdings Ltd,* 20 August 2003, viewed 2 March 2010, <http://www.comcom.govt.nz//RegulatoryControl/GasPipelines/ContentFiles/Documents/NGC-WACC.pdf).

202 ActewAGL, *Revised access arrangement information*, January 2010, p. 43. Source document is PriceWaterhouseCoopers, *Office of Gas and Electricity Markets*, *Advice on the cost of capital analysis for DPCR5*, *Final report*, 1 December 2009, viewed 1 March 2010, <http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/Financial%20Issues%20-%20Ofgem%20Cost%20of%20Capital%20-FINAL%20-%20011209.pdf>.

203 ActewAGL, *Revised access arrangement information*, January 2010, pp. 41–43.

204 ActewAGL, *Revised access arrangement information*, January 2010, p. 42.

205 ActewAGL, *Revised access arrangement information*, January 2010, p. 41.

206 ActewAGL, *Revised access arrangement information*, January 2010, p. 42.

In addition, the revised access arrangement proposal submits that statements in the draft decision are inconsistent with the WACC review.[207]

The revised access arrangement proposal also submits that an equity beta that is below 0.65 would result in a cost of equity that is lower than the cost of debt, which is at odds with normal observations and practice in the capital market.[208]

5.7.2 AER's analysis and considerations

This section discusses the determination of an equity beta in the context of the (standard) Sharpe–Lintner Capital Asset Pricing Model (CAPM). Jemena makes a submission about the use of the FFM instead of the Sharpe–Lintner CAPM. However, as ActewAGL does not propose an FFM, the AER does not consider Jemena's submission is relevant for consideration in final decision. That said, the AER considers that the CAPM remains the best available model to estimate the cost of equity, consistent with the requirements of the NGR.[209]

The AER considers that the revised access arrangement proposal confuses business specific risk (diversifiable risk) and systematic risk (non-diversifiable risk). ActewAGL submits that:

> …the AER has not acknowledged or reflected the increased business risk in the gas distribution compared with electricity distribution when setting the equity beta.[210]

The AER considers that, as outlined in the draft decision:

> The equity beta set by the AER reflects the exposure of a benchmark efficient service provider's returns to macroeconomic risk factors (i.e. non-diversifiable, systematic risk), and not the business risk faced by any particular individual service provider.[211]

Under the CAPM, the diversified investor invests in a portfolio of companies, such that business specific risks are eliminated—where one company performs well, and another performs poorly. The investor therefore only requires compensation for the remaining, non-diversifiable risk, and a business' exposure to this systematic risk determines its equity beta.[212]

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207 ActewAGL, *Revised access arrangement information*, January 2010, p. 42.

208 ActewAGL, *Revised access arrangement information*, January 2010, p. 43.

209 The AER notes the submission by Jemena Gas Networks (NSW) Ltd on the use of the Fama–French three–factor model instead of the CAPM, and the assessment of this submission is in the draft decision for Jemena—see AER, *Draft decision, Jemena access arrangement proposal for the NSW gas networks 1 July 2010 – 30 June 2015*, 10 February 2010, pp. 354–360 (appendix A; Jemena submission on the Da, Guo and Jagannathan working paper).

210 ActewAGL, *Revised access arrangement information*, January 2010, p. 41.

211 AER, *Draft decision*, November 2009, p. 198.

212 W. Sharpe, 'Capital Asset Prices; A Theory of Market Equilibrium under Conditions of Risk', *Journal of Finance*, 1964, vol. 19, pp. 425–442; J. Lintner, 'The Valuation of Risky Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets', *The Review of Economics and Statistics,* 1965, vol. 47, pp. 13–37; J. Mossin, 'Equilibrium in a Capital Asset Market', *Econometrica*, 1966, vol. 34(2), pp. 768–83; F. Black, 'Capital market equilibrium with restricted borrowing', *Journal of* Business, July 1972, vol. 45, pp. 444–454.

The revised access arrangement proposal outlines that the high month-to-month variation—in cash flow, customer numbers and expected revenue—reflects greater exposure to systematic risk.[213] The AER considers the alternative—that this variation reflects business specific risk—is more reasonable, and details its reasoning in the draft decision.[214] Although ActewAGL is correct to suggest that there are some fixed costs for a gas network business,[215] this does not mitigate the AER's central concern that the volatility analysis does not investigate the relationship between business' return and market return, and this is the only relationship relevant to the estimation of equity beta.[216] The AER's reasons in the draft decision further explain this point.[217]

The AER does not consider that the regulatory precedents cited in the revised access arrangement proposal provide evidence to support ActewAGL's proposal for an equity beta of 1.0.[218]

The NZCC gas control inquiry final report provides for a slight equity beta increase for gas businesses relative to electricity businesses (by 0.1), but makes clear that this arises from consideration of factors specific to New Zealand.[219]

The AER does not consider the submission by LECG provides a regulatory precedent, since it is a consultant report commissioned by a New Zealand gas distribution business (NGC Holdings Limited) for its submission to the NZCC gas control inquiry.[220]

The AER considers that the report by PWC does not support a higher (asset) beta for gas. First, immediately after the text quoted by ActewAGL, PWC dismisses the (higher) gas distribution beta result as anomalous:

> However, as stated earlier we believe it is appropriate to disregard the GD [gas distribution] beta. This is because our analysis shows that the asset beta of our sole GD company (Nicor) has historically been very volatile, perhaps

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213 ActewAGL, *Revised access arrangement information*, January 2010, p. 41; ActewAGL, *Access arrangement information*, June 2009, section 8.1.4.4, pp. 151–152.

214 AER, *Draft decision*, November 2009, pp. 62–64, 197–202.

215 ActewAGL, *Revised access arrangement information*, January 2010, p. 42.

216 AER, *Draft decision*, November 2009, pp. 197–202.

217 AER, *Draft decision*, November 2009, pp. 195–207.

218 ActewAGL, *Revised access arrangement information*, January 2010, pp. 42–43.

219 The NZCC report specifically mentions opportunities for NZ gas pipelines to expand their networks; the AER notes that there are relevant differences between the New Zealand and Australian regulatory regimes on this matter. See NZCC, *Final report, Gas Control Inquiry*, 29 November 2004, pp. 187–188, viewed 3 March 2010, <http://www.comcom.govt.nz//RegulatoryControl/GasPipelines/ContentFiles/Documents/Public%20Version%20Final%20Report%2029%20November%202004.pdf>.

220 LECG, *Response to the Commerce Commission's Gas Control Inquiry Draft Framework Paper; Estimation of the Weighted Average Cost of Capital; Prepared on behalf of NGC Holdings Ltd*, 20 August 2003, p. 3, viewed 2 March 2010 <http://www.comcom.govt.nz//RegulatoryControl/GasPipelines/ContentFiles/Documents/NGC-WACC.pdf>.

the result of higher operational leverage or due to reasons related to vertical integration.[221]

Second, the report by PWC presents ranges for asset betas of 0.24 to 0.43 for electricity businesses compared to 0.26 to 0.45 for gas businesses, which supports the position that gas and electricity have similar exposure to systematic risk.[222]

For the reasons outlined above, the AER does not consider that the regulatory precedents cited in the revised access arrangement proposal provide evidence to support an equity beta of 1.0.

In addition, the AER also does not consider the draft decision is inconsistent with the WACC review.[223] The draft decision clarifies[224] that there may be a difference between gas and electricity in total exposure to risk, with gas having higher business risk.[225] The draft decision elaborates on this point and states that the difference between gas and electricity may be sufficiently small as to be immaterial,[226] and also that the difference between gas and electricity may be entirely business risk, with no difference in systematic risk.[227]

The AER's consideration of the updated CEG DGM in section 5.6.2 of the final decision outlines that the DGM estimates are highly variable and cannot be relied on as a reasonable basis to determine a best estimate or forecast.[228]

The AER notes that the revised access arrangement proposal has not addressed several key issues outlined in the draft decision, including:

- the sample set used to estimate the equity beta in the WACC review was primarily composed of gas companies[229]
- the statistical analysis of this data set produces a range for the equity beta between 0.4 and 0.7[230]

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221 PWC, *Office of Gas and Electricity Markets; Advice on the cost of capital analysis for DPCR, Final report*, 1 December 2009, p. 83, viewed 1 March 2010, <http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/Financial%20Issues%20-%20Ofgem%20Cost%20of%20Capital%20-FINAL%20-%20011209.pdf>.

222 PWC, *Office of Gas and Electricity Markets; Advice on the cost of capital analysis for DPCR5, Final report*, 1 December 2009, p. 83, table 37, viewed 1 March 2010, <http://www.ofgem.gov.uk/Networks/ElecDist/PriceCntrls/DPCR5/Documents1/Financial%20Issues%20-%20Ofgem%20Cost%20of%20Capital%20-FINAL%20-%20011209.pdf>.

223 Source references are AER, *Final decision; WACC review*, 1 May 2009, pp. 107–108, 257–258, 260, 371; CEG, *MRP and relative risk for ActewAGL*, June 2009, paragraphs 107–108, p. 36–37, AER, *Draft decision*, November 2009, pp. 200–202, ActewAGL, *Revised access arrangement information*, January 2010, pp. 42.

224 AER, *Draft decision*, November 2009, p. 201.

225 AER, *Final decision, WACC review*, May 2009, pp. 257–258.

226 AER, *Draft decision*, November 2009, p. 200.

227 AER, *Draft decision*, November 2009, p. 201.

228 NGR, r. 74(2).

229 AER, *Draft decision*, November 2009, p. 197.

230 AER, *Draft decision*, November 2009, pp. 203–204.

- the buffer allowed over the upper end of the observed equity beta range is already greater than the difference ActewAGL submits exists between gas and electricity businesses.[231]

The revised access arrangement proposal also outlines a contingent operating expenditure for financial risk and preparedness, which ActewAGL proposes should only apply in the event that the AER does not approve its proposed higher equity beta of 1.0.[232] The AER considers the merits of this proposed allowance in appendix A.

Finally, the AER notes that the revised access arrangement proposal expresses concern that, if the equity beta was to be set below 0.65, the cost of debt would be above the cost of equity.[233] The AER notes that, as the equity beta of 0.8 determined by the AER is above an equity beta of 0.65, this concern is not relevant to the final decision.

The AER considers that the revised access arrangement proposal has not presented any evidence to support an equity beta of 1.0. Although reliance on market data suggests a value of between 0.4 and 0.7, the AER concludes that a conservative approach has merit, ensuring that the efficient network service provider has the opportunity to at least recover efficient costs.[234] Therefore, the AER considers that the value of 0.8 for the equity beta is a best estimate arrived at on a reasonable basis as outlined in revision 5.1.[235]

5.8 Inflation forecast

5.8.1 Revised access arrangement proposal

The revised access arrangement proposal submits that at the time of the draft decision, an analysis based on the Fischer equation (the market implied method using nominal and indexed CGS) and the AER's method arrived at similar inflation forecasts. ActewAGL notes that the difference between the average yield of the nominal CGS and the indexed CGS has increased by 0.8 percentage points between May 2009 and, the time of the revised access arrangement proposal, which again indicates a bias in the market. Given the reoccurring bias of the indexed CGS, ActewAGL accepts the AER's methodology applied in the draft decision.[236] The inflation forecast used in the revised access arrangement proposal is based on the Reserve Bank of Australia's (RBA) November 2009 monetary policy statement, and results in an inflation forecast of 2.48 per cent per annum.

5.8.2 AER's analysis and considerations

As outlined in the draft decision, forecast inflation is estimated over a 10-year period using the RBA's short-term inflation forecasts extending out for two years and the

231 AER, *Draft decision*, November 2009, p. 200.

232 ActewAGL, *Revised access arrangement information*, January 2010, p. 44 ; appendix B (confidential).

233 ActewAGL, *Revised access arrangement information*, January 2010, p. 43.

234 NGL, s. 24(2).

235 NGR, r. 74(2).

236 ActewAGL, *Revised access arrangement information*, January 2010, pp. 45–46.

mid-point of the RBA's target inflation band beyond that period (i.e. 2.5 per cent) for the remaining eight years. An implied 10-year inflation forecast is derived by calculating the geometric average of these individual forecasts.[237]

The revised access arrangement proposal accepts the draft decision's methodology to forecast inflation. However, the revised access arrangement proposal uses the information from the RBA's November 2009 monetary policy statement. ActewAGL estimates a geometric average inflation forecast over a 10-year period using the approach that is consistent with the AER's method. However, it does not incorporate the RBA's latest short-term inflation forecasts extending out to two years—that is, 2010–11 and 2011–12.

As stated in the draft decision, the AER considers that the estimate of expected inflation should be updated to incorporate the latest available RBA forecasts closer to the time of the final decision.[238] Table 5.7 shows the calculation of the inflation forecast for the access arrangement period using the RBA data.

Table 5.7: Final decision on inflation forecast (%)

	June 2011	June 2012	June 2013	June 2014	June 2015	June 2016	June 2017	June 2018	June 2019	June 2020	Geometric average
Forecast inflation	2.50	2.75	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.52

Source: RBA, *Statement on monetary policy*, 4 February 2010, p. 58.

Consistent with the approach applied in the draft decision and using the latest RBA forecasts, the AER considers that an inflation forecast of 2.52 per cent per annum produces the best estimate of a 10-year inflation forecast for the final decision.[239]

5.9 Conclusion

The AER does not approve the nominal vanilla WACC of 11.08 per cent specified in the revised access arrangement information as it does not comply with r. 74(2) of the NGR.

The AER estimates a nominal vanilla WACC of 9.72 per cent for ActewAGL, based on the updated risk-free rate and debt risk premium. Table 5.8 sets out the WACC parameter values for the final decision and provides a comparison with the values submitted in the revised access arrangement proposal. The WACC is lower than that in the revised access arrangement proposal due to the amendments required to parameters such as the nominal risk-free rate, equity beta, MRP and debt risk premium.

237 AER, *Draft decision*, November 2009, pp. 60–62.

238 AER, *Draft decision*, November 2009, p. 61.

239 NGR, r. 74(2). The current RBA forecasts are available at www.rba.gov.au. The current target inflation band is between two and three per cent per annum; see Treasurer and the Governor of the Reserve Bank of Australia, *Joint statement on the conduct of monetary policy*, 6 December 2007, viewed 4 February 2010, http://www.rba.gov.au/monetary-policy/inflation-target.html.

Table 5.8: Final decision on WACC parameters

Parameter	Revised access arrangement proposal	AER's conclusion
Nominal risk-free rate (%)	5.50 [a]	5.63 [a]
Inflation (%)	2.48 [a]	2.52 [b]
Real risk-free rate (%)	2.94	3.03 [a]
Equity beta	1.0	0.80
Market risk premium (%)	7.5	6.5
Debt risk premium (%)	4.30	3.35 [a]
Debt to total assets (gearing) (%)	60	60
Nominal return on equity (%)	13.00	10.83 [a]
Nominal return on debt (%)	9.80	8.98 [a]
Nominal vanilla WACC (%)	11.08	9.72 [a]

a: These figures have been updated using data for the 20 business days averaging period ending on 12 March 2009.

b: This figure has been updated using the latest data from the RBA statement on monetary policy dated 4 February 2010, p. 58.

5.10 Revisions

The AER proposes the following revisions:

Revision 5.1: delete Table 4.1 of the revised access arrangement information and replace it with the following:

Table 5.9: Summary of cost of capital parameters

Parameter	
Nominal risk-free rate (%)	5.63
Equity beta	0.80
Market risk premium (%)	6.5
Debt risk premium (%)	3.35
Debt to total assets (gearing) (%)	60
Gamma	0.65
Nominal return on equity (%)	10.83
Nominal return on debt (%)	8.98
Nominal vanilla WACC (%)	9.72

Revision 5.2: delete Table 4.2 in the revised access arrangement information and replace it with the following:

Table 5.10: Inflation forecast (%)

	June 2011	June 2012	June 2013	June 2014	June 2015	June 2016	June 2017	June 2018	June 2019	June 2020	Geometric average
Forecast inflation	2.50	2.75	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.52

Revision 5.3: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 5.1–5.2.

6 Taxation

6.1 Introduction

This chapter sets out the revised access arrangement proposal on, and the AER's analysis and consideration of, the revised estimate of the cost of corporate income taxation for the access arrangement period. This chapter also sets out the AER's analysis and consideration of the value of imputation credits (gamma) proposed in the revised access arrangement proposal. The assumed value of imputation credits is incorporated in the estimation of the cost of corporate income taxation.

6.2 Revised access arrangement proposal

ActewAGL uses a post-taxation framework to estimate its total revenue. It includes a taxation building block in its total revenue estimate.[240] The revised access arrangement proposal accepts the draft decision to the taxation standard life for high pressure services.[241]

The access arrangement proposal, proposes a gamma value of 0.65 consistent with the AER's recent review of the weighted average cost of capital parameters for electricity transmission and distribution network service providers (WACC review). However, ActewAGL submits its preference for a gamma value of below 0.5 but notes that no new information since the WACC review was available to support this.[242]

The revised access arrangement proposal states that, since submission of the access arrangement proposal, new material has been provided to the AER as part of the recent Queensland electricity distribution determination process. ActewAGL submits that this new material supports a gamma value lower than 0.5.[243] ActewAGL also submits that the Independent Pricing and Regulatory Tribunal (IPART) has released a WACC discussion paper that supports a gamma estimate lower than 0.5. [244] On this basis, ActewAGL submits that there is significant evidence indicating that gamma should be between 0.2 and 0.5.[245] Notwithstanding this, ActewAGL applies a gamma value of 0.65 to estimate the taxation building block in the revised access arrangement proposal.

6.3 AER's analysis and considerations

6.3.1 Estimated cost of corporate income taxation

The AER notes that ActewAGL has incorporated in full amendment 6.1 of the draft decision, which requires the amendment of the taxation standard life for high pressure services in the post-taxation revenue model (PTRM) to 50 years from 30 years.[246] As

240 ActewAGL, *Revised access arrangement information*, January 2010, p. 68.

241 ActewAGL, *Revised access arrangement information*, January 2010, p. 68.

242 ActewAGL, *Access arrangement information*, June 2009, p. 148.

243 ActewAGL, *Revised access arrangement information*, January 2010, pp. 37–38.

244 ActewAGL, *Revised access arrangement information*, January 2010, p. 38.

245 ActewAGL, *Revised access arrangement information*, January 2010, p. 38.

246 ActewAGL, *Revised access arrangement information*, January 2010, p. 68.

a result of this amendment the AER considers that the method for estimating the cost of corporate income taxation for each year of the access arrangement period is arrived at on a reasonable basis.[247]

However, the AER notes that the estimated cost of taxation is determined with reference to the other total revenue building blocks. This means that amendments required to capital and operating expenditure result in subsequent changes to the estimate of corporate income taxation. The estimated value of corporate income taxation needs to be updated to provide the best forecast possible in the circumstances.[248]

The AER considers that the method proposed by ActewAGL to estimate the cost of corporate income taxation is arrived at on a reasonable basis, as required by r. 74(2)(a) of the NGR. However, as a result of changes to other total revenue building blocks, the proposed taxation estimate is no longer the best possible in the circumstances as required by r. 74(2)(b) of the NGR. Therefore, the AER requires ActewAGL to revise its estimated value of corporate income taxation as set out in revisions 6.1 and 6.2.

6.3.2 Assumed utilisation of imputation credits (gamma)

ActewAGL refers to a recent IPART discussion paper on the WACC. The AER notes that the IPART discussion paper only provides the IPART's preliminary view on the gamma estimate that it may adopt in the future.[249] Further, the AER notes that the IPART discussion paper does not present any new evidence on an estimate of gamma from what was considered in detail as part of the WACC review.

ActewAGL also submits that new evidence has been provided to the AER as part of the recent Queensland electricity distribution determination process.[250] As outlined in the draft decision, the AER considered in detail the appropriate value for gamma in the WACC review.[251] The AER also considers the value of gamma (including new information submitted following the WACC review) as part of the draft decision on the Jemena NSW Gas Networks' access arrangement proposal as well as new information provided as part of the Queensland electricity distribution determination process and concludes in the draft decision that the estimate of 0.65 for gamma represents the best estimate arrived at on a reasonable basis currently available.[252]

As a consequence, the AER considers that the estimate of 0.65 for gamma adopted in the WACC review and applied in recent regulatory decisions takes into account all of the evidence currently available on the value of gamma.

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247 NGR, r. 74(2)(a).

248 NGR, r. 74(2)(b).

249 IPART, *IPART's cost of capital after the AER's WACC review; Lessons from the GFC, other* industries*—discussion paper*, November 2009, p. 62.

250 ActewAGL, *Revised access arrangement information*, January 2010, pp. 37–38.

251 AER, *Draft decision*, November 2009, p. 70.

252 AER, *Draft decision, Queensland draft distribution determination 2010–11 to 2014–15,* 25 November 2009, p. 217.

6.4 Conclusion

The AER does not approve the revised estimate of the cost of corporate income taxation for each year of the access arrangement period as it does not comply with r. 74 of the NGR.

6.5 Revisions

The AER proposes the following revisions:

Revision 6.1: delete Table 6.4 in the revised access arrangement information and replace it with the following:

Table 6.1: Roll forward of the TAB from 2010–11 to 2014–15

	2010–11	2011–12	2012–13	2013–14	2014–15
Opening TAB	196.9	216.1	234.2	237.7	240.0
Forecast capital expenditure	26.7	26.5	12.7	11.8	12.8
Straight–line depreciation	-7.5	-8.4	-9.2	-9.4	-9.9
Closing TAB	216.1	234.2	237.7	240.0	242.9

Revision 6.2: delete Table 6.5 in the revised access arrangement information and replace it with the following:

Table 6.2: Tax depreciation concessions 2010–11 to 2014–15

	2010–11	2011–12	2012–13	2013–14	2014–15
Tax depreciation concessions	7.5	8.4	9.2	9.4	9.9

Revision 6.3: delete Table 6.6 in the revised access arrangement information and replace it with the following:

Table 6.3: Corporate income tax building block 2010–11 to 2014–15

	2010–11	2011–12	2012–13	2013–14	2014–15
Tax payable	2.4	2.8	3.1	3.3	3.4
Value of imputation credits	-1.5	-1.8	-2.0	-2.2	-2.2
Tax allowance	0.8	1.0	1.1	1.2	1.2

Revision 6.4: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 6.1–6.3.

7 Incentive mechanism

7.1 Introduction

This chapter sets out ActewAGL's submissions and the AER's analysis and consideration of ActewAGL's proposed carryover of increments and decrements as well as particulars of its incentive mechanism including its rationale.

7.2 Revised access arrangement proposal

The revised access arrangement proposal accepts the draft decision's requirement to change the specification of how the carryover amounts are estimated but does not accept the removal of the incentive mechanism for capital expenditure.[253]

7.3 AER's analysis and considerations

As outlined in chapter 7 of the draft decision,[254] the AER considers that if an efficiency carryover mechanism is applied to capital expenditure and deferred capital expenditure cannot be excluded from the projected capital base then this delivers inappropriate incentives to defer capital expenditure to a later access arrangement period. This is because a service provider can receive the carryover amounts resulting from lower than forecast actual capital expenditure by proposing and then deferring capital expenditure to the next access arrangement period. This creates an incentive to continually propose and defer capital expenditure projects to the next access arrangement period while being continually rewarded with incentive mechanism carryover increments based on lower actual than forecast capital expenditure.

This issue is not addressed in the revised access arrangement proposal and seeks to reinstate the capital expenditure mechanism proposed in the access arrangement proposal.[255] Specifically, ActewAGL has not modified the capital expenditure incentive mechanism to remove the effects of deferral of capital expenditure or account for the possibility of capital expenditure deferral. Therefore, the AER does not consider that the issues set out in the draft decision about the proposed incentive mechanism for capital expenditure have been addressed.

The AER notes that as ActewAGL deferred capital expenditure in the earlier access arrangement period this may also occur in future access arrangement periods. The AER considers that given this possibility and without modification, the proposed incentive mechanism for capital expenditure does not encourage efficiency in the provision of services by the service provider as required by r. 98 of the NGR.

The AER notes that ActewAGL has retained some discussion about the methodology used to estimate efficiency carryover amounts for the final year of an access arrangement period in clause 4.16 of the revised access arrangement proposal.[256] The

253 ActewAGL, *Revised access arrangement information*, January 2010, pp. 71–76.

254 AER, *Draft decision*, November 2009, p. 78.

255 ActewAGL, *Revised access arrangement proposal*, January 2010, pp. 75–76.

256 This was included in clause 4.14A of the access arrangement proposal.

AER considers that this discussion is no longer required and may lead to confusion. Therefore the AER considers that this wording needs to be revised.

7.4 Conclusion

In summary, the AER considers that ActewAGL cannot exclude deferred capital expenditure from the projected capital base under the provisions of r. 79 of the NGR and that it has not addressed the AER's concern about deferred capital expenditure in the revised incentive mechanism.

The AER does not approve ActewAGL's revised rolling carryover mechanism for capital expenditure as it does not comply with r. 98 of the NGR.

The AER approves the revised specification for the carryover amounts for the incentive mechanism for operating expenditure as outlined in clauses 4.12–4.16 of the revised access arrangement proposal as it complies with r. 98 of the NGR.

7.5 Revisions

The AER proposes the following revisions:

Revision 7.1: delete clause 4.5(b) in the revised access arrangement proposal and replace it with the following:

> a rolling carryover mechanism, that results in ActewAGL retaining the reward associated with an efficiency-improving initiative for five years after the year in which the gain was achieved, that is, a reward (being the net amount of the efficiency gains (or losses) relating to operating expenditure) earned in one year of an Access Arrangement Period would be added to the total revenue and carried forward into the next Access Arrangement Period if necessary, until it has been retained by ActewAGL for a period of five years.

Revision 7.2: delete clauses 4.6–4.11 and 4.16 in the revised access arrangement proposal.

Revision 7.3: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 7.1 and 7.2.

8 Fixed principles

8.1 Introduction

This chapter sets out the AER's analysis and consideration of the fixed principles in the revised access arrangement proposal.

8.2 Revised access arrangement proposal

ActewAGL accepts the majority of the amendments to the fixed principles set out in the draft decision.[257] However, ActewAGL does not accept that the draft decision to remove the rolling carryover incentive mechanism for capital expenditure.[258] ActewAGL therefore proposes to include references to the rolling carryover mechanism for capital expenditure in clause 4.28(a) of the revised access arrangement proposal.[259]

8.3 AER's analysis and considerations

The AER does not approve ActewAGL's proposed rolling carryover incentive mechanism for capital expenditure as outlined in chapter 7 of the final decision. The AER considers that clause 4.28(a) of the revised access arrangement proposal should not contain any references to ActewAGL's proposed rolling carryover incentive mechanism for capital expenditure.

8.4 Conclusion

The AER's final decision removes the rolling carryover mechanism for capital expenditure. Therefore, the AER does not approve clause 4.28(a) of the revised access arrangement proposal because a preferable alternative exists that complies with the NGL and the NGR.[260]

8.5 Revisions

The AER proposes the following revision:

Revision 8.1: delete from clause 4.28(a) of the revised access arrangement proposal all references to clauses 4.6–4.11 in the revised access arrangement proposal.

Revision 8.2: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revision 8.1.

257 ActewAGL, *Revised access arrangement information*, January 2010, pp. 126–127.

258 ActewAGL, *Revised access arrangement information*, January 2010, pp. 71–76.

259 ActewAGL, *Revised access arrangement information*, January 2010, pp. 126–127; ActewAGL, *Revised access arrangement proposal*, January 2010, p. 24.

260 NGR, r. 99 and r. 40(3).

9 Operating expenditure

9.1 Introduction

This chapter considers ActewAGL's proposed operating expenditure set out in the revised access arrangement proposal.[261]

The AER's analysis and consideration of the access arrangement proposal for forecast operating expenditure is contained in chapter 9 of the draft decision.[262]

The draft decision sets out four amendments in relation to operating expenditure.[263] The AER notes that ActewAGL does not incorporate the draft decision amendments in full.[264] Amendment 9.1 sets out the AER's operating expenditure forecasts. Amendment 9.2 requires ActewAGL to apply these forecasts throughout the access arrangement proposal.[265] ActewAGL does not accept amendments 9.3 and 9.4 which require ActewAGL to create, maintain and keep a 'statement of costs' in order to obtain detailed information on the costs incurred from Jemena Asset Management Pty Ltd (JAM) in the access arrangement period.[266] This chapter considers these issues.

9.2 Revised access arrangement proposal

9.2.1 Forecast operating expenditure

The revised access arrangement proposal forecasts operating expenditure of $136.6 million ($2009–10) over the access arrangement period.[267] This is an increase of $28.4 million ($2009–10) or 26.2 per cent[268] from the draft decision. This increase includes $22.1 million[269] or 20.4 per cent for a new security of supply project and operating expenditure for ancillary services.[270]

The revised access arrangement proposal includes additional operating expenditure for self insurance, step changes and unaccounted for gas (UAG) than that allowed for in the draft decision.[271] It also applies different real cost escalators for application to its operating expenditure than those required in the draft decision.[272] The revised

261 ActewAGL, *Revised access arrangement information*, January 2010, p. 59.

262 AER, *Draft decision*, November 2009, pp. 90–126.

263 AER, *Draft decision*, November 2009, pp. 124–126.

264 ActewAGL, *Revised access arrangement information*, January 2010, pp. 47–66.

265 AER, *Draft decision*, November 2009, p. 125.

266 ActewAGL, *Revised access arrangement information*, January 2010, pp. 64, 65; AER, *Draft decision*, November 2009, pp. 125–126.

267 ActewAGL, *Revised access arrangement information*, January 2010, p. 66.

268 ActewAGL, *Revised access arrangement information*, January 2010, p. 66; AER, *Draft decision*, November 2009, p. 125.

269 This figure includes $21.9 million under the category APA security of supply and $0.2 million ($50 000 per annum) under the category operating and maintenance expenditure as described on page 52 of the revised access arrangement information.

270 ActewAGL, *Revised access arrangement information*, January 2010, p. 59.

271 ActewAGL, *Revised access arrangement information*, January 2010, pp. 47–53, 58, 60–64.

272 ActewAGL, *Revised access arrangement information*, January 2010, pp. 53–56.

forecast operating expenditure for the access arrangement period is set out in Table 9.1.

Table 9.1: Revised forecast operating expenditure ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Controllable costs						
Operating and maintenance	9.5	11.3	11.6	10.4	10.8	53.6
APA security of supply	0.0	5.5	5.5	5.5	5.5	21.9
Corporate overheads	3.3	3.3	3.4	3.5	3.6	17.0
Non-system asset charge	0.5	0.5	0.5	0.5	0.5	2.6
Marketing	1.3	1.3	1.4	1.4	1.4	6.8
Other controllable costs	0.2	0.2	0.2	1.0	0.8	2.6
Sub total	14.8	22.2	22.6	22.3	22.5	104.4
Non-controllable costs						
Government levies	0.7	0.7	0.7	0.7	0.7	3.2
Utilities Network Facilities Tax	3.4	3.4	3.5	3.5	3.6	17.4
Contestability costs	0.6	0.6	0.6	0.6	0.6	2.9
Unaccounted for gas	0.7	0.7	0.7	0.7	0.7	3.6
Ancillary services	0.2	0.2	0.2	0.2	0.2	0.8
Other costs	0.3	0.3	0.3	0.3	0.3	1.3
Debt raising costs	0.2	0.2	0.2	0.2	0.2	0.9
Self insurance costs	0.4	0.4	0.4	0.4	0.4	2.0
Sub total	6.3	6.4	6.4	6.5	6.6	32.2
Total operating expenditure	21.1	28.6	29.0	28.8	29.1	136.6

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 66.

9.3 AER's analysis and considerations

The AER notes that ActewAGL does not incorporate the draft decision amendments in full.[273] The AER's analysis and considerations of these issues are set out below.

273 AER, *Draft decision*, November 2009, pp. 124–126; ActewAGL, *Revised access arrangement information*, January 2010, pp. 47–66.

9.3.1 Step changes

9.3.1.1 APA security of supply ('the compressor project')

As outlined in chapter 3, the access arrangement proposal outlines the need for new capital expenditure (the Hoskinstown to Fyshwick Loop (HFL) project) to provide security of supply of gas to ActewAGL's gas network. The draft decision does not approve the proposed capital expenditure for the HFL project.[274] To address the concerns set out in the draft decision, the revised access arrangement proposal proposes a different project—the installation of a compressor on the Dalton to Watson lateral (part of the Moomba to Sydney Pipeline (MSP)) (the compressor project)—to commence in 2011–12. The revised access arrangement proposal includes additional operating expenditure associated with the compressor project.[275]

Under the proposed contract for the compressor project, the revised access arrangement proposal outlines that ActewAGL will pay the APA Group (APA) utilisation and maintenance fees which are equivalent to the forecast capital cost of the compressor of $32.0 million. ActewAGL estimates the utilisation and maintenance fee as $4.9 million ($2009–10) per annum. An additional fee of $0.6 million ($2009–10) per annum will also be payable to APA for the operation and maintenance of the compressor from 2011–12. As a result, the total operating and maintenance costs for the compressor project comprise a step change of $5.5 million ($2009–10) per annum over a 15 year period commencing in 2011–12.[276]

Also, in conjunction with the compressor project, ActewAGL submits that it will incur additional maintenance costs related to the extended Watson primary regulating station (PRS) and water bath heater (WBH). As a result it proposes a step change increase of $50 000 per annum commencing in 2011–12 to be included in its operating and maintenance costs.[277]

Summary

As discussed in chapter 3, the AER considers that ActewAGL has not adequately demonstrated the need for the compressor project. As a result the AER considers that the proposed step change for the compressor project does not meet the operating expenditure criteria set out in r. 91 of the NGR.

The AER does not approve ActewAGL's revised forecast operating expenditure for the compressor project as it does not comply with r. 91 of the NGR.

9.3.1.2 Technical regulation

As discussed in the draft decision, a report by the AER's consultant, Wilson Cook (the Wilson Cook report), concludes that the need for technical regulation appears to be well established and that the approach taken by ActewAGL is sound.[278] However, in the draft decision the AER considers that the proposed daily rate used to estimate

274 AER, *Draft decision*, November 2009, p. 36.

275 ActewAGL, *Revised access arrangement information*, January 2010, p. 52.

276 ActewAGL, *Revised access arrangement information*, January 2010, p. 52.

277 ActewAGL, *Revised access arrangement information*, January 2010, pp. 52–53.

278 AER, *Draft decision*, November 2009, p. 96.

its technical regulation compliance costs is too high and substitutes a lower daily rate.[279] This conclusion is based on consideration in the Wilson Cook report[280] which is that the proposed unit rate is too high if it relates mainly to field staff or technical staff on lower salary levels and a confidential daily rate observed by the AER for similar safety management workshops.[281]

ActewAGL submits that its original forecast operating expenditure for compliance with technical regulations is reasonable and appropriate and it does not accept the draft decision requirement to adjust the daily unit rate. It has not amended its forecast operating expenditure as required by the draft decision in this respect.[282]

To support its proposed daily rate, ActewAGL notes that there is often more professional than technical personnel attending these technical regulation meetings and provides information on the type of personnel contributing to safety management studies.[283] It also identifies the factors as to why the proposed daily rate of $1138 ($2009–10) is higher than the average daily rate of $922 ($2009–10) for this personnel.[284] These factors are:

- external engineers with expertise in safety management studies will be used to assist in validation and quality assurance. ActewAGL submits that the typical daily rate for these engineers is at least $2200 per day and as a result the average daily rate is expected to increase by approximately $200 per day. ActewAGL also notes that as there is more professional than technical personnel attending these technical regulation meetings, the 50 per cent Enterprise Bargaining Agreement (EBA) to 50 per cent non-EBA input cost split as originally proposed was conservative.

- there is considerable potential for the time required to undertake two safety management studies (i.e. 65 hours) to be underestimated. This is because the 65 hours assumes 25 hours of preparation for the two workshops. In practice, this preparation is likely to be as high as 25 hours for each workshop.[285]

ActewAGL also notes the AER's use of a confidential reference in the draft decision to support the argument that the proposed daily rate is higher than that observed by the AER for similar management workshops.[286] ActewAGL submits that as the source of this information is confidential, there is no basis for testing whether or not it is valid or representative of the requirements of ActewAGL. ActewAGL further submits that the lack of opportunity to make an informed response contravenes the principles of due process and natural justice.[287]

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279 AER, *Draft decision*, November 2009, p. 97.

280 Wilson Cook Report, 29 October 2009, p. 17.

281 AER, *Draft decision*, November 2009, pp. 96–97.

282 ActewAGL, *Revised access arrangement information*, January 2010, p. 50.

283 ActewAGL, *Revised access arrangement information*, January 2010, pp. 48–49.

284 ActewAGL, *Revised access arrangement information*, January 2010, p. 49.

285 ActewAGL, *Revised access arrangement information*, January 2010, p. 49.

286 ActewAGL, *Revised access arrangement information*, January 2010, pp. 49, 50.

287 ActewAGL, *Revised access arrangement information*, January 2010, p. 50.

Summary

The AER assessed ActewAGL's additional information and analysis on technical regulation provided in the revised access arrangement proposal[288] in response to the draft decision. The AER approves that in the context of the further information provided in the revised access arrangement proposal, especially the details about the nature of the personnel that attend the technical regulation meetings (or workshops) and taking into consideration the preparation time for these workshops, the daily rates do not appear unreasonable. The AER also notes that the concern raised by Wilson Cook about the daily rate being high for field staff or technical staff has been addressed by ActewAGL, as it has stated that professional staff will be required.[289] The AER notes in the draft decision that the proposed daily rate is significantly higher than an alternative rate observed, for what appeared to be a similar activity.[290] However, the AER considers that ActewAGL has adequately substantiated its proposed cost and therefore the alternative lower rate is not directly comparable to the resources that ActewAGL is proposing to use.

The AER approves ActewAGL's revised forecast operating expenditure for technical regulation as it complies with r. 74 and r. 91 of the NGR.

9.3.1.3 Information Technology application costs

ActewAGL submits that in addressing the AER's concerns set out in the draft decision relating to the IT application cost escalator, it has specified an additional step change relating to software licence maintenance that was previously factored in through the proposed IT escalator. It further submits that an investment in licensing is necessary in 2010–11 due to a change in the licensing requirements of ActewAGL's financial information management system.[291] This change in the licensing requirements is due to:

- increased capacity requirements for the technology platforms on which the application runs
- increased use of software development within the financial information management system.[292]

ActewAGL submits that this step change increase related to IT application costs is $11 000 per annum from 2010–11. It further submits that it has taken this cost increase out of the IT application cost escalator and included it as a step change in its forecast operating expenditure for corporate overheads.[293]

Summary

The AER considers that the step change related to IT application costs appears to be a valid cost and is the result of an external cost pressure that is to a large degree beyond

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288 ActewAGL, *Revised access arrangement information*, January 2010, pp. 48–50.

289 ActewAGL, *Revised access arrangement information*, January 2010, pp. 48–49.

290 AER, *Draft decision*, November 2009, p. 97.

291 ActewAGL, *Revised access arrangement information*, January 2010, p. 52.

292 ActewAGL, *Revised access arrangement information*, January 2010, p. 52.

293 ActewAGL, *Revised access arrangement information*, January 2010, p. 52.

the control of ActewAGL. The AER considers that on this basis, the proposed step change meets the step change criteria as developed by Wilson Cook in the context of its report on Jemena's proposed access arrangement.[294]

The AER considers that ActewAGL's proposed step change in its forecast operating expenditure which is related to IT application costs has been arrived at on a reasonable basis and represents the best forecast or estimate possible in the circumstances as required by r. 74(2) of the NGR.

The AER approves the revised forecast operating expenditure for information technology application costs as it complies with r. 74 and r. 91 of the NGR.

9.3.1.4 Cost escalators

In relation to forecast operating expenditure, ActewAGL proposes cost escalators for labour and IT application costs in the revised access arrangement proposal.[295] The proposed labour escalators are also relevant to forecast capital expenditure. For the reasons discussed in chapter 3 of the final decision, the AER approves the proposed labour cost escalators.

IT application cost escalator

The revised access arrangement proposal identifies a substantial increase in its IT application costs that was previously accounted for within its proposed IT application cost escalator. As previously discussed ActewAGL proposes an additional step change that relates to this increase in IT application costs. Consequently, the revised access arrangement proposal proposes a reduced IT application cost escalator.[296] ActewAGL also provides itemised recent actual and forecast IT application costs that form the basis of the proposed escalator.[297]

The AER has reviewed the information provided by ActewAGL and met with representatives ActewAGL's IT staff. The AER notes that there are factors that are specific to ActewAGL's circumstances that increase the operating expenditure during the access arrangement period, including its size[298] and legacy issues from when it was owned by the ACT Government.[299]

Summary

The proposed IT application cost escalator has been estimated on the basis of recent actual costs, known future costs and expected costs payable to each of ActewAGL's IT application providers. On balance, the AER considers that the proposed IT application cost escalator has been adequately substantiated by ActewAGL and

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294 Wilson Cook, *Review of expenditure of ACT and NSW gas distributors, Jemena Gas Networks (NSW) Ltd*, December 2009, p. 30.

295 ActewAGL, *Revised access arrangement information*, January 2010, pp. 53–56.

296 ActewAGL, *Revised access arrangement information*, January 2010, p. 55.

297 ActewAGL, *Revised access arrangement information*, January 2010, attachment E.3 (confidential).

298 The AER understands that ActewAGL is not always able to have its IT hardware requirements tailored to its needs and this can result in higher IT application costs.

299 The AER understands that ActewAGL has historically been able to access concessional rates which are gradually being unwound.

arrived at on a reasonable basis. The AER also considers that it represents the best estimate possible in the circumstances.

The AER approves ActewAGL's revised labour and information technology application cost escalators as they comply with r. 74 and r. 91 of the NGR.

9.3.1.5 Unaccounted for gas

In the draft decision the AER does not approve ActewAGL's proposed forecast level of UAG of 1.8 per cent and instead proposes a level of 1.5 per cent.[300] The AER comes to this decision based on:

- the Wilson Cook report's conclusion that 1.8 per cent is not a fair representation of ActewAGL's actual UAG levels observed in recent years and instead recommends 1.7 per cent[301]
- a further reduction of 0.2 per cent for WBH consumption. In making this reduction the AER notes that since April 2008, ActewAGL has made adjustments to its UAG for WBH consumption and that ActewAGL is consequently expecting a reduction of 0.2 per cent in its UAG level.[302]

The revised access arrangement proposal applies a UAG level of 1.7 per cent. It also applies an average price of $5.27/GJ ($2009–10). However, ActewAGL does not accept the further reduction in the UAG level for WBH consumption, which it submits has already been taken into account when estimating its proposed level of UAG. ActewAGL further submits that the effect of WBH consumption on UAG is effectively double counted in the draft decision.[303]

In response to a request from the AER, ActewAGL has provided further information which demonstrates that the effect of WBHs is taken into account when it estimates the level of UAG.[304]

Summary

The AER considers that ActewAGL has substantiated that the level of UAG used to derive its forecast UAG expenditure takes into account the effect of WBHs. As a consequence, the AER considers that ActewAGL's revised level of UAG (i.e. 1.7 per cent) has been arrived at on a reasonable basis and represents the best forecast or estimate possible in the circumstances, as required by r. 74(2) of the NGR.

The AER approves ActewAGL's revised forecast operating expenditure for UAG expenditure as it complies with r. 91 of the NGR.

300 AER, *Draft decision*, November 2009, p. 118.

301 AER, *Draft decision*, November 2009, p. 118.

302 AER, *Draft decision*, November 2009, p. 118.

303 ActewAGL, *Revised access arrangement information*, January 2010, p. 58.

304 ActewAGL, email to the AER, 19 February 2010, pp. 1–2.

9.3.1.6 Ancillary services

In the draft decision the AER considers that ancillary services are reference services. As a consequence, a proportion of total revenue allocated to reference services was allocated to ancillary services based on forecast demand for those services.[305]

ActewAGL in its revised access arrangement proposal includes operating expenditure for ancillary services of $0.8 million over the access arrangement period in its forecast operating expenditure. It further submits that it has used the same forecast of costs for ancillary services that were submitted to the AER before the draft decision as part of tariff setting considerations.[306]

In response to a request from the AER, ActewAGL has provided further information on its ancillary service costs including a breakdown of these costs, the actual and estimated costs incurred in the earlier access arrangement period and a discussion of recent trends of these costs.[307] In this response ActewAGL submits that the bulk of its ancillary services' costs are attributed to costs associated with special meter readings. ActewAGL submits that there was a significant increase above trend in the actual volume of special meter reads in 2008–09 which continues through to 2009–10. It further submits that this increase is due to the implementation of system changes but that these issues are being addressed and the volume of special meter reads is assumed to return to trend levels in the access arrangement period.[308]

Summary

ActewAGL has accepted the draft decision to reclassify ancillary services as reference services and includes the operating costs associated with these services in the total revenue.

The AER notes that while ActewAGL did not include the total revenue for the pipeline services in the access arrangement proposal as required under r. 76 of the NGR, the AER considers that it is appropriate for ActewAGL to recoup the relevant costs for delivering pipeline services, including ancillary services.

The AER considers that ActewAGL has substantiated the forecast operating expenditure for ancillary services which increases in line with expected demand and actual costs incurred in the earlier access arrangement period (excluding the affects of system changes discussed above).

The AER approves the revised forecast operating expenditure for ancillary services as it complies with r. 91 of the NGR.

9.3.1.7 Self insurance

The draft decision does not approve the self insurance operating expenditure proposed by ActewAGL on the grounds that they do not meet the criteria of r. 91 of the

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305 AER, *Draft decision*, November 2009, p. 156.

306 ActewAGL, *Revised access arrangement information*, January 2010, p. 59.

307 ActewAGL, email to the AER, 24 February 2010, pp. 1–2.

308 ActewAGL, email to the AER, 24 February 2010, p. 2.

NGR.[309] The revised access arrangement proposal responds to the draft decision in a confidential appendix.[310]

The revised access arrangement proposal outlines that:

- given the irregularity of events, the self insurance premiums proposed cannot be based on actual annualised or historical costs, and therefore premiums estimated in a report prepared by Marsh Pty Limited[311] (the Marsh report) accurately quantify the risks faced by ActewAGL

- it is not economically feasible to reduce the proposed risks to zero, nor does ActewAGL consider that a zero premium would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice. In association with the Marsh report ActewAGL states that it has adequately quantified risk associated with self insurance events

- the efficacy of a cost pass through is limited to the extent that it might discourage a service provider from taking cost effective action to mitigate a risk for which it bears no consequence. [312]

The revised access arrangement proposal includes self insurance premiums to the value of $403 500 per annum.[313]

The AER considers that self insurance may be appropriate in certain circumstances. However, the AER is not satisfied that the proposed self insurance is consistent with the requirements of r. 91 of the NGR. The AER provides a detailed response to each of the proposed self insurance events in the revised access arrangement proposal in appendix B.

In the draft decision, the AER outlines several concerns about the proposed self insurance operating expenditure. These include among other things:

- the lack of clarity about the definition of each proposed self insurance event

- whether the risk being self insured is a business risk of ActewAGL's

- the basis on which the estimated self insurance cost for each proposed event is derived.[314]

The revised access arrangement proposal provides additional information to address some of these issues. The revised access arrangement proposal outlines that the Marsh

309 AER, *Draft decision*, November 2009, appendix C (confidential).

310 ActewAGL, *Revised access arrangement information*, January 2010, attachment D, Self insurance (confidential).

311 ActewAGL, *Access arrangement information*, June 2009, attachment D, Marsh, *ActewAGL Self insurance risk quantification, final report*, 29 June 2009 (confidential).

312 ActewAGL, *Revised access arrangement information*, January 2010, p. 62.

313 ActewAGL, *Revised access arrangement information*, January 2010, p. 63.

314 AER, *Draft decision*, November 2009, appendix C, pp. 227-243 (confidential).

report adequately quantifies the risks associated with the proposed self insurance events. However, even after further inquiries the AER still has concerns that the forecast operating expenditure for some of the proposed events is not adequately substantiated and does not comply with r. 91 of the NGR.

In the draft decision, the AER considers that for certain events responsibility is shifted from ActewAGL to either JAM or another third party and is not a relevant business risk for ActewAGL. ActewAGL has not provided any further supporting information in the revised access arrangement proposal to show that this is not the case, and as such the AER does not approve certain events on this basis.

In some cases, the AER also considers that the cost pass through mechanism is the best way in which to mitigate the forecasting risk associated with these events while also providing ActewAGL with an ability to recover its efficient costs.

ActewAGL has submitted that it is inappropriate to manage these risks with a pass through mechanism on the basis that it removes ActewAGL's incentive to mitigate its risk.[315] The AER considers that a prudently risk averse service provider would seek to mitigate risk by making reasonable efforts to avoid an additional regulatory process, that is, a cost pass though assessment, where recovery of costs is not guaranteed.

The AER notes that approved cost pass through expenditure must be consistent with the relevant building block criteria in the NGR. For example, if the cost pass through relates to operating expenditure, the cost pass through amount must be consistent with the expenditure that would be incurred by a prudent service provider acting efficiently as required by r. 91 of the NGR.[316] For these reasons, the AER considers that ActewAGL's incentive to mitigate risk is not removed by the presence of a cost pass through mechanism.

Reporting requirements

The AER considers that Australian Accounting Standards are the relevant benchmark for industry best practice with respect to reporting and administration. The AER notes that self insurance events are similar in nature to contingent liabilities. Contingent liabilities are defined under Australian Accounting Standards Board (AASB) 137:[317]

> …a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity

The standard defines contingent liabilities as liabilities that are not recognised as they are either a possible obligation which is yet to be confirmed or a present obligation which cannot be reliably estimated or is not probable.[318]

Under AASB 137, self insurance events cannot be a recognised as a provision because there is no present obligation, no probable outflow of resources and no reliable

315 ActewAGL, *Revised access arrangement information*, January 2010, p. 62.

316 Refer to chapter 13 of this final decision for further discussion of cost pass through arrangements.

317 AASB 137, *Provisions, contingent liabilities and contingent assets*, paragraph 10.

318 AASB 137, *Provisions, contingent liabilities and contingent assets*, paragraph 13(b).

estimate of the amount of the obligation.[319] However for contingent liabilities the standard does require that certain disclosures are made in the financial accounts of the business.

In the absence of any other administrative arrangements, the AER considers a prudent service provider should disclose self insurance events each regulatory year and provide a brief description of the nature of the self insurance event in accordance with AASB 137 in its regulatory and audited financial accounts. AASB 137 requires the business, where practical, to also disclose an estimate of the financial effect of the liability, an indication of the uncertainties relating to the amount or timing of the outflow, and the possibility of any reimbursement.

When a self insurance risk manifests, the AER considers a prudent service provider will have in place appropriate reporting procedures to inform the AER that an event has occurred. This report would necessarily provide an estimate of the cost of the event that is supported by independent audit information and verification about how these costs are segregated from regulated revenue.

The AER agrees with the access arrangement proposal in that when a self insurance event approved by the AER occurs during the access arrangement period, the AER should be notified as part of ActewAGL's annual compliance reporting.[320] The AER considers that any notification during the annual compliance process also needs to outline the following information for each event:

- the nature of the event
- the total cost of the event, separately identifying:
    - costs that are provided for by external funding such as through insurance or where the cost is paid for by third parties
    - costs that are covered by self insurance
    - costs to be passed through
    - other costs, for example which do not relate to the regulated assets
- independently verifiable information to justify the estimated total cost of the event and funding components of the total cost used to cover the loss.

Summary

For the reasons discussed above and outlined in appendix B, after consideration of the revised access arrangement proposal, the AER considers that self insurance is appropriate for one event at a reduced amount. The AER has also outlined the reporting requirements for this self insurance event should it occur during the access arrangement period.

319 AASB 137, *Provisions, contingent liabilities and contingent assets*, paragraph 14.

320 ActewAGL, *Access arrangement information*, June 2009, p. 207.

The AER does not approve the revised forecast operating expenditure for self insurance as it does not comply with r. 91 of the NGR. Instead the AER approves an operating expenditure for self insurance of $1,000 per annum which complies with r. 91 of the NGR.

9.3.1.8 Statement of costs

Amendment 9.3 of the draft decision requires ActewAGL to amend its access arrangement to include a new clause which details the requirements for a 'statement of costs'.[321] This proposed new section of the access arrangement requires ActewAGL to create, maintain and keep records of specific fees and costs for each financial year of the access arrangement period in a form indicated by a new attachment titled 'statement of costs' which is required to be added to the access arrangement by amendment 9.4.[322] The specific fees and costs that ActewAGL is required to report on include fees payable by ActewAGL to JAM in relation to field and asset management services and ActewAGL's controllable and non-controllable costs. ActewAGL is required to provide the AER with this information as part of the proposed revisions to ActewAGL's access arrangement for the next access arrangement period.[323]

The revised access arrangement proposal outlines that an access arrangement should not be used as a means for the regulator to impose obligations to perform actions that are not relevant to the purpose of the access arrangement in setting out the terms and conditions of access to reference services.[324] ActewAGL notes that chapter 2 of the NGL provides the AER with broad and effective information gathering powers and also includes a framework that provides for the measured and reasonable application of these powers.[325]

ActewAGL further submits that it considers that there are practical difficulties in the implementation of the required amendments. It submits that these difficulties arise from the indicative status of the 'statement of costs' and the nature of the obligation being placed on ActewAGL to collate this information.[326] ActewAGL submits that it has serious concerns about the scope and intent of the information required and as to whether it can provide information to the level of detail indicated. As a result ActewAGL submits that it would be uncertain whether it is complying, or even can comply with its requirements with respect to the proposed 'statement of costs' amendment 9.4.[327]

ActewAGL accepts in principle the requirement to maintain a 'statement of costs' but seeks consultation with the AER on the precise form of the information template. It

321 AER, *Draft decision*, November 2009, p. 125.

322 AER, *Draft decision*, November 2009, p. 126.

323 AER, *Draft decision*, November 2009, pp. 125–126.

324 ActewAGL, *Revised access arrangement information*, January 2010, p. 64.

325 ActewAGL, *Revised access arrangement information*, January 2010, p. 64.

326 ActewAGL, *Revised access arrangement information*, January 2010, pp. 64–65.

327 ActewAGL, *Revised access arrangement information*, January 2010, p. 65.

proposes a negotiating framework commencing after the final decision in response to the draft decision amendment.[328]

As outlined in the draft decision, the statement of costs outlines important information that is required to understand the nature of costs incurred and to provide sufficient details about the quantum of operating expenditure over the access arrangement period.[329] Unlike other service providers ActewAGL outsources the majority of its day to day operation of the network and all of the capital expenditure programmes to a third party, JAM. As ActewAGL does not undertake this work directly, these costs are incurred through ActewAGL's contract with JAM. ActewAGL pays JAM a fee for these services.[330] Of particular concern is that: (i) JAM is a related party; and (ii) the contract between ActewAGL and JAM has not been subject to a competitive tender process.[331]

Given these two issues, the AER needs a means to assess whether the contract fee paid to JAM reflects an efficient cost for the services provided under the contract. Only the fee and not the underlying costs that make up that fee have been provided to the AER in the context of this review.[332] As a consequence, the AER considers more detailed cost information is required. As the AER also outlines in the draft decision, benchmarking or top-down analyses are not sufficient to assess whether these costs meet the requirements of r. 91 of the NGR.[333]

The AER agrees that the proposed 'statement of costs' can be collected under the AER's information powers. As outlined above and in the draft decision, the AER considers that it is important that specific information related to ActewAGL's costs be kept and maintained and then provided to the AER as part of the access arrangement proposal for the next access arrangement period.

In order to achieve this outcome, the AER may use its information gathering powers under the NGL to specifically request ActewAGL to keep, maintain and provide the required information to the AER. If ActewAGL cannot provide the level of detail required under an information notice, the AER may consider alternative means to obtain this information from JAM directly. Prior to serving a regulatory information notice, the AER would consult with ActewAGL about the type and form of information required. This will ensure that the AER considers ActewAGL's business needs and that the information sought achieves the AER's requirement for additional and more detailed cost information about the underlying operating expenditure contained in the Distribution Asset Management Services (DAMS) agreement with JAM.

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328 ActewAGL, *Revised access arrangement information*, January 2010, p. 65.

329 AER, *Draft decision*, November 2009, pp. 110–111.

330 ActewAGL, *Access arrangement information*, June 2009, pp. 23–27.

331 AER, *Draft decision*, November 2009, pp. 109–110.

332 AER, *Draft decision*, November 2009, p. 108.

333 AER, *Draft decision*, November 2009, p. 108.

Summary

In view of ActewAGL's position that the NGL provides an alternative means of collecting the statement of costs data, the AER considers that the proposed amendments 9.3 and 9.4 in the draft decision are no longer required and the final decision replaces these amendments with a general requirement to maintain information about costs over the access arrangement period. The AER will specify the relevant cost in any regulatory information notice served to ActewAGL. Further, the AER does not approve the negotiating framework proposed by ActewAGL in clause 4.26 of its revised access arrangement proposal. The AER considers that the NGL adequately sets out consultation procedures to be followed when applying the information gathering powers. Accordingly, the AER requires ActewAGL to modify clause 4.26 of the revised access arrangement proposal.

9.3.2 Conclusion

The AER does not consider that the forecast operating expenditure revised by ActewAGL complies with r. 91 of the NGR and accordingly the AER proposes to make revisions to:

- remove ActewAGL's proposed APA security of supply step changes of $5.5 million per annum for payments to APA and $50 000 per annum from the operating and maintenance costs category for additional costs related to the extended Watson PRS and WBH
- remove the forecast operating expenditure for self insurance except an amount for public liability risk
- modify clause 4.26 titled 'statement of costs' in the revised access arrangement proposal.

9.4 Revisions

The AER proposes the following revisions:

Revision 9.1: delete Tables 5.4, 5.5, 5.6 and 5.8 in the revised access arrangement information and replace them with the following:

Table 9.2: ActewAGL's forecast operating expenditure ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Controllable costs						
Operating and maintenance	9.5	11.3	11.6	10.4	10.7	53.4
Corporate overheads	3.2	3.3	3.4	3.5	3.5	17.0
Non-system asset charge	0.5	0.5	0.5	0.5	0.5	2.6
Marketing	1.3	1.3	1.4	1.4	1.4	6.8
Other controllable costs	0.2	0.2	0.2	1.0	0.8	2.5
Total controllable costs	14.8	16.7	17.1	16.8	17.0	82.3
Other allowable costs						
Government levies	0.7	0.7	0.7	0.7	0.7	3.2
Utilities Network Facilities Tax	3.4	3.4	3.5	3.5	3.6	17.4
Contestability costs	0.6	0.6	0.6	0.6	0.6	2.9
Unaccounted for gas	0.7	0.7	0.7	0.7	0.7	3.6
Ancillary services	0.2	0.2	0.2	0.2	0.2	0.8
Other costs	0.3	0.3	0.3	0.3	0.3	1.3
Total other operating expenditure	5.7	5.8	5.8	5.9	6.0	29.2
Self insurance costs	0.0	0.0	0.0	0.0	0.0	0.0
Debt raising costs	0.2	0.2	0.2	0.2	0.2	0.9
Total operating expenditure	20.7	22.6	23.1	22.9	23.2	112.4

Revision 9.2: delete clause 4.26 titled 'Statement of costs' in the revised access arrangement proposal and replace it with the following:

> 4.26 For each 12 month period ending on 30 June during the Access Arrangement Period, ActewAGL must maintain records for:

(a) JAM fees—any fees payable by ActewAGL to Jemena Asset Management Pty Ltd (JAM) in relation to field and asset management services provided under their distribution asset management services agreement (or any other replacement asset management services agreement);

(b) ActewAGL controllable costs—costs which can be controlled or varied by ActewAGL. For example, without limitation, direct materials or direct labour costs can be varied by management through making different managerial decisions; and

(c) ActewAGL non-controllable costs—costs that ActewAGL cannot control or vary. For example, without limitation, government levies and taxes.

ActewAGL must provide a breakdown of these fees and costs to the Relevant Regulator as part of its proposed revisions to this Access Arrangement under clause 1.16 of this Access Arrangement.

Revision 9.3: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of revisions 9.1–9.2.

10 Total revenue

10.1 Introduction

This chapter sets out the estimation of total revenue for each year of the access arrangement period.

This chapter also sets out indicative X factors to ActewAGL's reference tariffs.

10.2 Revised access arrangement proposal

The revised access arrangement proposal does not make amendments 10.1 and 10.2 of the draft decision and, instead, proposes the total revenue for each year of the access arrangement period and X factors as set out in Table 10.1.

Table 10.1: Revised total revenue and X factors ($m, nominal, unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	30.8	34.4	37.1	38.1	39.0
Depreciation	2.6	4.0	4.6	5.3	5.6
Operating and maintenance	21.6	30.0	31.3	31.8	32.9
Corporate income taxation	1.1	1.4	1.5	1.6	1.6
Incentive mechanism payments	na	na	na	na	na
Total	54.4	61.9	70.6	80.8	92.8
X factor tariff revenue (%) [a b]	–10.9	–10.9	–10.9	–10.9	–10.9

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 71.
na: Not applicable.
a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factors are indicative only.

10.3 AER's analysis and considerations

Part A of the final decision sets out the AER's consideration of the building blocks of total revenue including the return on projected capital bases, depreciation, taxation, incentive mechanism and operating expenditure proposed by ActewAGL.

10.3.1 ActewAGL's proposed P0 adjustment and X factors

The P0 adjustment indicates the increase in the total revenue in the first year of the access arrangement period, while the X factors indicate subsequent movements in revenue over the access arrangement period.

10.3.2 Total revenue, P0 adjustment and X factors

The AER estimates total revenue, P0 adjustment and X factors based on its decisions regarding the building block components discussed in the chapters in Part A of the final decision. These estimations are summarised in Table 10.2.

The AER's final decision results in a total revenue requirement over the access arrangement period of $278.7 million ($2009–10), compared to $329.8 million ($2009–10) proposed by ActewAGL. This reflects the fact that the AER:

- does not approve the operating expenditure for the installation of a compressor on the Dalton to Watson lateral (part of the Moomba to Sydney Pipeline (MSP)) (the compressor project)
- does not approve the weighted average cost of capital (WACC).

Table 10.2: Final decision on total revenue and X factors ($m, nominal, unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	27.0	29.5	31.8	32.6	33.4
Depreciation	2.5	3.6	4.2	4.8	5.1
Operating and maintenance	21.2	23.8	24.9	25.3	26.2
Corporate income taxation	0.8	1.0	1.1	1.2	1.2
Incentive mechanism payments	0.0	0.0	0.0	0.0	0.0
Total	51.5	57.8	61.9	63.9	65.9
X factor tariff revenue [a] (%)	-4.96	-4.96	-4.96	-4.96	-4.96
Smoothed revenue path	51.4	55.2	59.8	65.0	70.7

Source: Table 10.2 is based on information found in chapters 4, 5, 6, 7 and 8 of the final decision.
na: Not applicable.
a: The X factors in the Table above are indicative only. Negative values for X indicate real increases.

10.4 Conclusion

The AER does not approve the revised total revenue figures for each regulatory year of the access arrangement period as these do not comply with r. 76 of the NGR.

10.5 Revisions

The AER proposes the following revisions:

Revision 10.1: delete Table 6.7 in the revised access arrangement information and replace it with the following:

Table 10.3: Calculation of revenue allowance the reference tariff ($m, nominal unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Regulatory depreciation	2.5	3.6	4.2	4.8	5.1
Return on capital	27.0	29.5	31.8	32.6	33.4
Tax allowance	0.8	1.0	1.1	1.2	1.2
Operating expenditure	21.2	23.8	24.9	25.3	26.2
Incentive mechanism payments (decrements)	0.0	0.0	0.0	0.0	0.0
Unsmoothed revenue requirement	51.5	57.8	61.9	63.9	65.9
Energy forecasts (TJ)	6545.0	6525.2	6565.5	6641.6	6736.0
Revenue yield (tariff/TJ)	7547.4	8121.7	8739.8	9404.8	10120.4
Smoothed revenue requirement	51.4	55.2	59.8	65.0	70.7
of which tariff revenue	49.4	53.0	57.4	62.5	68.2
of which contract revenue	2.0	2.3	2.4	2.5	2.6
X factor tariff revenue (%)	na	na	na	na	na

na: Not applicable.

Revision 10.2: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revision 10.1.

Part B—Tariffs

11 Demand forecasts

11.1 Introduction

This chapter outlines the demand forecasts and the AER's analysis and considerations as to whether they reflect a reasonable estimate of growth in demand over the access arrangement period.

The AER's analysis and consideration of the access arrangement proposal relating to demand forecasts are located in chapter 11 of the draft decision.[334]

11.2 Revised access arrangement proposal

ActewAGL's demand forecasts are set out at Tables 11.1, 11.2 and 11.3. The revised access arrangement information proposal does not propose any changes to the demand forecasts set out in the access arrangement proposal.[335]

334 AER, *Draft decision*, November 2009, pp. 133–142.

335 ActewAGL *Revised access arrangement information*, January 2010, p. 11.

Table 11.1: Total annual actual and forecast load and customer numbers

	2004–05 [a]	2005–06 [a]	2006–07 [a]	2007–08 [a]	2008–09 [b]	2009–10 [b]	2010–11 [b]	2011–12 [b]	2012–13 [b]	2013–14 [b]	2014–15 [b]
Tariff customers (no.)	98 657	101 460	104 495	109 791	112 765	116 123	119 711	123 429	127 030	130 284	133 420
Tariff load (TJ)	6050	6584	5889	6370	6654	6514	6545	6525	6565	6642	6736
Contract customers (no.)	36	38	37	38	40	41	41	41	41	41	42
Contract load (TJ)	1018	1082	1038	1020	1100	1149	1166	1171	1179	1192	1210
Total load (TJ)	7068	7666	6927	7390	7754	7663	7711	7696	7744	7834	7946

Source: ActewAGL, *Access arrangement information*, June 2009, pp. 75, 79, 91, 92.
a: Actual.
b: Forecast.

Table 11.2: Forecast average, maximum and minimum daily demand

	2004–05 [a]	2005–06 [a]	2006–07 [a]	2007–08 [a]	2008–09	2009–10	2010–11 [b]	2011–12 [b]	2012–13 b	2013–14 [b]	2014–15 [b]
Minimum (TJ/day)	2.9	1.9	4	3.8	c	c	d	d	d	d	d
Maximum (TJ/day)	58	69	67	63	c	c	68.6	68.3	68.6	69.3	70.1
Average (TJ/day/annum)	20	20	19	20	c	c	21.1	21	21.1	21.3	21.5

Source: ActewAGL, *Access arrangement information*, June 2009, pp. 77, 91.
a: Actual.
b: Forecast.
c: Actual not available.

d: Minimum forecasts not provided.

Table 11.3: Contract MDQ

	2004–05 [a]	2005–06 [a]	2006–07 [a]	2007–08 [a]	2008–09 [b]	2009–10 [b]	2010–11 [b]	2011–12 [b]	2012–13 [b]	2013–14 [b]	2014–15 [b]
System total (GJ)	6221	6086	6245	6116	6384	6596	6677	6693	6721	6764	6827

Source: ActewAGL, *Access arrangement information*, June 2009, pp. 76, 91.
a: Actual.
b: Forecast.
MDQ: Maximum daily quantity.

11.3 AER's analysis and considerations

On the basis of a report from ACIL Tasman and the AER's own analysis contained in the draft decision the AER concludes that the proposed demand forecasts are arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances in accordance with r. 74(2) of the NGR.[336] The revised access arrangement proposal accepts the draft decision.

11.4 Conclusion

The AER approves the revised demand forecasts as these comply with r. 74 of the NGR.

336 AER, *Draft decision*, November 2009, p. 142.

12 Reference tariffs

12.1 Introduction

This chapter sets out the AER's consideration of issues that arise from the revised access arrangement proposal in relation to tariffs.

The AER's analysis and consideration of the access arrangement proposal in relation to the allocation of costs and tariff setting is set out at chapter 12 of the draft decision.

12.2 Tariffs

12.2.1 Revised access arrangement proposal

The revised access arrangement proposal groups customers into two tariff classes: tariff customers and contract customers. ActewAGL submits that it has taken into consideration transaction costs when determining these tariff classes, particularly the costs of metering.[337]

Table 12.1 shows the proposed expected revenue for the tariff and contract customer classes is between avoidable costs and stand alone costs.

Table 12.1: Revised avoidable and stand alone cost ($m, nominal)

	Avoidable cost	Expected revenue	Stand-alone cost
Tariff	23.97	54	55.23
Contract	1.35	2.6	32.61

Source: ActewAGL, *Revised access arrangement information*, January 2010, p. 177.

The revised access arrangement proposal provides estimates of the indicative long run marginal costs for different customers. [338]

ActewAGL submits that it takes into account long run marginal cost, transaction cost and price responsiveness when determining reference tariffs.[339]

12.2.2 AER's analysis and considerations

The AER considers that the revised access arrangement proposal satisfies r. 94(1) of the NGR, which requires customers for reference services to be divided into tariff classes.[340] The AER considers that the tariff classes have been constituted with regard to grouping customers for reference services together on an economically efficient basis and the need to avoid unnecessary transaction costs.[341] As no customers are forecast to take up non–reference services, costs for these services have not been

337 ActewAGL, *Revised access arrangement information*, January 2010, p. 173.

338 ActewAGL, *Revised access arrangement information*, January 2010, p. 178.

339 ActewAGL, *Revised access arrangement information*, January 2010, pp. 178–179.

340 ActewAGL, *Revised access arrangement information*, January 2010, p. 173.

341 NGR, r. 94(2).

estimated and allocated to non–reference services. Therefore, the requirement to demonstrate the allocation between reference and non-reference services set out in r. 93 of the NGR does not apply.

The AER considers that the revised access arrangement proposal complies with r. 94(3) of the NGR as it demonstrates that the expected revenue for each tariff class is between stand alone and avoidable costs.[342]

The revised access arrangement proposal demonstrates that each charging parameter has taken into consideration the long run marginal costs (LRMC).[343] Further, ActewAGL demonstrates that transaction costs and customers' responses to price signals are taken into consideration when setting the charging parameter for each tariff class.[344]

12.2.3 Conclusion

The AER approves the methodology for allocating costs and setting reference tariffs as they comply with r. 93 and r. 94 of the NGR.

12.3 Other matters

12.3.1 Revised access arrangement proposal

The revised access arrangement proposal states that the corollary of the reference tariff policy principles for the previous access arrangement is the revenue and pricing principles set out in section 24 of the NGL. As a consequence ActewAGL has not accepted amendment 12.1 to clause 4.1 of the revised access arrangement proposal. This is because the AER's amendment to clause 4.1 of the revised access arrangement proposal refers to r. 94 of the NGR not s. 24 of the NGL, and that is not the intent of clause 4.1 of the revised access arrangement proposal which sets out how revenue is estimated.[345]

ActewAGL accepts that it is appropriate to refer to the reference tariff variation mechanism in clauses 4.1 to 4.4 of the revised access arrangement proposal.[346]

The revised access arrangement proposal proposes additional words are added to clause 4.2 of the revised access arrangement proposal that total revenue may vary during the access arrangement period as reference tariffs are varied.[347]

The revised access arrangement proposal accepts in principle the amendment to clause 4.4 to refer to r. 94 of the NGR as the basis for the allocation of revenue to

342 ActewAGL, *Revised access arrangement information*, January 2010, p. 177.

343 NGR, r. 94(4)(a).

344 ActewAGL, *Revised access arrangement information*, January 2010, pp. 178–179; ActewAGL, *Revised access arrangement proposal*, January 2010, pp. 61–97; NGR, r. 94(4)(b).

345 ActewAGL, *Revised access arrangement information*, January 2010, pp. 121–122.

346 ActewAGL, *Revised access arrangement information*, January 2010, p. 122.

347 ActewAGL, *Revised regulatory proposal*, January 2010, section 4.2.

market segments. ActewAGL has slightly amended the AER's drafting of this clause to better reflect r. 94 of the NGR.[348]

12.3.2 AER's analysis and considerations

Clause 4.1 of the revised access arrangement proposal states that total revenue has been determined in accordance with the revenue and pricing principles. However, except for the incentive mechanism which must be consistent with the revenue and pricing principles, the NGR does not expressly state that the revenue and pricing principles in s. 24 of the NGL are to be applied when determining total revenue.[349] The AER considers that clause 4.1 of the revised access arrangement proposal should be revised to clarify this.

The AER notes that ActewAGL's proposed amendment to clause 4.2 demonstrates the effect of the tariff variation mechanism on total revenue. Further, the proposed amendment to clause 4.4 more closely reflects the language in the NGR.

12.3.3 Conclusion

The AER does not approve clause 4.1 of the revised access arrangement proposal as it is not consistent with the national gas objective.[350] The AER approves clauses 4.2 and 4.4 of the revised access arrangement proposal, as these comply with r. 94 of the NGR.

12.3.4 Revision

The AER proposes the following revisions:

Revision 12.1: delete clause 4.1 of the revised access arrangement proposal and replace it with the following:

> Where required under the National Gas Law and National Gas Rules, the building block components used to determine total revenue have been derived in accordance with the revenue and pricing principles set out in subsections 24(2)–(7) of the National Gas Law.

Revision 12.2: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revision 12.1.

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348 ActewAGL, *Revised access arrangement information*, January 2010, pp. 121–122.

349 NGR, r. 76 and r. 98(3).

350 NGR, r. 100.

13 Tariff variation mechanism

13.1 Introduction

This chapter sets out the AER's consideration of issues that arise from the revised access arrangement proposal in relation to the revised tariff variation mechanisms.

The AER's analysis and consideration of the access arrangement proposal in relation to the tariff variation mechanism is set out at chapter 13 of the draft decision.

The AER notes that the revised access arrangement proposal incorporates in full amendments 13.1, 13.2, 13.5, and 13.7–13.9 of the draft decision. ActewAGL also makes consequential amendments to the access arrangement proposal to reflect amendment 13.2 of the draft decision.[351]

13.2 Annual tariff variation formula mechanism

13.2.1 Equalisation of revenue

13.2.1.1 Revised access arrangement proposal

ActewAGL demonstrates that for capacity reservation service customers, tariff service customers and meter data services that the net present value of the proposed revenue is equal to the net present value of the revenue requirement.[352]

13.2.1.2 AER's analysis and considerations

The purpose of the annual tariff variation mechanism over the access arrangement period is to equalise in present value terms the forecast revenue from reference services and the portion of total revenue allocated to reference services.[353]

The AER considers that the methodology for equalising revenue in the revised access arrangement proposal complies with r. 92(2) of the NGR. However, the final decision revises the proposed total revenue and as a consequence the expected revenue also changes. For this reason, revision 13.1 reflects the changes to forecast total revenue[354] arising from the AER's final decision to ensure total revenue and expected revenue are equal in present value terms over the access arrangement period. The changes to total revenue are outlined in Part A of the final decision.

13.2.1.3 Conclusion

The AER does not approve the revised reference tariffs in attachment 3 of the revised access arrangement proposal as they do not comply with r. 92(2) of the NGR.

13.2.1.4 Revision

The AER proposes the following revision:

351 ActewAGL, *Revised access arrangement information*, January 2010, pp. 7–8.

352 ActewAGL, *Revised access arrangement information*, January 2010, pp. 180–182.

353 NGR, r. 92(2).

354 NGR, r. 76.

Revision 13.1: amend the revised access arrangement proposal to:

- delete the Tables in clause 1.40 in attachment 3A and clause 1.20 in attachment 3B and replace them with the following:

Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
256.08	256.09	256.09	256.09	256.09

- delete the Tables in clause 1.44 in attachment 3A and clause 1.24 in attachment 3B and replace them with the following:

Annual Quantity Block Structure	Relevant Capped Rate $/GJ Equivalent (GST exclusive real 2010–2011 dollars)
First 20 TJ p.a.	3.10
Next 30 TJ p.a.	2.70
All Additional	2.30

- delete the Tables in clause 1.48 in attachment 3A, clause 1.28 in attachment 3B and clause 1.19 in attachment 3C and replace them with the following:

Meter Set Type Typical/Alternative Meter Provision of Basic Metering Equipment Charge in $ per annum expressed in GST exclusive real 2010–2011 dollars	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2012	Year Ending 30 June 2015
Single Run & Bypass					
Toyo MT5, Email 602, Email 610	63	63	63	63	63
Toyo MT10, Email 1010, Email 750	127	127	127	127	127
AL-425	951	951	951	951	951
AL-1000, AL-1400, Romet RM30	1,990	1,990	1,990	1,990	1,990
AL-2300, Romet Rm55, Romet RM85, Roots 3M, Instomet G65	2,762	2,762	2,762	2,762	2,762

Romet Rm140, AL-5000, roots 5M, Instromet G100	3,318	3,318	3,318	3,318	3,318
Roots 7m, Rockwell TPL9, Instromet G160	5,095	5,095	5,095	5,095	5,095
Roots 16M, Roots 11M, Instromet G250	6,090	6,090	6,090	6,090	6,090
Singer 4GT, Rockwell AT-18, Instromet G400	7,236	7,236	7,236	7,236	7,236
Singer 6GT, Rockwell AT-30	10,418	10,418	10,418	10,418	10,418
Rockwell AT-60	12,279	12,279	12,279	12,279	12,279
Single Run & Shunt or Double Run (different Meters) – requiring special charges					
Rockwell AT-30 + AL 1400	11,890	11,890	11,890	11,890	11,890

- delete the Table in clause 1.18 in attachment 3C and replace it with the following:

Year Ending 30 June 2011	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
3.753	3.753	3.753	3.753	3.753

- delete the Table in clause 1.14 in attachment 3E and replace it with the following:

Year Ending 30 June 2011	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
47.45	47.45	47.45	47.45	47.45

- delete the Tables in clause 1.15 in attachment 3E and replace them with the following:

Throughput Charge for Tariff Service ($/GJ) in GST exclusive real 2010–2011 dollars

Block Size (GJ per Mth)	**Block Size (GJ Per Qtr)**	**Year Ending 30 June 2011**	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
First 1.25	First 3.75	7.45	8.24	8.50	8.50	8.50

Next 82.25	Next 246.75	5.90	6.52	6.72	6.72	6.72
Next 333.5	Next 1000.5	5.37	5.94	6.13	6.13	6.13
All additional	All additional	3.77	4.18	4.31	4.31	4.31

Provision of Basic Metering Equipment Charge in GST exclusive real 2010–2011 dollars

Meter Provision Charges	**Year Ending 30 June 2011**	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
For meters with Capacity less than or equal to 6m3/hr ($p.a.)	26.30	27.83	27.83	27.83	27.83
For meters with a Capacity of greater than 6m3/hr ($/GJ)	0.2171	0.2297	0.2297	0.2297	0.2297

- delete the Table in clause 1.17 in attachment 3E and replace it with the following:

Meter Provision Charges	**Year Ending 30 June 2011**	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
For monthly bills	2.90	3.20	3.30	3.30	3.30
For quarterly bills	8.60	9.50	9.80	9.80	9.80

- delete the Table in clause 1.20 in attachment 3F and replace it with the following:

Provision of On-Site Data and Communication Equipment Charge ($ p.a.) in GST exclusive real 2010–2011 dollars

	Year Ending 30 June 2011	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
Charge per Delivery Station (includes the first 2 meters at a Delivery Station)	1585	1585	1585	1585	1585
Charge for each additional 1 or 2 meters at a Delivery Station	376	376	376	376	376

- delete the Tables in clause 1.21 in attachment 3F and replace them with the following:

Provision of Meter Reading Charge for Tariff Delivery Points ($ p.a.) in GST exclusive real 2010–2011 dollars

Meter Reading Cycle	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
Quarterly	4.54	4.85	4.85	4.85	4.85
Monthly	43.30	46.20	46.20	46.20	46.20

Provision of Meter Reading Charge for Non-Tariff Delivery Points ($ p.a.) in GST exclusive real 2010–2011 dollars

	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
Charge per Delivery Station (includes the first 2 meters at a Delivery Station)	687	687	687	687	687
Charge for each additional 1 or 2 meters at a Delivery Station	163	163	163	163	163

- delete the Table in clause 1.19 in attachment 3I and replace it with the following:

Ancillary Services Charges in GST exclusive real 2010–2011 dollars	
Request for service	$64.50 plus $64.50 per hour after the first hour
Special meter read	$48.40
Reconnection fee	$91.40
Disconnection fee	$123.70

13.2.2 Minor technical specification matters

13.2.2.1 Revised access arrangement proposal

The revised access arrangement proposal does not accept the specification of the annual tariff variation formula in the draft decision.

The revised access arrangement proposal does not accept the subscripts for the numerator for the CPI adjustment or the definition of ‘t’ in the annual tariff variation formula.[355] Instead, ActewAGL proposes a CPI formula that is similar to the CPI formula in the access arrangement proposal and provides an example of how the formula should work.[356]Further, ActewAGL provides an example of what the CPI inputs will be when determining 2011–2012 tariffs to assist users to understand how the annual tariff variation formula will work.[357]

13.2.2.2 AER’s analysis and considerations

The CPI adjustment is used to adjust reference tariffs annually for CPI changes.[358] The draft decision does not approve ActewAGL’s specification of the CPI adjustment and as outlined above ActewAGL revises the specification of the CPI adjustment in the annual tariff variation mechanism.[359]

The AER considers that the revised specification of the CPI adjustment including providing an example is appropriate.

13.2.2.3 Conclusion

The AER approves the revised CPI formula as it complies with r. 97(1) of the NGR.

13.3 Cost pass through tariff variation mechanism

13.3.1 Extending decision making time

13.3.1.1 Revised access arrangement proposal

The revised access arrangement proposal does not accept the draft decision which allows the AER to extend its decision making time for cost pass through applications to 90 business days.[360] ActewAGL submits that this requirement will result in higher administrative costs for users and potential users as the AER could make a decision on a cost pass through notification after 1 July resulting in more than one tariff change within a financial year. The revised access arrangement proposal extends the decision making time available to the AER from 30 business days to 45 business days for the annual tariff and cost pass through notifications.[361] However, the revised access arrangement proposal does not provide for an extension of the 45 business day period for consultation processes, as required in the draft decision.[362]

ActewAGL considers the requirement that reference tariffs change once a year for low materiality threshold events is inconsistent with the clause that allows the AER to extend its decision making time to 90 business days. ActewAGL considers the two

355 ActewAGL, *Revised access arrangement information*, January 2010, pp. 86–88.

356 ActewAGL, *Revised Access arrangement proposal*, January 2010, p. 28; ActewAGL, *Access arrangement proposal*, June 2009, p. 29.

357 ActewAGL, *Revised Access arrangement proposal*, January 2010, section 6.4.

358 ActewAGL, *Revised Access arrangement proposal*, January 2010, pp. 61–97.

359 AER, *Draft decision*, November 2009, p. 158.

360 AER, *Draft decision*, November 2009, p. 170.

361 ActewAGL, *Revised access arrangement information*, January 2010, p. 97.

362 ActewAGL, *Revised access arrangement information*, January 2010, pp. 96–97.

clauses are inconsistent because if the decision making time is extended for a low materiality threshold event it is possible that the AER decision will be made after 1 July.[363]

13.3.1.2 AER's analysis and considerations

The draft decision allows for a minimum decision making time period of 30 business days, which can be extended by a period of up to a maximum of 90 business days. The extension of the decision making time was put in place to allow the AER to undertake public consultation and if required, for consideration by an expert consultant. The ability to extend the decision making time is to consider complex or significant issues that may arise in assessing or quantifying the effects of a pass through event. The AER's ability to extend the decision making time provides the AER with oversight or powers of approval when assessing complex or significant cost pass through applications.[364]

ActewAGL submits that the extension of decision making time may mean the cost of low administrative threshold events are not factored into tariffs in the year after they are incurred. However, the AER considers that the extension of decision making time is not intended to apply to low administrative cost pass through events. This is because the costs of these events have already been incurred and for which information or documentation is available to enable the AER to readily verify the efficient cost of these events.

The AER considers that ActewAGL raises an issue of timing which it can address in most cases by applying for approval of particularly more complex and significant cost pass through events at least 90 business days prior to 1 July of the relevant year (under clause 6.12 of the revised access arrangement proposal), so that the costs can be factored into tariff increases in the next regulatory year.

The draft decision outlines that, in order to reduce the administrative costs of assessing low administrative threshold events, the AER requires these type of events are assessed once a year at the same time as the annual tariff variations.[365]

The AER does not consider it is inconsistent to require that tariffs increase only once a year for low administrative threshold events and to provide for the ability to extend decision making time for more complex or significant events. As outlined, the AER does not consider that low threshold cost pass through events will require additional decision making time. This is because these events are low in value (less than one per cent of revenue) and will usually be verifiable through relevant documentation for example an invoice and thus can be processed efficiently. The draft decision outlines that the purpose of changing tariffs once a year is to reduce the administrative costs for the AER and users. This was a separate consideration to putting in place oversight procedures. The AER considers that there may be occasions when the minimum decision making time may need to be extended for low threshold events and the tariff changes cannot be effected as at 1 July after the regulatory year in which these costs

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363 ActewAGL, *Revised access arrangement information*, January 2010, pp. 106–107.

364 NGR, r. 97(4).

365 AER, *Draft decision*, November 2009, p. 165.

are incurred. In these circumstances, if ActewAGL submits an application for a cost pass through event and the AER approves the costs of this event, these costs can be effected through a change in tariffs in the next regulatory year, subject to any requirements of the NGR.[366] However, as these costs relate to low administrative threshold events there should be minimal financial impact if these costs are included in the tariffs in later years. The AER also considers that if there is any doubt about the completeness or sufficiency of information or documentation to verify these low threshold events, the AER suggests that ActewAGL consults with the AER before it submits its annual tariff variation notification.

As outlined in revision 13.3, the AER considers that low administrative cost events can only pass through incurred costs and not expected costs. Further, low administrative cost pass through costs need to be substantiated with an audit statement or an invoice.

13.3.1.3 Conclusion

The AER does not approve the revised access arrangement proposal which seeks to prevent the AER from extending its decision making time for costs pass through notifications as it is not consistent with r. 97(4) of the NGR.

13.3.1.4 Revision

The AER proposes the following revision:

Revision 13.2: amend the revised access arrangement proposal to:

- delete clause 6.17 and replace it with the following:

> The Relevant Regulator must notify ActewAGL of its decision under clause 6.16 within 45 Business Days of receiving the notification. This period may be extended for the time taken by the Relevant Regulator to obtain information from ActewAGL, obtain expert advice or consult about the notification. However, the Relevant Regulator must assess a cost pass through application within 90 Business Days, including any extension of the decision making time.

- delete clause 6.18 and replace it with the following:

> If ActewAGL has not received notification from the Relevant Regulator of its decision within 45 Business Days (excluding any extension of time outlined in 6.17) of receiving a notification under clause 6.10 or 6.12, the Reference Tariffs will be automatically varied in accordance with the relevant notification given by ActewAGL.

13.3.2 Unascertainable, incurred and forecast costs

13.3.2.1 Revised access arrangement proposal

The revised access arrangement proposal includes a clause for unascertainable costs to be considered for a cost pass through event.[367] An unascertainable cost is uncertain

366 Costs that are incurred in the 2010–2015 access arrangement period can not be recovered in next access arrangement period.

367 ActewAGL, *Revised access arrangement proposal*, January 2010, clause 6.15.

at the time of the submission of the notification. The revised access arrangement proposal also includes a clause that allows ActewAGL to adjust the unascertainable costs (at some stage after the notification is submitted) once the actual costs of an event are known.[368]

The revised access arrangement proposal includes incurred and forecast costs for cost pass through events.[369]

13.3.2.2 AER's analysis and considerations

In order to address the revised access arrangement proposal about unascertainable costs and the proposed adjustment mechanism for such costs, the AER considers low administrative cost impact events (specified uncontrollable cost event or a change in tax event) and high administrative cost impact events separately.

In relation to low administrative cost impact events, ActewAGL submits that these events relate to costs that have been incurred and can be substantiated with an invoice or an audit statement.[370] By definition, the AER does not consider that the costs for low threshold events should be unascertainable as the costs are incurred and therefore are known with certainty at the time the cost pass through notification is made. Therefore the AER does not approve that unascertainable costs relate to low administrative threshold events.

For high administrative cost impact events where the net cost[371] for an event may be incurred, estimated or forecasted. Reasonable forecasts or estimates of the costs of the event are required at the time that the cost pass through notification is submitted to the AER. Given the time limits placed on the decision making time and process outlined in the final decision, in order to effectively review a cost pass through event, the notification needs to be complete on submission to the AER and contain costs that are the best estimates or forecasts arrived at on a reasonable basis.[372]

The AER considers that the adjustment of unascertainable costs for actual costs [373] after the notification is submitted to the AER will increase the administrative costs of ActewAGL, users, potential users and the AER.[374] The revised access arrangement proposal effectively means that the AER may be required to assess a cost pass through application for the same event more than once.

368 ActewAGL, *Revised access arrangement information*, January 2010, p. 102.

369 ActewAGL, *Revised access arrangement information*, January 2010, p. 101.

370 ActewAGL, *Revised access arrangement proposal*, January 2010, clause 6.25(a)(ii).

371 As the cost of an event needs to be net of recoveries or money received in relation to the event, any recoveries or compensation will also need to be able to be reasonably forecast or estimated at the time the cost pass through notification is submitted to the AER.

372 NGR, r. 74(2).

373 ActewAGL, *Revised access arrangement information*, January 2010, p. 102.

374 NGR, r. 97(3)(b).

Thus, the AER does not agree with ActewAGL that the difference in unascertainable and actual costs for cost pass through events can be recovered at a later time, once the actual costs can be properly verified or forecast.[375]

Revision 13.3 removes unascertainable costs from consideration as part of a cost pass through event and the requirement to adjust these costs for actual costs.

13.3.2.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR and for the reasons outlined above does not approve the inclusion of unascertainable costs and consequential adjustments as part of the cost pass through mechanism as it does not comply with r. 97(3) and r. 97(4) of the NGR.

13.3.2.4 Revision

The AER proposes the following revisions:

Revision 13.3: amend the access arrangement proposal to:

- delete clauses 6.14(d) and 6.14(e) and replace them with the following:

  (d) the incurred and/or forecast Change in Cost of the relevant Cost Pass Through Event on ActewAGL and the basis on which this has been calculated. A Specified Uncontrollable Cost Event or a Change in Tax Event must only specify the incurred Change in Cost;

  (e) whether the Cost Pass-Through Event has, or is expected to have, an Administrative Cost Impact, which must be substantiated to the Relevant Regulator's reasonable satisfaction;

- delete clause 6.15
- delete clause 6.16(b) and replace it with the following:

  (b) whether the Cost Pass-Through Event has, or is expected to have, an Administrative Cost Impact;

- delete the first sentence in clause 6.24 and replace it with the following:

  The Reference Tariff may be varied if there is, or there is expected to be, an Administrative Cost Impact on the cost of providing Reference Services as a result of one of the cost pass-through events listed below, where that cost was not incorporated in the determination of Reference Tariffs at the Commencement Date of this Access Arrangement or, if there has been a previous review of the Reference Tariffs, at that review.

13.3.3 Administrative cost impact

13.3.3.1 Revised access arrangement proposal

The revised access arrangement proposal outlines that notifications for cost pass through events made at the same time as the annual tariff variation process impose

375 ActewAGL, *Revised access arrangement proposal*, January 2010, clause 6.15.

lower administrative costs on the AER compared to notifications for pass through events made at other times of the year. As a consequence, ActewAGL proposes two different materiality thresholds for cost pass through events (note this is not relevant to low administrative threshold events):[376]

- for cost pass through event claims made as part of the annual tariff variation cycle—the change in costs arising from the pass through event must exceed 0.5 per cent of the revenue approved in the year the cost are first incurred[377]

- for cost pass through event claims made outside of the annual tariff variation cycle—the change in costs arising from the pass through event to exceed one per cent of the revenue approved in the year the costs are first incurred.[378]

13.3.3.2 AER's analysis and considerations

In the draft decision the AER requires that all costs pass through events other than low materiality threshold events are subject to a materiality threshold of at least one per cent of revenue, regardless of when the pass through notification is submitted to the AER.[379] The revised access arrangement proposal outlines that a cost pass through event assessed at the same time as the annual tariff variation process should have a lower materiality threshold compared to costs pass through events that are assessed outside the annual tariff variation cycle.[380]

The AER considers that the administrative cost of assessing pass through claims made at the same time as the annual tariff variation process is lower compared to pass through claims made outside the annual tariff variation process. The draft decision made provision to account for this in proposing a low administrative threshold event for which efficient costs for certain events could be readily verified and would lower the administrative costs for ActewAGL and the AER. While the AER agrees that some administration costs may be lower if a high materiality event is processed at the same time as the annual tariff variation, the AER does not consider that the administrative costs are halved as outlined by ActewAGL.[381] Further it considers that its administrative costs and those of users and prospective users are not only a function of when an event is considered but also its complexity or impact.[382] The AER considers a materiality threshold of one per cent of revenue for some cost pass through events is appropriate for the reasons outlined in its draft decision.[383] The AER also revises the definition of materiality for the higher administrative cost events so that it is consistent with the definition for materiality that applies to cost pass through

376 ActewAGL, *Revised access arrangement information*, January 2010, pp. 115–116.

377 ActewAGL, *Revised access arrangement information*, January 2010, pp. 115–116.

378 ActewAGL, *Revised access arrangement information*, January 2010, pp. 115–116.

379 AER, *Draft decision*, November 2009, p. 172.

380 ActewAGL, *Revised access arrangement information*, January 2010, p. 116.

381 ActewAGL, *Revised access arrangement proposal*, January 2010, section 6.25.

382 NGR, r. 97(3)(b).

383 AER, *Draft decision*, November 2009, pp. 162–163; NGR, r. 97(3)(e).

events in ActewAGL's electricity determination. The AER considers that it is desirable to maintain this consistency across similar cost pass through mechanisms.[384]

As outlined in revision 13.4 the AER considers that cost pass events other than low materiality threshold events should be subject to the same materiality threshold.

13.3.3.3 Conclusion

The AER has had regard the factors in r. 97(3) of the NGR and does not approve the definition of administrative costs threshold, for the reasons outlined above, as it does not comply with r. 97(3) of the NGR.

13.3.3.4 Revision

The AER proposes the following revision:

Revision 13.4: delete clause 6.25(b) in the revised access arrangement proposal and replace it with the following:

> (b) in the case of a notification under clause 6.10 and 6.12 other than a notification relating to an event listed in paragraph (a) would exceed 1 per cent of the smoothed revenue requirement specified in the final decision in the years of the access arrangement period that the costs are incurred.

13.3.4 Cost pass through claims linked to a single event

13.3.4.1 Revised access arrangement proposal

The revised access arrangement proposal accepts that each individual cost pass through event should be separately subject to the relevant materiality threshold.[385] However, ActewAGL submits that if separate claims for a cost pass through event are made over time they should be grouped for the purposes of the materiality threshold for that event. Further, where the separate cost pass through events that make up the group are subject to different thresholds, the higher materiality threshold should apply to the combined costs of the events.[386]

13.3.4.2 AER's analysis and considerations

The draft decision outlines that each cost pass through event will be assessed separately. This means the AER does not approve that different cost pass through events can be linked and applications for different events can be grouped so that the costs for each separate event can when grouped meet the threshold; particularly when as separate events the events and their costs would not separately meet the threshold. In addition as outlined in section 13.3.2.2 of the final decision, the costs for a single event need to be considered together, after they are incurred or can be reasonably estimated or forecast. The AER notes that this is one advantage of a general pass through event compared to specifically defined events. In this case if a major event

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384 AER, *Final decision, Australian Capital Territory distribution determination 2009–10 to 2013–14*, April 2009, p. 137; NGR, r. 97(3)(e).

385 ActewAGL, *Revised access arrangement information*, January 2010, p. 117; AER, *Draft decision*, November 2009, p. 172.

386 ActewAGL, *Revised access arrangement information*, January 2010, p. 117.

were to occur within the access arrangement period, it would be captured by the general pass through event subject to one materiality threshold.

The AER has concerns about the staggering or staging of a cost pass through application as implied in the revised access arrangement proposal. The AER does not consider that an application which does not include all the relevant costs can be considered to be complete.

An incomplete application has implications for the decision making process particularly as the AER has a maximum of 90 business days to assess a cost pass through application. It also has implications for the AER's ability to assess the efficiency of the costs of the event, if the costs cannot be considered at the one time and as part of the same decision making process. In addition, the proposed staggering of cost claims for an event will increase the administrative costs for ActewAGL, as well as users and the AER.[387] Revision 13.5 amends the revised access arrangement proposal so each individual cost pass through event is subject to the relevant threshold.

13.3.4.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR and does not approve the grouping of costs for different cost pass through events so that together they meet the materiality threshold as it does not comply with r. 97(3) of the NGR and r. 97(4) of the NGR.

13.3.4.4 Revision

The AER proposes the following revision:

Revision 13.5: amend the revised access arrangement proposal to:

- delete clause 6.16(f) and replace it with the following:

  (f) each individual Cost Pass-Through Event must have, or is expected to have, an Administrative Cost Impact

- delete clause 6.16(g).

13.3.5 Verification statement

13.3.5.1 Revised access arrangement proposal

The revised access arrangement proposal outlines the uncertainty about what is required when providing a 'verification statement by an officer of the service provider' verifying that a pass through amount is net of any third party payments (as required in amendment 13.14 of the draft decision). ActewAGL notes that its entire cost pass through notification submitted to the AER under clause 6.14 of the revised access arrangement proposal is effectively a statement by an officer of the service

387 NGR, r. 97(3)(b).

provider. As a result, ActewAGL has removed the requirement for the verification statement to be provided by an officer of the service provider.[388]

13.3.5.2 AER's analysis and considerations

The draft decision requires ActewAGL to provide a verification statement by an officer of the service provider that the financial impacts of the cost pass through events is net of any third party payments including insurer payments or reimbursements in connection with the event.[389] The AER agrees that the entire costs pass through notification is effectively a statement by an officer of the service provider and does not require an additional verification statement by an officer of the service provider.

13.3.5.3 Conclusion

The AER approves the revised access arrangement proposal about the verification statement as it complies with r. 97(4) of the NGR.

13.3.6 Assessment of cost pass through notifications

13.3.6.1 Revised access arrangement proposal

The revised access arrangement proposal incorporates several factors the AER must take into account when assessing a cost pass through event required in the draft decision. However, in addition to these factors required by the draft decision, ActewAGL includes other factors.[390]

13.3.6.2 AER's analysis and considerations

While the AER does not have any concerns with the additional factors proposed in the revised access arrangement proposal, the AER has included a minor modification to the proposed factors. The minor modification includes wording that the additional factors are consistent with the NGL.[391] Revision 13.6 provides this wording for the additional factors.

13.3.6.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR and does not approve the additional factors the AER must consider when assessing a cost pass through event.[392]

13.3.6.4 Revision

The AER proposes the following revision:

Revision 13.6: amend the revised access arrangement proposal to:

- delete clause 6.20(c) and replace it with the following:

388 ActewAGL, *Revised access arrangement information*, January 2010, p. 101.

389 AER, *Draft decision*, November 2009, p. 173.

390 ActewAGL, *Revised access arrangement information*, January 2010, pp. 102–105.

391 NGR, r. 97(3)(e).

392 NGR, r. 97(3)(e)

(c) the time cost of money for the period over which the Cost Pass–Through Amount is to apply, to leave ActewAGL in an economically neutral position with respect to any delay in the recovery (or return) of a Cost Pass–Through Amount, consistent with the National Gas Law;

- delete clause 6.20(d) and replace it with the following:

(d) the relative amounts of Reference Services supplied to each User in determining the allocation of the Cost Pass–Through Amount to Reference Tariffs, consistent with the National Gas Law;

- delete clause 6.20(f) and replace it with the following:

(f) consistent with National Gas Law the financial effects on ActewAGL associated with the provision of Reference Services directly attributable to the Cost Pass–Through Event concerned, and the time at which the financial effect arises; and

13.3.7 Supply curtailment event

13.3.7.1 Revised access arrangement proposal

In the access arrangement proposal, ActewAGL does not propose a supply curtailment cost pass through event. Instead, ActewAGL seeks to address the costs of a supply curtailment event as a business interruption self insurance event. As the draft decision does not approve ActewAGL's self insurance operating expenditure for business interruption, the revised access arrangement proposal seeks a supply curtailment event to address this risk. ActewAGL proposes a supply curtailment cost pass through event to adjust tariffs for foregone revenue and costs associated with a supply curtailment event. ActewAGL submits the supply curtailment event is subject to a higher materiality threshold, preventing short term or local load shedding from being considered a pass through event.[393]

13.3.7.2 AER's analysis and considerations

The revised access arrangement proposal seeks a cost pass through event for a supply curtailment event because the draft decision did not approve a self insurance event for business interruption to manage the risk and costs of supply curtailment.

As outlined in the draft decision, the AER considers that it is appropriate for costs associated with market shortfall event to be covered by the proposed supply curtailment event in certain circumstances. In particular, the risk needs to be identified as a business risk of the service provider, the service provider incurs costs in relation to the event and the service provider is not otherwise compensated for this event. As the event relates to incurred costs, the AER considers that the proposed supply curtailment cost pass through event cannot relate to foregone revenue and needs to be net of monies recovered from third parties that may be responsible or required to pay for the event. If the supply curtailment event meets these conditions, (and other relevant criteria), the AER considers it is appropriate for such an event to be considered as a cost pass through event subject to a higher materiality threshold. The AER does not consider that the definition of the proposed curtailment cost pass

393 ActewAGL, *Revised access arrangement information*, January 2010, pp. 91–93.

through event is necessarily confined to costs incurred and needs to be modified to not relate to foregone revenue. [394] The AER refers to its conclusions in the NSW/ACT electricity determination (as cited by ActewAGL[395]) in which it stated that there is no provision to recover foregone revenue through a cost pass through mechanism under the NER. The AER considers this is also the case under the NGR and that the costs incurred for an event need to relate to a building block component of total revenue under the NGR. Revision 13.7 confines the definition of the supply curtailment event to incurred costs and, as with other cost pass through events, needs to be net of monies that may to be reimbursed or recovered from third parties.

13.3.7.3 Conclusion

The AER has had regard to factors in r. 97(3) of the NGR and approves the supply curtailment event as a cost pass through event as it complies with r. 97(3) of the NGR. However, the AER modifies the definition of costs for the event to exclude foregone revenue.

13.3.7.4 Revision

Refer to revision 13.7 in section 13.3.8.4.

13.3.8 Change in cost definition

13.3.8.1 Revised access arrangement proposal

The revised access arrangement proposal amends the definition of change in cost to clarify that the change in cost calculation relates to the net change in cost and to refer to the combined operating and capital expenditure associated with the event.[396]

13.3.8.2 AER’s analysis and considerations

The AER acknowledges that ActewAGL has amended the change in cost definition to address the AER’s amendment in the draft decision.[397] The AER has considered the revised access arrangement proposal and the access arrangement proposal. On review of the draft decision and the revised access arrangement proposal, the AER considers it not appropriate for the change in cost to relate to the net change in operating expenditure and capital expenditure. This is because the change in cost as defined by ActewAGL is inconsistent with the building blocks for total revenue. Under r. 76 of the NGR, the capital expenditure costs included in the total revenue building blocks are as a return on the projected capital base and depreciation. As a result, the impact of capital expenditure costs in any one year in these total revenue building blocks is much lower than the value of capital expenditure that may be incurred in that year. Also, the AER considers that the change in capital expenditure associated with a cost pass through event should relate to incremental revenue and depreciation (the costs included in the total revenue building blocks). This is consistent with ActewAGL’s submission that unlike capital expenditure, operating expenditure cannot be added back to allowable revenue at a later date once it is judged to be conforming capital

394 NGR, 97(3)(e).

395 ActewAGL, *Access arrangement information*, June 2009, p. 254.

396 ActewAGL, *Revised access arrangement information*, January 2010, p. 118.

397 AER, *Draft decision*, November 2009, p. 172.

expenditure.[398] In light of this, the AER considers that the definition of change in cost needs to be modified to clarify that the incremental capital expenditure that comprise the building block costs are the relevant costs for a cost pass through event. To this end, the AER revises the definition of change in cost to reflect the relevant capital expenditure costs are the return on and return of capital.

13.3.8.3 Conclusion

The AER does not approve the change in cost definition as it does not comply with r. 76 of the NGR.

13.3.8.4 Revision

The AER proposes the following revision:

Revision 13.7: amend clause 6.25 of the revised access arrangement proposal to delete the definition of 'change in cost' and replace it with the following:

> **Change in Cost** in relation to a Cost Pass-Through Event means the net decrease or increase in operating expenditure plus incremental revenue requirement arising as a result of change in capital expenditure, incurred as a result of the Cost Pass-Through Event for the remaining year of the Access Arrangement Period.

13.3.9 Recovering costs in the next access arrangement period

13.3.9.1 Revised access arrangement proposal

The revised access arrangement proposal amends the cost pass through variation mechanism to provide greater scope for the AER to approve the recovery of efficient costs arising from a cost pass through event over a number of yeas which can span into the next access arrangement period. Further, the revised access arrangement proposal allows ActewAGL to submit a reference tariff variation notification in the access arrangement period associated with an event occurring in the earlier access arrangement period.[399]

13.3.9.2 AER's analysis and considerations

Rule 92(2) of the NGR requires that in present value terms the forecast revenue from reference services and the portion of total revenue allocated to reference services must equal. The AER considers that adjusting tariffs in an access arrangement period for changes in costs that occur in a different access arrangement period is not consistent with r. 92(2) of the NGR. For instance, if an increase in costs associated with a cost pass through event is recovered with higher tariffs in the next access arrangement period, r. 92(2) is not satisfied for either access arrangement period. It is not satisfied in the access arrangement period in which the costs are incurred as the present value of the costs are higher than the present value of the revenue recovered from the tariffs. Further, it is not satisfied in the next access arrangement period as the present value of revenue recovered from tariffs is higher than the present value of costs. As required by revision 13.8, the AER considers that within an access arrangement period, tariffs

398 ActewAGL, *Revised access arrangement information*, January 2010, p. 108.

399 ActewAGL, *Revised access arrangement information*, January 2010, pp. 107–109.

can only be adjusted for costs pass through events that occur in that access arrangement period.

13.3.9.3 Conclusion

The AER does not approve the proposal to allow costs associated with a pass through event to be recovered from users over a number of access arrangement periods as this does not comply with r. 92(2) of the NGR.

13.3.9.4 Revision

The AER proposes the following revision:

Revision 13.8: amend the revised access arrangement proposal to:

- delete clause 6.14(i) and replace it with the following:

  > (i) the date from and period over which ActewAGL proposes to charge the Cost Pass-Through amount or change the Reference Tariff, which may occur over a number of financial years (not including financial years in the next Access Arrangement period)

- delete from clause 6.25 the last subclause (b) in the definition of 'General Pass–Through Event' and replace it with the following:

  > at the time the AER approves this Access Arrangement, despite the occurrence of the event being a possibility, there was no compelling reason to consider that the event was more likely to occur than not to occur during the access arrangement period.

- delete clause 6.20(e) and replace it with the following

  > (e) the manner in which and period over which the Cost Pass-Through Amount or change in Reference Tariffs is to apply within the Access Arrangement period consistent with the National Gas Rules.

- delete clause 6.13 and replace it with the following

  > ActewAGL may make an application under clause 6.10 or 6.12 in respect of a Cost Pass-Through occurring during the then current financial year, or having occurred in an earlier financial year, but not before 1 July 2010.

13.3.10 Other matters

13.3.10.1 Revised access arrangement proposal

In addition to the matters discussed above the revised access arrangement proposal outlines certain revisions including:

- Renaming the low administrative cost pass through event as a specified uncontrollable cost event.[400]

- Setting out the information to be provided for a low administrative cost event.[401]

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400 ActewAGL, *Revised access arrangement information*, January 2010, p. 113.

- Modifying the requirement to advise the AER within 90 business days if a cost pass through (other than a specified uncontrollable cost event or a change in tax event) event occurs and has a material impact.[402]

- Removing the word "materially" from the definition of a Service Standard event.[403]

- Including new clauses for the operation of the annual reference tariff adjustment formula mechanism.[404]

- Providing an administrative cost threshold for low administrative cost events.[405]

- Amending clause 6.23 of the revised access arrangement proposal to provide more clarity as to how the AER can initiate a reference tariff variation and specified ActewAGL's obligations under this clause.[406]

- Including a definition of a cost pass through amount and cost pass through event in the access arrangement.[407]

- Amending attachment 3 of the access arrangement to refer to reference tariffs more accurately.[408]

- Modifying amendment 13.14 of the draft decision to ActewAGL Distribution from service provider.[409]

13.3.10.2 AER's analysis and considerations and conclusions

The AER approves the amendments proposed by ActewAGL.

13.3.10.3 Revision

The AER proposes the following revision:

Revision 13.9: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 13.1 to 13.8.

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401 ActewAGL, *Revised access arrangement information*, January 2010, p. 102.

402 ActewAGL, *Revised access arrangement information*, January 2010, pp. 98–100.

403 ActewAGL, *Revised access arrangement information*, January 2010, p. 90.

404 ActewAGL, *Revised access arrangement information*, January 2010, p. 106.

405 ActewAGL, *Revised access arrangement information*, January 2010, pp. 114–115; AER, *Draft decision*, November 2009, p. 162.

406 ActewAGL, *Revised access arrangement information*, January 2010, p. 100.

407 ActewAGL, *Revised access arrangement information*, January 2010, p. 119.

408 ActewAGL, *Revised access arrangement information*, January 2010, p. 119.

409 ActewAGL, *Revised access arrangement information*, January 2010, p. 119.

Part C—Other provision of an access arrangement

14 Non–tariff components

14.1 Introduction

This chapter considers the non-tariff components of the revised access arrangement proposal. The NGR sets out the criteria for determining which pipeline services constitute reference services and the terms and conditions on which service providers are to grant third parties access to these services.

The AER's analysis and consideration of the access arrangement proposal in relation to the non-tariff components of the access arrangement proposal is set out in chapter 14 of the draft decision.

The AER notes that ActewAGL has incorporated in full all amendments set out in chapter 14 of the draft decision, except for amendments 14.6, 14.11–14.13 and 14.15–14.16. Amendment 14.6 relates to capacity trading requirements. Amendments 14.11–14.13 relates to extensions and expansions, amendments 14.15 relates to ancillary amendments required to the access arrangement information and amendment 14.16 relates to trigger events.

14.2 Capacity trading requirements

14.2.1 Revised access arrangement proposal

The revised access arrangement proposal revises amendment 14.6 of the draft decision to clarify that where the rules of an applicable gas market provide for the transfer of capacity, this will apply in preference to the operation of r. 105 of the NGR.[410]

14.2.2 AER's analysis and considerations

The AER approves clause 8.1 of the revised access arrangement proposal as this clarifies the application of r. 105 of the NGR.

14.2.3 Conclusion

The AER approves ActewAGL's revised capacity trading requirement as this meets the requirements of r. 105 of the NGR.

14.3 Extensions and expansions

14.3.1 Revised access arrangement proposal

Amendment 14.11 of the draft decision requires ActewAGL to apply to the AER for a decision whether a proposed high pressure extension will be taken to form a part of the covered pipeline. This applies to all high pressure extensions, including those approved under the access arrangement and included in reference tariffs and high pressure extensions to the network required for individual customer connections within high pressure precincts where no medium pressure mains exist. ActewAGL

410 ActewAGL, *Revised access arrangement information*, January 2010, pp. 134–136.

does not consider that requiring the AER's approval for coverage of these extensions is in the long term interest of users. It notes that it is subject to legislative obligations to connect customers to the network where relevant capital contributions are paid.[411]

ActewAGL further submits that high pressure extensions to new developments can be captured by limiting the requirement that ActewAGL advises the AER of those instances where ActewAGL proposes to extend its covered pipeline with a direct connection to a transmission pipeline that serves end-use customers outside the boundaries of the ACT and Queanbeyan or outside ActewAGL's existing market in Palerang.[412] ActewAGL submits that this addresses the AER's concerns that ActewAGL may extend its network into another market for which the access arrangement provisions including reference tariffs may not be appropriate.[413]

Amendment 14.12 of the draft decision concerns expansions. ActewAGL submits that there should be scope to apply to the AER for an extension or expansion of the network not to be part of the covered pipeline.[414]

Amendment 14.13 of the draft decision concerns the cost of extensions or expansions in the estimation of reference tariffs. ActewAGL proposes revised wording in clause 7.3 of the revised access arrangement proposal. This clarifies that the approval process for pipeline extensions and expansions only relates to extensions and expansions where the cost has not been included in the calculation of reference tariffs.[415]

ActewAGL has incorporated amendment 14.14 of the draft decision which requires ActewAGL to notify the AER of proposed surcharges of non-conforming capital expenditure or a specified portion of non-conforming capital expenditure.

Amendment 14.15 of the draft decision requires the amendment of the access arrangement information to reflect amendments 14.11–14.14. ActewAGL has only incorporated amendment 14.15 insofar as this applies to amendment 14.14 of the draft decision.

14.3.2 AER's analysis and considerations

This section addresses two elements: (i) the approval requirement; and (ii) the reporting requirement set out in the draft decision.

High pressure pipelines

The AER approves that high pressure extensions required for individual customers within high pressure precincts where no medium pressure mains exist, should be excluded from the general approval requirement attaching to high pressure extensions. However, the AER considers that the definition of high pressure pipeline extensions proposed by ActewAGL in the revised access arrangement proposal must clarify that

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411 ActewAGL, *Revised access arrangement information*, January 2010, pp. 128–129.

412 ActewAGL, *Revised access arrangement information*, January 2010, p. 129.

413 ActewAGL, *Revised access arrangement information*, January 2010, p. 129.

414 ActewAGL, *Revised access arrangement information*, January 2010, p. 130.

415 ActewAGL, *Revised access arrangement information*, January 2010, pp. 133–134.

in-fill pipeline extensions are not included and that the focus concerning high pressure pipelines is on new developments and existing developments that have not previously been serviced with reticulated gas. Clause 7.1 also needs to clarify that the anticipated extension in the Australian Capital Territory from Belconnen across the Molonglo Valley to Phillip does not represent a high pressure extension for the purposes of Part 7 of the access arrangement proposal.

The AER considers that it is important to distinguish between in-fill development within the geographic reach of the existing network on one hand and new developments serving new areas outside the existing geographic reach of the network and existing development previously not serviced with reticulated gas when deciding whether a pipeline extension is covered by default under the access arrangement. This is because in the case of new extensions to areas and customers without reticulated gas, pipelines are potentially extended to a new part of the market. This warrants consideration by the AER. New areas outside the current geographic reach of the network will be more likely serviced by high pressure pipelines. The AER accordingly considers that if a high pressure pipeline extension is planned, then an application should be made to the AER for a decision as to whether or not the extension is part of the covered pipeline. The use of 'high pressure' provides a means of generally distinguishing in-fill from new extensions to areas and customers.

The AER considers that distinguishing the treatment of high pressure pipelines has the benefit of promoting the efficient investment in and the efficient operation and use of natural gas services for the long term interests of consumers of natural gas in accordance with the national gas objective.[416]

The AER considers that a minor revision is required for the avoidance of doubt that the high pressure pipeline extensions being considered in clause 7.3 of the revised access arrangement refer to capital expenditure that has been previously approved by the AER (this may include capital expenditure approved under r. 80 of the NGR).[417]

The AER approves clause 7.4 of the revised access arrangement proposal that requires the AER to make a decision within 20 business days or to notify ActewAGL if the AER requires further consultation with ActewAGL before making a decision. However, the timeframe of 20 business days may not provide the AER with sufficient time to make a decision regarding the coverage of a proposed high pressure pipeline extension. For this reason clause 7.4 needs to be amended to allow for an extension of time as well as consultation with ActewAGL.

The AER approves clause 7.6 of the revised access arrangement proposal which allows ActewAGL to apply to the AER proposing that an extension or expansion of the network should not be covered by the access arrangement. While the AER considers that expansions will generally form a part of the covered pipeline, it considers that ActewAGL may wish to make an application exempting an extension or an expansion and the AER will review each application on its specific factors.

416 NGL, s. 23.

417 NGL, r. 80.

Reporting requirement

The AER notes ActewAGL's submission that the AER's reporting requirements are not reasonable and in the long term interests of consumers. ActewAGL also submits that it is difficult for it to comply with the reporting requirement given the nature of its market expansion forecast. ActewAGL uses a forecast of the number of new connections for its market expansion capital expenditure forecast. This is based on historical trends and anticipated new developments.[418]

ActewAGL submits in the revised access arrangement proposal that it is currently required to provide information annually to the ICRC including the total number of customers added and the total length of the network categorised as medium or high pressure pipelines.[419] The AER has considered the revised access arrangement proposal (clauses 7.8 and 7.9) and does not seek to increase the regulatory burden for ActewAGL in providing information to the AER. For this reason, the AER does not require clauses 7.8 and 7.9 to be included but requests that ActewAGL provide a copy of the information it provides to the ICRC at the same time that it submits that information to the ICRC. To the extent necessary, the AER may also seek to exercise its information gathering powers under the NGL to specifically request ActewAGL to keep, maintain and provide the necessary information.

14.3.3 Conclusion

The AER does not approve ActewAGL's revised extensions and expansions policy as a preferable alternative exists that complies with applicable requirements of the NGL and NGR and is consistent with applicable criteria prescribed by the NGL and NGR.[420]

14.3.4 Revision

The AER proposes the following revision:

Revision 14.1: amend the revised access arrangement proposal to:

- delete from clause 7.1 the words 'that serves end-use customers outside the boundaries of the ACT and Queanbeyan or outside ActewAGL's existing market in Palerang' and replace them with the following:

  > that provides reticulated gas to a new development or an existing development not serviced with reticulated gas.
  >
  > The anticipated extension in the Australian Capital Territory from Belconnen across the Molonglo Valley to Phillip does not represent a high pressure extension for the purposes of Part 7.

- include in clause 7.3 the following words after 'has already been included':

  > and approved by the Relevant Regulator

418 ActewAGL, *Revised access arrangement information*, January 2010, p. 132.

419 ActewAGL, *Revised access arrangement information*, January 2010, p. 133; ActewAGL, email to the AER, 1 March 2010.

420 NGR, r. 40(3).

- include in clause 7.4(b) the following words after 'whether the Relevant Regulator requires':

> an extension of time including to allow

- delete clauses 7.8 and 7.9.

Revision 14.2: amend the revised access arrangement information to reflect revision 14.1.

14.4 Acceleration of review submission date triggers

14.4.1 Revised access arrangement proposal

The revised access arrangement proposal does not accept the draft decision amendment 14.6 to include a trigger event in the access arrangement proposal.

14.4.2 AER's analysis and considerations

The revised access arrangement proposal outlines that:

- the impact of the National Energy Customer Framework (NECF): (i) can be adequately dealt with using other measures;[421] (ii) may be limited in the access arrangement period as explanatory materials released with the second exposure draft of the NECF note that it will be implemented through jurisdictional legislation according to jurisdictional timetables;[422] (iii) can be addressed through alternative provisions, such as the cost pass through tariff variation mechanism approved in the draft decision;[423] and (iv) can be addressed under r. 65 of the NGR which permits ActewAGL to apply for a variation of the access arrangement.[424]

- regarding the application of r. 51(2) of the NGR. [425] Rule 51(2) provides that 'a trigger event may consist of any significant circumstance or conjunction of circumstances'. ActewAGL submits that the reference in r. 51(2) of the NGR to 'significant circumstances or conjunction of circumstances' refers to external events and that a discretionary decision by the AER does not represent a 'circumstance or conjunction of circumstances'.[426]

The AER notes ActewAGL's submission that amendment 14.16 of the draft decision is not limited to circumstances that are significant. However, r. 51(2) of the NGR does not state that a trigger event needs to be limited to a significant circumstance or set of circumstances, only that a trigger 'may' consist of any significant circumstance or

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421 ActewAGL, *Revised access arrangement information*, January 2010, p. 137.

422 ActewAGL, *Revised access arrangement information*, January 2010, p. 139.

423 ActewAGL, *Revised access arrangement information*, January 2010, p. 140.

424 ActewAGL, *Revised access arrangement information*, January 2010, p. 140.

425 ActewAGL, *Revised access arrangement information*, January 2010, pp. 137–139.

426 ActewAGL, *Revised access arrangement information*, January 2010, p. 137. The AER assumes that the reference to r. 51(1) of the NGR in the last paragraph on page 137 of the revised access arrangement proposal includes a typographical error and r. 51(2) of the NGR is meant.

conjunction of circumstances. That said, the AER considers that, in this instance, there is merit in limiting the scope of the trigger for the acceleration of the review submission date to a circumstance or set of circumstances likely to result in changes significant to users. An amendment of the NGR or NGL or the commencement in New South Wales or the Australian Capital Territory of the National Energy Retail Law or National Energy Retail Rules will constitute a trigger event if it results in or causes an inconsistency with the access arrangement. Where a trigger event occurs, ActewAGL must notify the AER of this, so that the AER may consult with interested parties in order to determine whether the trigger event has or is likely to result in significant changes to the terms of the access arrangement. Where the AER finds this to be the case, it may put the review submission date fixed in the access arrangement forward to a date six months from the date of the trigger event or another date as agreed between the AER and ActewAGL.

The AER considers that revision 14.3 addresses ActewAGL's concern that the trigger event proposed in the draft decision relies on a discretionary decision by the AER[427] and that the test of 'significance' not rely on a subjective assessment.[428]

The AER does not agree with ActewAGL's submission regarding the impact of the NECF.

- First, ActewAGL notes in its submission that there is a well established industry led rule change process for amending the NGR.[429] The AER recognises this but considers that time delays associated with the implementation of legislative amendments may operate to the detriment of users and consumers in the access arrangement period. The trigger event set out at revision 14.3 below will provide a safeguard.

- Second, if amendments to the NGL or NGR are not likely to be significant or the NECF does not come into force during the access arrangement period the amended trigger event set out at revision 14.3 below will be redundant.

The AER also notes ActewAGL's concern that including a trigger event fails to take account of the inclusion of transitional arrangements, such as rule 101 in the Draft National Gas (Retail Support) Amendment Rule 2010 (Draft Retail Rules).[430] Rule 101 states that Part 21 of the Draft Retail Rules applies to distributors and retailers who have shared customers and will prevail over any inconsistent provisions in a distributor's access arrangement. Given that the Draft Retail Rules have not been finalised and that r. 101 only relates to inconsistencies, the AER remains of the view that a trigger event should be included.

- Third, the cost pass through mechanism does not provide an effective means of addressing all significant changes that may result from the NECF. For example, a cost pass through mechanism considers the costs imposed in the service provider

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427 ActewAGL, *Revised access arrangement information*, January 2010, p. 137.

428 ActewAGL, email to the AER, 3 March 2010.

429 ActewAGL, *Revised access arrangement information*, January 2010, p. 137.

430 ActewAGL, email to the AER, 3 March 2010.

arising from the introduction of the NECF, but it does not take into consideration changes which are not related to costs of the service provider. Given this, the AER considers that it is necessary to include the trigger events set out at revision 14.3 below.

- Fourth, r. 65 of the NGR allows the services provider to submit an application for a variation of the access arrangement. The AER considers that if the NECF adversely affects ActewAGL's interests, ActewAGL may apply for a variation of the access arrangement. However, where the interests of users or prospective users are adversely affected there is no redress for users or prospective users, and there is no requirement for ActewAGL to vary the access arrangement. In order to address this asymmetry especially as the energy framework which is likely to impact the obligations of services providers in arrangements with users and prospective users, the AER considers that it is necessary to include the trigger events set out at revision 14.3 below.

14.4.3 Conclusion

The AER does not approve the revised trigger events as a preferable alternative exists that complies with applicable requirements of the NGL and NGR and this is consistent with applicable criteria prescribed by the NGL and NGR.[431]

14.4.4 Revisions

The AER proposes the following revisions:

Revision 14.3: amend the revised access arrangement proposal to include a new clause 10 stating:

> 10.1 If an amendment to the National Gas Law or the National Gas Rules takes effect or the National Energy Retail Law or the National Energy Retail Rules commence operation in New South Wales or the Australian Capital Territory and:
>
> (a) this affects the terms and conditions on which Users or Customers obtain access under the Access Arrangement; and
>
> (b) this results in more favourable conditions for Users or Customers than those under the Access Arrangement
>
> ActewAGL is required to notify the Relevant Regulator no later than one month following this and to also provide contact details of its Users to the Relevant Regulator at this time.
>
> 10.2 The Relevant Regulator may consult with interested parties and ActewAGL in order to determine whether the circumstances outlined in 10.1 are circumstances that are likely to be significant and constitute a trigger event.
>
> 10.3 Following the consultation in 10.2, the Relevant Regulator will notify ActewAGL whether the circumstances constitute a trigger event, in which case the review submission date fixed in the Access Arrangement will advance, to a date 6 months from the date of the trigger event or such other

431 NGR, r. 40(3).

date as determined by the Relevant Regulator subject to the National Gas Rules.

Revision 14.4: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 14.1 to 14.3.

A. Financial risk and preparedness costs

A.1 Introduction

The revised access arrangement proposal seeks operating expenditure for financial risk and preparedness, if the AER does not approve ActewAGL's proposal for an equity beta of 1.0.[432]

In chapter 5 of the final decision, the AER maintains its position—consistent with the draft decision—that an equity beta of 1.0 is inappropriate. The AER does not approve statements that use the volatility of business metrics (based on a confidential analysis of ActewAGL's cashflow, customer numbers and expected revenue) to support a higher equity beta value (relative to the equity beta determined for electricity network businesses). The AER considers that the observed volatility may represent business specific risk, but not systematic risk, and therefore may not be relevant to the determination of equity beta.[433]

A.2 Revised proposal

Given that the AER does not approve an equity beta of 1.0, ActewAGL submits that comparison of business metrics from its gas operations with those from its electricity operations shows that cash flow is more volatile for gas than for electricity. The proposed financial risk and preparedness cost is based on the cost of sourcing credit facilities that would be drawn down in times of reduced cash flow, on the basis that:

> ActewAGL Distribution has analysed the options for providing financial preparedness and concluded that credit facilities would provide better financial preparedness more effectively (at lowest cost) than maintaining a higher liquidity level.[434]

ActewAGL does not outline what options it examined or define what a higher liquidity level entails.

ActewAGL estimates that the credit facility should cover the difference between the average and lowest quarterly net cash flow from operating activities, based on the last five years of data.[435] It costs the provision of this credit facility by detailing:

- A one-off establishment fee for the credit facility.
- A fee for having the credit facility available but undrawn (C-I-C).
- Interest when drawing the funds (C-I-C).[436]

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432 ActewAGL, *Revised access arrangement information*, January 2010, pp. 41–43, 44 (footnote 76); ActewAGL, *Access arrangement information*, January 2010, attachment B, *Financial risk and preparedness cost* (confidential).

433 AER, *Draft decision*, pp. 196–202.

434 ActewAGL, *Revised access arrangement information*, January 2010, attachment B, *Financial risk and preparedness cost*, p. 1 (confidential).

435 ActewAGL, *Revised access arrangement information*, January 2010, attachment B*; Financial risk and preparedness cost*, p. 2 (figure B.1) (confidential).

This results in a total financial risk and preparedness cost of approximately $C-I-C per annum.[437]

A.3 AER's analysis and considerations

The AER considers that the proposal for financial risk and preparedness costs is more correctly characterised as operating expenditure for a working capital. ActewAGL submits that the potential for mismatch between cash inflow and outflow exposes the business to financial risk. The AER considers that this type of risk is business liquidity risk and that working capital is used to manage business liquidity.

The statements in ActewAGL's confidential attachment—and all such working capital arguments—rely upon the contention that the timing of cash flow in the post-tax revenue model (PTRM) does not accurately reflect the true timing of cash flow faced by the service provider within a given year, and that this inaccuracy materially under-compensates the service provider.[438] For ActewAGL, the key concern is that cash flows from its gas operations exhibit considerable seasonality, with a large winter peak (driven by high demand for gas for heating) and much lower cash flow in summer.[439]

The AER considers that ActewAGL's concern with seasonal variation is misplaced. The AER acknowledges—consistent with past statements on this issue—that the PTRM makes assumptions about the timing of cash flow and is not intended to accurately reflect the true timing of cash flow for a particular business within a given year.[440] However, the AER considers that the analysis by ActewAGL does not show that the service provider is currently under-compensated because:[441]

- The cash flow analysis is incomplete because it:
  - does not consider the full range of cash inflows and outflows for ActewAGL
  - does not evaluate the actual timing of cash flow against the assumed timing of cash flow from the PTRM
  - arbitrarily dismisses consideration of the general liquidity level that would apply to ActewAGL

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436 ActewAGL, *Revised access arrangement information,* January 2010, attachment B, *Financial risk and preparedness cost,* p. 2 (confidential).

437 ActewAGL, *Revised access arrangement information,* January 2010, attachment B, *Financial risk and preparedness cost,* p. 3 (confidential).

438 In other words, if the timing of all cash flows was known exactly, these would be modelled in the PTRM and there would be no need for such an allowance. See also ActewAGL, *Revised access arrangement information*, January 2010, attachment B, *Financial risk and preparedness cost* (confidential).

439 ActewAGL, *Revised access arrangement information*, January 2010, attachment B; *Financial risk and preparedness cost,* p. 2 (confidential).

440 ACCC, *Draft decision, New South Wales and Australian Capital Territory transmission network revenue caps—EnergyAustralia, 2004/05–2008/09*, 28 April 2004, pp. 100–101; ACCC, *Decision, New South Wales and Australian Capital Territory transmission network revenue cap, EnergyAustralia, 2004–05 to 2008–09*, 27 April 2005, p. 119–121.

441 ActewAGL, *Revised access arrangement information*, January 2010, attachment B, *Financial risk and preparedness cost* (confidential).

- does not consider how the circumstances of ActewAGL relate to the circumstances of the efficient benchmark firm.

- The method for calculating costs is inaccurate because it:
  - uses inappropriate costs for the credit facility (C-I-C)
  - assumes the credit facility is C-I-C each year, when based on the graph submitted the facility would have been C-I-C for a total of C-I-C months in the last C-I-C years.

- The assessment is biased because it considers interest costs in times of reduced cash flow, but ignores the interest benefit received in times of increased cash flow.

In contrast, detailed analysis undertaken by the Allen Consulting Group (ACG) on behalf of the ACCC considers these issues.[442] This analysis clearly shows that when considered in total, the cash flow timing assumptions implemented in the PTRM result in the service provider being over-compensated, not under-compensated.[443]

The AER notes that the revenue seasonality documented by ActewAGL does not result in under-compensation for ActewAGL. In the PTRM, yearly revenue is modelled as arriving on the last day of the year and inflated to end of year dollar terms, so the service provider is over-compensated by the nominal time value of the actual revenues received throughout the year. For electricity businesses, which have a relatively smooth receipt of revenue throughout the year, the timing assumption in the PTRM results in a net benefit for the service provider of between three and four per cent.[444] For the gas revenue profile submitted by ActewAGL, where the bulk of revenue is received between June and November, the net benefit for the service provider is between five and seven per cent.[445] That is, ActewAGL receives the bulk of its revenue at the beginning of the financial year, and thus is in a better position than a service provider that receives its revenue evenly each month of the year.

442 Allen Consulting Group, *Working Capital, Relevance for the assessment of reference tariffs, Report to the ACCC*, March 2002; ACCC, *Draft decision, New South Wales and Australian Capital Territory transmission network revenue caps—EnergyAustralia, 2004/05–2008/09*, 28 April 2004, pp. 100–101; ACCC, *Decision, New South Wales and Australian Capital Territory transmission network revenue cap, EnergyAustralia, 2004–05 to 2008–09*, 27 April 2005, p. 119–121; ACCC, *Draft decision, Revised access arrangement by Gasnet Australia Pty Ltd for the principal transmission system*, 14 November 2007, pp. 150–151; ACCC, Final Decision, *Revised access arrangement by Gasnet Australia (Operations) Pty Ltd and Gasnet (NSW) Pty Ltd for the principal transmission system*, 30 April 2008, pp. 104–110.

443 Allen Consulting Group, *Working Capital, Relevance for the assessment of reference tariffs, Report to the ACCC*, March 2002, pp. 1–3; ACCC, Decision, *New South Wales and Australian Capital Territory transmission network revenue cap, EnergyAustralia, 2004–05 to 2008–09*, 27 April 2005, p. 119–121; ACCC, *Final Decision, Revised access arrangement by Gasnet Australia (Operations) Pty Ltd and Gasnet (NSW) Pty Ltd for the principal transmission system*, 30 April 2008, pp. 104–110.

444 This estimate is based on cash flow received in twelve even instalments across the year, with a nominal vanilla WACC between 8.5 and 10.5 per cent, and a delay between invoice and receipt of up to two months. More detailed analysis (for instance, daily or weekly) would increase the over-estimation.

445 Parameter assumptions match those in the electricity analysis, but because ActewAGL provides graphical data (not precise figures) in its confidential appendix to the revised access arrangement proposal, a broader range results (i.e. the range spans two percentage points, not one).

The ACG report examines this issue with specific regard to the Moomba-to-Adelaide pipeline (a gas transmission pipeline with peak loading in winter), and finds the net over-compensation to the service provider is 1.8 per cent of total revenue.[446] Even under extremely unfavourable (to the service provider) assumptions about the timing of cash flows, the net effect is still over-compensation by 1.6 per cent.[447]

Given the evident shortcomings in the ActewAGL analysis, the AER considers that its analysis of cash flow patterns—building on the cash flow analysis by ACG in 2002—is arrived at on a reasonable basis and produces the best forecast or estimate possible in the circumstances.[448] This analysis shows that the timing assumptions in the PTRM do not under-compensate the benchmark service provider for the costs of working capital.

A.4 Summary

Based on the above analysis, the AER does not approve ActewAGL's proposed financial risk and preparedness operating expenditure. This does not involve any adjustment to the total operating expenditure presented in the revised access arrangement proposal—as contingent operating expenditure, the financial risk and preparedness cost was not included in the proposed operating expenditure.

A.5 Conclusion

The AER does not approve the revised operating expenditure for financial risk and preparedness costs as the estimate of costs is not arrived at on a reasonable basis and does not represent the best forecast possible in the circumstances, as required by r. 74(2) of the NGR. Further, the financial risk and preparedness costs do not reflect efficient costs that would be incurred by a prudent service provider, as required by r. 91(1) of the NGR.

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446 Allen Consulting Group, *Working Capital, Relevance for the assessment of reference tariffs, Report to the ACCC*, March 2002, p. 22.

447 Allen Consulting Group, *Working Capital, Relevance for the assessment of reference tariffs, Report to the ACCC*, March 2002, p. 23.

448 NGR, r. 74(2).

B. Self Insurance–Confidential

C. Revisions

The AER proposes the following revisions:

Revision 2.1: amend Box H.2 in the access arrangement information to include under the heading ‘12.3 Revisions to Part 3–General terms and conditions for access’ the word ‘period’ between the words ‘ICRC in the’ and ‘before approval’.

Revision 3.1: delete Table 3.1 of the revised access arrangement information and replace it with the following:

Table 3.5: Inflation rates for adjusting the capital base (%)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
Inflation rates	2.34	2.67	3.54	2.33	4.35	1.82

Revision 3.2: delete the amount of $12 747 on page 16 of the revised access arrangement information and replace it with $12 726.

Revision 3.3: delete Table 3.2 of the revised access arrangement information and replace it with the following**:**

Table 3.6: Derivation of the opening capital base at 1 July 2010 ($m, nominal)

	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
Opening capital base	225.9	233.8	239.3	250.4	255.6	266.8	278.1
Capital expenditure	9.8	7.2	11.1	7.6	8.6	15.5	
Depreciation	7.3	8.0	8.6	8.4	8.8	9.2	
Adjustment for inflation	5.4	6.3	8.7	5.9	11.3	5.0	
Closing capital base	233.8	239.3	250.4	255.6	266.8	278.1[a]	

a: Closing capital base for 2009–10 includes an adjustment for difference between actual and forecast capital expenditure in the period before the earlier access arrangement period.

Revision 3.4: delete Table 3.3 of the revised access arrangement information and replace it with the following:

Table 3.7: Real escalation factors for ActewAGL capital expenditure (%)

	2009	2010	2011	2012	2013	2014
EBA EGW labour	1.2	1.9	1.3	1.5	1.9	2.3
Contract EGW labour	0.9	1.2	1.5	2.7	3.8	3.7
Aluminium	–16.7	46.7	11.9	1.4	0.2	0.4
Steel	–28.5	45.6	17	1.7	–2.4	–1.9
Polyethylene	0	0	0	0	0	0

Revision 3.5: delete Table 3.4 of the revised access arrangement information and replace it with the following:

Table 3.8: Effect of emissions trading scheme on escalation factors (%)

	2009	2010	2011	2012	2013	2014
Aluminium	0.0	0.0	0.0	0.0	0.0	0.0
Steel	0.0	0.0	0.0	0.0	0.0	0.0
Polyethylene	0.0	0.0	0.0	0.0	0.0	0.0

Revision 3.6: delete Table 3.5 of the revised access arrangement information and replace it with the following:

Table 3.9: Forecast net capital expenditure including contributions and disposals 2010–11 to 2014–2015

	2010–11	**2011–12**	**2012–13**	**2013–14**	**2014–15**	**Total**
Distribution system capital expenditure:						
Market expansion	8.83	7.21	7.06	6.18	5.8	35.08
Capacity development	5.41	15.49	0.66	0.31	2.35	24.23
Stay in business	11.47	2.22	3.61	4.08	3.18	24.56
Total distribution system capital expenditure	25.72	24.91	11.33	10.57	11.33	83.86
Non system capital expenditure:						
IT System	0.32	0.31	0.44	0.1	0	1.17
Total non system capital expenditure	0.32	0.31	0.44	0.1	0	1.17
Capital contributions	0.06	0.06	0.06	0.06	0.06	0.29
Equity raising costs	0	0	0	0	0	0
Disposals	0	0	0	0	0	0
Total capital expenditure	25.98	25.16	11.71	10.61	11.26	84.72

Revision 3.7: delete Table 3.6 of the revised access arrangement information and replace it with the following:

Table 3.10: Forecast capital expenditure 2010–11 to 2014–15 by asset type (gross) ($m, real, 2008–09)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Distribution system:						
TRS & DRS – Valves & Regulators	12.59	4.08	0.42	0.93	0.42	18.44
HP Mains (inc DRS & TRS)	0.98	11.53	-	-	1.47	13.97
MP Mains	4.81	3.51	3.56	2.59	2.87	17.33
Meters – Tariff	3.75	2.77	4.33	4.09	3.77	18.70
Meters – Contract	0.63	0.20	0.22	0.32	0.22	1.59
MP Services	2.97	2.83	2.81	2.64	2.59	13.83
HP Services	-	-	-	-	-	-
Non system:	-	-	-	-	-	-
IT System	0.32	0.31	0.44	0.10	-	1.17
Total capital expenditure	26.04	25.22	11.78	10.67	11.33	85.03

Revision 3.8: delete Table 3.8 of the revised access arrangement information and replace it with the following:

Table 3.11: Economic depreciation 2010–2011 to 2014–15 ($m, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Straight line depreciation	9.5	11.2	12.4	13.2	13.8	60.1
Inflation adjustment	-7.0	-7.6	-8.2	-8.5	-8.6	-40.0
Economic depreciation	2.5	3.6	4.2	4.8	5.1	20.1

Revision 3.9: delete Table 3.9 of the revised access arrangement information and replace it with the following:

Table 3.12: Projected capital base 2010–2011 to 2014–15 ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Opening capital base	278.1	295.7	311.0	311.7	310.6	na
Plus forecast capital expenditure	26.9	26.0	12.1	11.0	11.7	87.6
Less forecast depreciation	9.3	10.7	11.5	12.0	12.2	55.6
less forecast disposals	0.0	0.0	0.0	0.0	0.0	0.0
Closing capital base	295.7	311.0	311.7	310.6	310.1	na

na: Not applicable.

Revision 3.10: delete the footnote to clause 4.19 of the revised access arrangement proposal and replace it with the following:

> Rule 82(3) of the NGR only permits capital expenditure (including a capital contribution made by a user, or part of such a capital contribution) to be rolled into the capital base if this Access Arrangement contains a mechanism which prevents ActewAGL from benefitting, through increased revenue, from the User's contribution to the capital base. As of the Commencement Date, ActewAGL does not have such a mechanism. Accordingly, ActewAGL cannot increase the Capital Base for capital contributions pursuant to rule 82 of the NGR.

Revision 3.11: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 3.1 to 3.10.

Revision 5.1: delete Table 4.1 of the revised access arrangement information and replace it with the following:

Table 5.9: Summary of cost of capital parameters

Parameter	
Nominal risk-free rate (%)	5.63
Equity beta	0.80
Market risk premium (%)	6.5
Debt risk premium (%)	3.35
Debt to total assets (gearing) (%)	60
Gamma	0.65
Nominal return on equity (%)	10.83
Nominal return on debt (%)	8.98
Nominal vanilla WACC (%)	**9.72**

Revision 5.2: delete Table 4.2 in the revised access arrangement information and replace it with the following:

Table 5.10: Inflation forecast (%)

	June 2011	**June 2012**	**June 2013**	**June 2014**	**June 2015**	**June 2016**	**June 2017**	**June 2018**	**June 2019**	**June 2020**	**Geometric average**
Forecast inflation	2.50	2.75	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.52

Revision 5.3: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 5.1–5.2.

Revision 6.1: delete Table 6.4 in the revised access arrangement information and replace it with the following:

Table 6.1: Roll forward of the TAB from 2010–11 to 2014–15

	2010–11	**2011–12**	**2012–13**	**2013–14**	**2014–15**
Opening TAB	196.9	216.1	234.2	237.7	240.0
Forecast capital expenditure	26.7	26.5	12.7	11.8	12.8

Straight–line depreciation	-7.5	-8.4	-9.2	-9.4	-9.9
Closing TAB	216.1	234.2	237.7	240.0	242.9

Revision 6.2: delete Table 6.5 in the revised access arrangement information and replace it with the following:

Table 6.2: Tax depreciation concessions 2010/11 to 2014/15

	2010–11	2011–12	2012–13	2013–14	2014–15
Tax depreciation concessions	7.5	8.4	9.2	9.4	9.9

Revision 6.3: delete Table 6.6 in the revised access arrangement information and replace it with the following:

Table 6.3: Corporate income tax building block 2010/11 to 2014/15

	2010–11	2011–12	2012–13	2013–14	2014–15
Tax payable	2.4	2.8	3.1	3.3	3.4
Value of imputation credits	-1.5	-1.8	-2.0	-2.2	-2.2
Tax allowance	0.8	1.0	1.1	1.2	1.2

Revision 6.4: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 6.1–6.3.

Revision 7.1: delete clause 4.5(b) in the revised access arrangement proposal and replace it with the following:

> a rolling carryover mechanism, that results in ActewAGL retaining the reward associated with an efficiency-improving initiative for five years after the year in which the gain was achieved, that is, a reward (being the net amount of the efficiency gains (or losses) relating to operating expenditure) earned in one year of an Access Arrangement Period would be added to the total revenue and carried forward into the next Access Arrangement Period if necessary, until it has been retained by ActewAGL for a period of five years.

Revision 7.2: delete clauses 4.6–4.11 and 4.16 in the revised access arrangement proposal.

Revision 7.3: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 7.1 and 7.2.

Revision 8.1: delete from clause 4.28(a) of the revised access arrangement proposal all references to clauses 4.6–4.11 in the revised access arrangement proposal.

Revision 8.2: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revision 8.1.

Revision 9.1: delete Tables 5.4, 5.5, 5.6 and 5.8 in the revised access arrangement information replace them with the following:

Table 9.2: ActewAGL's forecast operating expenditure ($m, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Controllable costs						
Operating and maintenance	9.5	11.3	11.6	10.4	10.7	53.4
Corporate overheads	3.2	3.3	3.4	3.5	3.5	17.0
Non-system asset charge	0.5	0.5	0.5	0.5	0.5	2.6
Marketing	1.3	1.3	1.4	1.4	1.4	6.8
Other controllable costs	0.2	0.2	0.2	1.0	0.8	2.5
Total controllable costs	14.8	16.7	17.1	16.8	17.0	82.3
Other controllable costs						
Government levies	0.7	0.7	0.7	0.7	0.7	3.2
Utilities Network Facilities Tax	3.4	3.4	3.5	3.5	3.6	17.4
Contestability costs	0.6	0.6	0.6	0.6	0.6	2.9
Unaccounted for gas	0.7	0.7	0.7	0.7	0.7	3.6
Ancillary services	0.2	0.2	0.2	0.2	0.2	0.8
Other costs	0.3	0.3	0.3	0.3	0.3	1.3
Total other operating expenditure	5.7	5.8	5.8	5.9	6.0	29.2
Self insurance costs	0.0	0.0	0.0	0.0	0.0	0.0
Debt raising costs	0.2	0.2	0.2	0.2	0.2	0.9
Total operating expenditure	20.7	22.6	23.1	22.9	23.2	112.4

Revision 9.2: delete clause 4.26 titled 'statement of costs' in the revised access arrangement proposal and replace it with the following:

> 4.26 For each 12 month period ending on 30 June during the Access Arrangement Period, ActewAGL must maintain records for:
>
> (a) JAM fees—any fees payable by ActewAGL to Jemena Asset Management Pty Ltd (JAM) in relation to field and asset management services provided under their distribution asset management services agreement (or any other replacement asset management services agreement);
>
> (b) ActewAGL controllable costs—costs which can be controlled or varied by ActewAGL. For example, without limitation, direct materials or direct labour costs can be varied by management through making different managerial decisions; and
>
> (c) ActewAGL non-controllable costs—costs that ActewAGL cannot control or vary. For example, without limitation, government levies and taxes.
>
> ActewAGL must provide a breakdown of these fees and costs to the Relevant Regulator as part of its proposed revisions to this Access Arrangement under clause 1.16 of this Access Arrangement.

Revision 9.3: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of revisions 9.1–9.2.

Revision 10.1: delete Table 6.7 in the revised access arrangement information and replace it with the following:

Table 10.3: Calculation of revenue allowance the reference tariff ($m, nominal unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Regulatory depreciation	2.5	3.6	4.2	4.8	5.1
Return on capital	27.0	29.5	31.8	32.6	33.4
Tax allowance	0.8	1.0	1.1	1.2	1.2
Operating expenditure	21.2	23.8	24.9	25.3	26.2
Incentive mechanism payments (decrements)	0.0	0.0	0.0	0.0	0.0
Unsmoothed revenue requirement	51.5	57.8	61.9	63.9	65.9
Energy forecasts (TJ)	6545.0	6525.2	6565.5	6641.6	6736.0
Revenue yield (tariff/TJ)	7547.4	8121.7	8739.8	9404.8	10 120.4
Smoothed revenue requirement	51.4	55.2	59.8	65.0	70.7
of which tariff revenue	49.4	53.0	57.4	62.5	68.2
of which contract revenue	2.0	2.3	2.4	2.5	2.6
X factor tariff revenue (%)	na	na	na	na	na

na: Not applicable.

Revision 10.2: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revision 10.1.

Revision 12.1: delete clause 4.1 of the revised access arrangement proposal and replace it with the following:

> Where required under the National Gas Law and National Gas Rules, the building block components used to determine total revenue have been derived in accordance with the revenue and pricing principles set out in subsections 24(2)–(7) of the National Gas Law.

Revision 12.2: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revision 12.1.

Revision 13.1: amend the revised access arrangement proposal to:

- delete the Tables in clause 1.40 in attachment 3A and clause 1.20 in attachment 3B and replace them with the following:

Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
256.08	256.09	256.09	256.09	256.09

- delete the Tables in clause 1.44 in attachment 3A and clause 1.24 in attachment 3B and replace them with the following:

Annual Quantity Block Structure	Relevant Capped Rate $/GJ Equivalent (GST exclusive real 2010–2011 dollars)
First 20 TJ p.a.	3.10
Next 30 TJ p.a.	2.70
All Additional	2.30

- delete the Tables in clause 1.48 in attachment 3A, clause 1.28 in attachment 3B and clause 1.19 in attachment 3C and replace them with the following:

Meter Set Type Typical/Alternative Meter Provision of Basic Metering Equipment Charge in $ per annum expressed in GST exclusive real 2010–2011 dollars	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2012	Year Ending 30 June 2015
Single Run & Bypass					
Toyo MT5, Email 602, Email 610	63	63	63	63	63
Toyo MT10, Email 1010, Email 750	127	127	127	127	127
AL-425	951	951	951	951	951
AL-1000, AL-1400, Romet RM30	1,990	1,990	1,990	1,990	1,990
AL-2300, Romet Rm55, Romet RM85, Roots 3M, Instomet G65	2762	2762	2,762	2,762	2,762

Romet Rm140, AL-5000, roots 5M, Instromet G100	3318	3318	3,318	3,318	3,318
Roots 7m, Rockwell TPL9, Instromet G160	5095	5095	5,095	5,095	5,095
Roots 16M, Roots 11M, Instromet G250	6090	6090	6,090	6,090	6,090
Singer 4GT, Rockwell AT-18, Instromet G400	7236	7236	7,236	7,236	7,236
Singer 6GT, Rockwell AT-30	10,418	10,418	10,418	10,418	10,418
Rockwell AT-60	12,279	12,279	12,279	12,279	12,279
Single Run & Shunt or Double Run (different Meters) – requiring special charges					
Rockwell AT-30 + AL 1400	11,890	11,890	11,890	11,890	11,890

- delete the Table in clause 1.18 in attachment 3C and replace it with the following:

Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
3.753	3.753	3.753	3.753	3.753

- delete the Table in clause 1.14 in attachment 3E and replace it with the following:

Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
47.45	47.45	47.45	47.45	47.45

- delete the Tables in clause 1.15 in attachment 3E and replace them with the following:

Throughput Charge for Tariff Service ($/GJ) in GST exclusive real 2010–2011 dollars

Block Size (GJ per Mth)	Block Size (GJ Per Qtr)	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
First 1.25	First 3.75	7.45	8.24	8.50	8.50	8.50

Next 82.25	Next 246.75	5.90	6.52	6.72	6.72	6.72
Next 333.5	Next 1000.5	5.37	5.94	6.13	6.13	6.13
All additional	All additional	3.77	4.18	4.31	4.31	4.31

Provision of Basic Metering Equipment Charge in GST exclusive real 2010–2011 dollars

Meter Provision Charges	**Year Ending 30 June 2011**	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
For meters with Capacity less than or equal to 6m3/hr ($p.a.)	26.30	27.83	27.83	27.83	27.83
For meters with a Capacity of greater than 6m3/hr ($/GJ)	0.2171	0.2297	0.2297	0.2297	0.2297

- delete the Table in clause 1.17 in attachment 3E and replace it with the following:

Meter Provision Charges	**Year Ending 30 June 2011**	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
For monthly bills	2.90	3.20	3.30	3.30	3.30
For quarterly bills	8.60	9.50	9.80	9.80	9.80

- delete the Table in clause 1.20 in attachment 3F and replace it with the following:

Provision of On-Site Data and Communication Equipment Charge ($ p.a.) in GST exclusive real 2010–2011 dollars

	Year Ending 30 June 2011	**Year Ending 30 June 2012**	**Year Ending 30 June 2013**	**Year Ending 30 June 2014**	**Year Ending 30 June 2015**
Charge per Delivery Station (includes the first 2 meters at a Delivery Station)	1585	1585	1585	1585	1585
Charge for each additional 1 or 2 meters at a Delivery Station	376	376	376	376	376

- delete the Tables in clause 1.21 in attachment 3F and replace them with the following:

Provision of Meter Reading Charge for Tariff Delivery Points ($ p.a.) in GST exclusive real 2010–2011 dollars

Meter Reading Cycle	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
Quarterly	4.54	4.85	4.85	4.85	4.85
Monthly	43.30	46.20	46.20	46.20	46.20

Provision of Meter Reading Charge for Non-Tariff Delivery Points ($ p.a.) in GST exclusive real 2010–2011 dollars

	Year Ending 30 June 2011	Year Ending 30 June 2012	Year Ending 30 June 2013	Year Ending 30 June 2014	Year Ending 30 June 2015
Charge per Delivery Station (includes the first 2 meters at a Delivery Station)	687	687	687	687	687
Charge for each additional 1 or 2 meters at a Delivery Station	163	163	163	163	163

- delete the Table in clause 1.19 in attachment 3I and replace it with the following:

Ancillary Services Charges in GST exclusive real 2010–2011 dollars	
Request for service	$64.50 plus $64.50 per hour after the first hour
Special meter read	$48.40
Reconnection fee	$91.40
Disconnection fee	$123.70

Revision 13.2: amend the revised access arrangement proposal to:

- delete clause 6.17 and replace it with the following:

> The Relevant Regulator must notify ActewAGL of its decision under clause 6.16 within 45 Business Days of receiving the notification. This period may

be extended for the time taken by the Relevant Regulator to obtain information from ActewAGL, obtain expert advice or consult about the notification. However, the Relevant Regulator must assess a cost pass through application within 90 Business Days, including any extension of the decision making time.

- delete clause 6.18 and replace it with the following:

If ActewAGL has not received notification from the Relevant Regulator of its decision within 45 Business Days (excluding any extension of time outlined in 6.17) of receiving a notification under clause 6.10 or 6.12, the Reference Tariffs will be automatically varied in accordance with the relevant notification given by ActewAGL.

Revision 13.3: amend the access arrangement proposal to:

- delete clauses 6.14(d) and 6.14(e) and replace them with the following:

(d) the incurred and/or forecast Change in Cost of the relevant Cost Pass Through Event on ActewAGL and the basis on which this has been calculated. A Specified Uncontrollable Cost Event or a Change in Tax Event must only specify the incurred Change in Cost;

(e) whether the Cost Pass-Through Event has, or is expected to have, an Administrative Cost Impact, which must be substantiated to the Relevant Regulator's reasonable satisfaction;

- delete clause 6.15

- delete clause 6.16(b) and replace it with the following:

(b) whether the Cost Pass-Through Event has, or is expected to have, an Administrative Cost Impact;

- delete the first sentence in clause 6.24 and replace it with the following:

The Reference Tariff may be varied if there is, or there is expected to be, an Administrative Cost Impact on the cost of providing Reference Services as a result of one of the cost pass-through events listed below, where that cost was not incorporated in the determination of Reference Tariffs at the Commencement Date of this Access Arrangement or, if there has been a previous review of the Reference Tariffs, at that review.

Revision 13.4: delete clause 6.25(b) in the revised access arrangement proposal and replace it with the following:

(b) in the case of a notification under clause 6.10 and 6.12 other than a notification relating to an event listed in paragraph (a) would exceed 1 per cent of the smoothed revenue requirement specified in the final decision in the years of the access arrangement period that the costs are incurred.

Revision 13.5: amend the revised access arrangement proposal to:

- delete clause 6.16(f) and replace it with the following:

(f) each individual Cost Pass-Through Event must have, or is expected to have, an Administrative Cost Impact

- delete clause 6.16(g).

Revision 13.6: amend the revised access arrangement proposal to:

- delete clause 6.20(c) and replace it with the following:

(c) the time cost of money for the period over which the Cost Pass–Through Amount is to apply, to leave ActewAGL in an economically neutral position with respect to any delay in the recovery (or return) of a Cost Pass–Through Amount, consistent with the National Gas Law;

- delete clause 6.20(d) and replace it with the following:

(d) the relative amounts of Reference Services supplied to each User in determining the allocation of the Cost Pass–Through Amount to Reference Tariffs, consistent with the National Gas Law;

- delete clause 6.20(f) and replace it with the following:

(f) consistent with National Gas Law the financial effects on ActewAGL associated with the provision of Reference Services directly attributable to the Cost Pass–Through Event concerned, and the time at which the financial effect arises; and

Revision 13.7: amend clause 6.25 of the revised access arrangement proposal to delete that definition of 'change in cost' and replace it with the following:

Change in Cost in relation to a Cost Pass-Through Event means the net decrease or increase in operating expenditure plus incremental revenue requirement arising as a result of change in capital expenditure, incurred as a result of the Cost Pass-Through Event for the remaining year of the Access Arrangement Period.

Revision 13.8: amend the revised access arrangement proposal to:

- delete clause 6.14(i) and replace it with the following:

(i) the date from and period over which ActewAGL proposes to charge the Cost Pass-Through amount or change the Reference Tariff, which may occur over a number of financial years (not including financial years in the next Access Arrangement period)

- delete from clause 6.25 the last subclause (b) in the definition of 'General Pass–Through Event' and replace it with the following:

at the time the AER approves this Access Arrangement, despite the occurrence of the event being a possibility, there was no compelling reason to consider that the event was more likely to occur than not to occur during the access arrangement period.

- delete clause 6.20(e) and replace it with the following

(e) the manner in which and period over which the Cost Pass-Through Amount or change in Reference Tariffs is to apply within the Access Arrangement period consistent with the National Gas Rules.

- delete clause 6.13 and replace it with the following

> ActewAGL may make an application under clause 6.10 or 6.12 in respect of a Cost Pass-Through occurring during the then current financial year, or having occurred in an earlier financial year, but not before 1 July 2010.

Revision 13.9: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 13.1 to 13.8.

Revision 14.1: amend the revised access arrangement proposal to:

- delete from clause 7.1 the words 'that serves end-use customers outside the boundaries of the ACT and Queanbeyan or outside ActewAGL's existing market in Palerang' and replace them with the following:

> that provides reticulated gas to a new development or an existing development not serviced with reticulated gas.
>
> The anticipated extension in the Australian Capital Territory from Belconnen across the Molonglo Valley to Phillip does not represent a high pressure extension for the purposes of Part 7.

- include in clause 7.3 the following words after 'has already been included':

> and approved by the Relevant Regulator

- include in clause 7.4(b) the following words after 'whether the Relevant Regulator requires':

> an extension of time including to allow

- delete clauses 7.8 and 7.9.

Revision 14.2: amend the revised access arrangement information to reflect revision 14.1.

Revision 14.3: amend the revised access arrangement proposal to include a new clause on 10 stating:

> 10.1 If an amendment to the National Gas Law or the National Gas Rules takes effect or the National Energy Retail Law or the National Energy Retail Rules commence operation in New South Wales or the Australian Capital Territory and:
>
> (a) this affects the terms and conditions on which Users or Customers obtain access under the Access Arrangement; and
>
> (b) this results in more favourable conditions for Users or Customers than those under the Access Arrangement

ActewAGL is required to notify the Relevant Regulator no later than one month following this and to also provide contact details of its Users to the Relevant Regulator at this time.

10.2 The Relevant Regulator may consult with interested parties and ActewAGL in order to determine whether the circumstances outlined in 10.1 are circumstances that are likely to be significant and constitute a trigger event.

10.3 Following the consultation in 10.2, the Relevant Regulator will notify ActewAGL whether the circumstances constitute a trigger event, in which case the review submission date fixed in the Access Arrangement will advance, to a date 6 months from the date of the trigger event or such other date as determined by the Relevant Regulator.

Revision 14.4: make any and all consequential amendments necessary in the revised access arrangement proposal and the revised access arrangement information to take account of and reflect revisions 14.1 to 14.3.

Glossary

AAG	Access Arrangement Guideline
AASB	Australian Accounting Standards Board
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
Access Economics	Access Economics Pty Ltd
ACIL	ACIL Tasman Pty Ltd
ACQ	annual contract quantity
ACG	The Allen Consulting Group Pty Ltd
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AFMA	Australian Financial Markets Association
ANSIO	Australian national state and industry outlook
APA Group	APA Group is comprised of the Australian Pipeline Trust and APT Investment Trust
ASX	Australian Stock Exchange
BB	National Gas Services bulletin board
CAPM	Capital Asset Pricing Model
CCGT	combined cycle gas turbine
CEG	Competition Economists Group
CGS	Commonwealth government securities
CO2	carbon dioxide
CPI	consumer price index
CPRS	Carbon Pollution Reduction Scheme
DAMS	Distribution Asset Management Services
DGM	dividend growth model
DRP	debt risk premium
DRS	district regulator set

Eastern Gas Pipeline	this is owned by Jemena Ltd and transports gas from the Gippsland Basin in Victoria to markets in Sydney and regional centres
EBA	enterprise bargaining agreement
EBT	earnings before taxation
Econtech	KPMG Econtech Pty Ltd
EGP	Eastern gas pipeline
EGW	electricity, gas and water
EIL	energy industry levy
ERP	equity risk premium
ESCV	Essential Services Commission of Victoria
GFC	Global Financial Crisis
GIS	Geographic Information System
GJ	gigajoule (1 000 000 000 joules)
GMC	Gas Market Company
GST	goods and services tax
HFL	Hoskinstown to Fyshwick loop
ICRC	Independent Competition and Regulatory Commission (ACT)
IPART	Independent Pricing and Regulatory Tribunal (NSW)
ISR	Industrial special risk
IT	Information technology
Jemena	Jemena Gas Networks (NSW) Ltd.
JV	joint venture
KPI	key performance indicator
LME	London Metal Exchange
MAOP	maximum allowable operating pressure
MCE	Ministerial Council on Energy
MDQ	maximum daily quantity
Moomba to Sydney pipeline	this is owned by the APA Group and links the Cooper Basin gas fields at Moomba with distribution networks in Sydney and regional New

	South Wales. The pipeline includes laterals to Canberra and regional centres including Lithgow and Griffith
MRP	market risk premium
MSP	Moomba to Sydney pipeline
NECF	National Energy Customer Framework
NEMMCO	National Electricity Market Management Company
NERA	NERA Economic Consulting
NIEIR	National Institute of Economic and Industry Research
NPV	net present value
NSP	network service provider
NSW	New South Wales
NTER	National tax equivalent regime
NYMEX	New York Mercantile Exchange
OECD	Organisation for Economic Co-operation and Development
ORG	Victorian Office of Regulator General
PB	Parsons Brinckerhoff
PJ	petajoule (equal to 1000 terajoules)
POTS	Packaged off take station
PRS	primary regulating station
PTRM	post-taxation revenue model
QSN Link	The link between Epic Energy's South West Queensland Pipeline and the Moomba to Adelaide Pipeline System and the MSP—the Queensland South Australia and NSW Link
RBA	Reserve Bank of Australia
SCP	SoftLaw Community Projects
SRS	secondary regulator set
STTM	short–term trading market
TJ	terajoules (equal to 1000 gigajoules)
Tribunal	Australian Competition Tribunal

TRS	trunk receiving stations
UAG	unaccounted for gas
UNFT	utilities network facilities tax
WACC	weighted average cost of capital
WBH	water bath heater
Wilson Cook	Wilson Cook & Co Limited