Final decision–Public

Access arrangement proposal

Wagga Wagga natural gas distribution network

1 July 2010–30 June 2015

March 2010

AUSTRALIAN ENERGY REGULATOR

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 Wagga Wagga gas distribution network submitted by Country Energy Gas Pty Ltd (Country Energy). 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 A 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 on 23 April 2010.

Shortened forms

access arrangement information	Country Energy Gas Pty Ltd, *Access arrangement information for the Wagga Wagga natural gas distribution network*, 1 July 2009
access arrangement period	1 July 2010 to 30 June 2015
access arrangement proposal	Country Energy Gas Pty Ltd, *Access arrangement for the Wagga Wagga natural gas distribution network,* 1 July 2009
AER	Australian Energy Regulator
draft decision	AER, *Draft decision*, *Country Energy Wagga Wagga natural gas distribution network*, *Access arrangement proposal*, 1 July 2010–30 June 2015, November 2009
earlier access arrangement	access arrangement for 1 January 2006 to 30 June 2010 inclusive
earlier access arrangement period	1 January 2006 to 30 June 2010 inclusive
IPART	The Independent Pricing and Regulatory Tribunal
NGL	National Gas Law
NGR	National Gas Rules
revised access arrangement information	Country Energy Gas Pty Ltd, *Access arrangement information for the Wagga Wagga natural gas distribution network*, January 2010
revised access arrangement proposal	Country Energy Gas Pty Ltd, *Access arrangement for the Wagga Wagga natural gas distribution network*, January 2010

1 Introduction

1.1 Background

Country Energy Gas Pty Ltd's (Country Energy) Wagga Wagga gas distribution network has around 680 km of pipeline, delivers approximately 1.6 PJ of gas annually and supplies gas to over 18 700 customers located primarily in the districts of Wagga Wagga and its surrounding areas.[1]

Country Energy was established following the merger of Great Southern Energy, Advance Energy and NorthPower.[2] Country Energy is owned by the New South Wales (NSW) government.[3]

Wagga Wagga is supplied by gas from the Cooper Basin via a lateral pipeline off the Moomba–to–Sydney Pipeline. Gas is also sourced from the New South Wales–Victoria interconnection pipeline that runs from Wagga Wagga to Barnawatha (near Wodonga.)[4]

Country Energy's distribution network is classified as a covered distribution pipeline.[5]

1.2 AER's draft decision

On 11 November 2009, the Australian Energy Regulator (AER) issued the Draft decision: Country Energy Wagga Wagga natural gas distribution network, Access arrangement proposal, 1 July 2010–30 June 2015, November 2009 (draft decision) on Country Energy's access arrangement for the Wagga Wagga natural gas distribution network, 1 July 2009 (access arrangement proposal). The AER held a public forum via teleconference on the draft decision on 19 November 2009.

1.3 Revised access arrangement proposal

On 6 January 2010, Country Energy submitted the access arrangement for the Wagga Wagga natural gas distribution network (revised access arrangement proposal) to the AER and the access arrangement information for the Wagga Wagga natural gas distribution network (revised access arrangement information) for the Wagga Wagga gas distribution network. Country Energy also submitted a response to the draft decision on the access arrangement proposal that identifies the amendments set out in the draft decision accepted by Country Energy and the reasons for Country Energy

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1 Country Energy, *Revised access arrangement information*, January 2010, pp. 5, 19.

2 Country Energy, *Revised access arrangement information*, January 2010, p. 5.

3 Country Energy, *Annual Report 2007–2008*, p. 4.

4 Pipeline Publications, *Map of major Australian Gas pipelines*, viewed 15 October 2009, <http://pipeliner.com.au/pipeline_map_of_australia>.

5 AEMC, *List of Natural Pipelines – description and classifications*, viewed 15 October 2009, <http://www.aemc.gov.au/Gas/Scheme-Register/Pipeline-list-summary.html >.

not accepting particular amendments proposed by the AER.[6] Country Energy provided additional information to support its revised access arrangement proposal during the consultation period on the draft decision and the revised access arrangement proposal.

1.4 Principal components of the revised access arrangement proposal

Country Energy's revised access arrangement proposal incorporates a number of changes from its access arrangement proposal:

- a lower nominal weighted average cost of capital (WACC) of 10.19 per cent reflecting changed financial market circumstances since the initial proposal but which is still higher then the AER's draft decision of 10.16 per cent

- an increase in operating expenditure of $1.3 million ($2009–10) to $14.3 million ($2009–10) which reflects higher actual base year costs for 2008–09.

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.[7]

Following consideration of the revised access arrangement proposal, the AER has reduced the total revenue requirement by $2.7 million ($2009–10) to $48.8 million ($2009–10) over the access arrangement period resulting from reductions to Country Energy's proposed capital and operating expenditure and its proposed cost of capital.

As a consequence, network charges in 2010–11 will increase by 17.8 per cent (in nominal terms) for residential customers. This represents an increase of $1.27 per week for the residential customers' gas bills.

Tariffs are expected to increase on average by 2.5 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.[8]

The AER has prepared an access arrangement proposal incorporating the outcomes of its final decision.[9] This has been formulated having regard to the matters that the

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6 Country Energy, *Response to the AER's draft decision on the Wagga Wagga natural gas distribution network access arrangement proposal*, January 2010 (Country Energy, *Response to the s draft decision l*, January 2010).

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

8 NGR, r. 64(1).

National Gas Law (NGL) and the NGR require an access arrangement to include, Country Energy's access arrangement proposal and the AER's reasons for refusing to approve that proposal.[10]

The AER will make a decision in respect of the access arrangement proposal within two months after the final decision.[11]The AER expects to make this decision on 23 April 2010.

1.7 Chapter summaries

Pipeline services

Country Energy proposes to offer pipeline services, comprising reference services and services which are not reference services. The services are largely the same as those offered in the earlier access arrangement period.

Part A–Total revenue (building block components)

Capital base

Opening capital base

The revised access arrangement proposal proposes an opening capital base of $59.56 million ($nominal) for the access arrangement period. Country Energy's estimation of the opening capital base is shown in Table 1.

Table 1: Revised opening capital base ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Opening capital base	44 515	46 280	48 921	52 590	57 121	na
Capital expenditure	1727	2191	3816	3636	3013	14 383
Depreciation	564	1226	1332	1474	1588	6184
Adjustment for inflation	602	1676	1186	2368	1051	6883
Difference between actual and forecast capital expenditure (January-June 2006)					–25	–25
Return on difference					–13	–13
Closing capital base	46 280	48 921	52 590	57 121	59 559	na

Source: Country Energy, *Revised access arrangement information*, 1 January 2010, p. 22.

9 NGR, r. 64.

10 NGR, r. 64(2).

11 NGR, r. 64(4).

The AER approves an opening capital base of $59.58 million, reflecting the difference in the forecast inflation rate applied by the AER for 2009–10 to that proposed by Country Energy.

Projected capital base

Country Energy proposes a projected capital base of $77.92. million ($nominal), which is shown in Table 2.

Table 2: Revised projected capital base ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Opening capital base	59 559	63 119	67 132	71 016	74 582	na
Forecast capital expenditure	4386	4689	4620	4374	4232	22 301
Forecast depreciation	2285	2222	2382	2548	2724	12 161
Disposals	0	0	0	0	0	0
Adjustment for inflation (Indexation)	1459	1546	1645	1740	1827	8217
Closing capital base	63 119	67 132	71 016	74 582	77 918	na

Source: Country Energy, *Revised access arrangement information*, 1 January 2010, p. 27.
na: Not applicable.

The AER approves a projected capital base of $78.2 million, reflecting the difference in the forecast inflation rate applied by the AER to that applied by Country Energy.

The AER considers that Country Energy's forecast capital expenditure of $22.3 million ($nominal) meets the requirements of the NGR.

Depreciation

The AER approves Country Energy'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 draft decision to set the risk-free rate, equity beta and market risk premium used to estimate the WACC parameters and the AER's methodology used to estimate the inflation forecast. However, Country Energy does not accept the AER's gamma value and methodology for estimating the debt risk premium.

Country Energy proposes a nominal vanilla WACC of 10.19 per cent. The AER estimates a nominal vanilla WACC of 9.72 per cent for Country Energy, based on market data in the specified averaging period. 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 and debt risk premium. Table 3 outlines the proposed and approved WACC parameter values, in the revises access arrangement proposal and the final decision.

Table 3: WACC parameters

Parameter	Revised access arrangement proposal	Final decision
Nominal risk-free rate (%)	5.47	5.62 [b]
Inflation (%)	2.45 [a]	2.52 [c]
Real risk-free rate (%)	2.95	3.02 [b]
Equity beta	0.8 [a]	0.8
Market risk premium (%)	6.5 [a]	6.5
Debt risk premium (%)	4.4	3.36 [b]
Debt to total assets (gearing) (%)	60	60
Nominal vanilla WACC (%)	10.19	9.72 [b]

a: Country Energy has adopted the inflation forecast, equity beta and MRP determined in the draft decision. Country Energy, *Revised access arrangement information*, January 2010, pp. 27–28, 32–33.

b: These figures have been updated using data for the 15 business days averaging period ending on 12 March 2009.

c: This figure has been updated using the latest data from the RBA statement of 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 Country Energy to apply the estimated cost of corporate income taxation set out in chapter 6 of the final decision.

The AER does not approve the gamma of 0.3 proposed by Country Energy in the revised access arrangement proposal and instead applies a gamma of 0.65, consistent with the draft decision and other recent regulatory decisions.

Operating expenditure

The revised access arrangement proposal forecasts total operating expenditure for the access arrangement period of $14.3 million ($2009–10). The AER has made minor adjustments to unaccounted for gas (UAG) to reflect changes to demand forecasts and updated Country Energy's forecasts to reflect the cost escalators submitted by Country Energy after it submitted it revised access arrangement proposal.

Table 4 set outs the forecast operating expenditure, in the revised access arrangement proposal and the final decision for forecast operating expenditure.

Table 4: Final decision forecast operating expenditure ($’000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Country Energy revised proposed operating expenditure						
Controllable costs	2257	2298	2307	2347	2391	11 600
Non controllable costs[a]	584	559	532	508	485	2667
Total operating expenditure[b]	2841	2858	2839	2856	2877	14 267
AER final decision operating expenditure						
Controllable costs	2253	2303	2327	2385	2434	11 702
Non controllable costs	576	552	526	502	479	2636
Total operating expenditure[b]	2829	2855	2853	2888	2913	14 338

Source: Country Energy, *Revised access arrangement information*, January 2010, p.30; AER’s final decision on operating expenditure, chapter 7.
a: Country Energy does not separate operating expenditure into controllable and non controllable costs.
b: Totals may not add up due to rounding.

Total revenue

The revised access arrangement proposal proposes total revenue of $53.4 million ($2009–10) over the access arrangement period and X factors set out in Table 5.

Table 5: Revised total revenue requirements and X factors ($’000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	6069	6432	6841	7237	7600
Return of capital	826	675	737	808	896
Operating expenditure	2910	3000	3052	3146	3247
Benchmark tax liability	386	358	393	429	464
Total costs	10 192	10 466	11 023	11 619	12 207
X factor [a] (%)	–19.7 [b]	–2.5	–2.5	–2.5	–2.5

Source: Table 8.1 is based on information found at Country Energy, *Revised access arrangement information*, January 2010, p. 36.
a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factor is P0.

The final decision does not approve the revised total revenue. The final decision approves total revenue over the access arrangement period of $48.8 million ($2009–

10) based on its assessment of this expenditure against the relevant criteria for the building block components. The total revenue and relevant X factors are summarised in Table 6.

Table 6: Final decision forecast total revenue ($m, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	5.8	6.1	6.5	6.9	7.3
Depreciation	0.8	0.6	0.7	0.8	0.8
Operating and maintenance	2.9	3.0	3.1	3.2	3.3
Corporate income tax	0.2	0.2	0.2	0.2	0.2
Total	9.6	9.9	10.5	11.1	11.6
X factor tariff revenue [a] (%)	-12.81[b]%	-2.50%	-2.50%	-2.50%	-2.50%

a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factor is P0.

Part B–Tariffs

Demand forecasts

The revised access arrangement information revises forecast demand as outlined in Table 7. These demand forecasts support Country Energy's forecast capital expenditure and operating expenditure.

Table 7: Revised forecast load and customer numbers

	2010–11[a]	2011–12[a]	2012–13a	2013–14a	2014–15a
Volume customers (no.)	18 960	19 250	19 540	19 830	20 120
Total volume load (GJ)	919 586	931 867	942 157	953 330	964 427
Contract customers (no)	14	14	14	14	14
Total contract load (GJ)	646 344	645 995	645 645	645 295	644 946
Total load	1 565 930	1 577 862	1 587 802	1 598 625	1 609 373

Source: Country Energy, *Revised access arrangement information*, January 2010, pp. 6, 19, Country Energy, Submission to the AER, 12 February 2010, p. 2; Country Energy, Email to the AER, 3 March 2010.
a: Forecast.
no.: Number.

The AER approves Country Energy's demand forecasts.

Reference tariffs

Country Energy proposes two tariff classes: contract and volume. These tariff classes are broadly consistent with the tariff classes in the earlier access arrangement period.

The main difference is the merger of the central and fringe zone tariffs for contract transportation services.

Tariffs for residential users are expected to increase by 17.8 per cent (in nominal terms) as at 1 July 2010, and then by 2.5 per cent on average each subsequent year of the access arrangement period in nominal terms. These estimated tariffs do not take into account the impact of cost pass throughs that may occur over the access arrangement period.

Tariff variation mechanisms

Country Energy proposes two tariff variation mechanisms, annual tariff variation formula mechanism and a cost pass through. The revised access arrangement proposal uses a similar annual tariff variation mechanism to the earlier access arrangement period. The cost pass through mechanism includes new events such as a retail project, climate change, and a general pass through event.

The final decision revises the annual tariff variation formula. It also revises the material impact threshold definition as well as certain administrative arrangements for the cost pass through events.

Part C—Non–tariff components

Non–tariff components

The final decision does not approve the revised access arrangement proposal for the extensions and expansions requirements. Instead the final decision includes extensions and expansions requirements that do not automatically cover certain extensions.

The revised access arrangement proposal includes a trigger event for amendments to the NGL or NGR. The AER has revised the trigger event provision so it more closely follows the language of the NGR and so it also applies to the commencement in operation in NSW of the National Energy Retail Law and National Energy Retail Rules.

Country Energy proposes and the AER approves a review submission date of 1 July 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 access arrangement proposal in relation to pipeline services is set out in chapter 2 of the draft decision.

2.2 Revised access arrangement proposal

The revised access arrangement proposal incorporates amendments 2.1–2.5 and 2.8–2.9 of the draft decision.[12]

In relation to proposed amendment 2.6 of the draft decision, Country Energy made the amendment to the access arrangement information referred to in the first bullet point of the amendment. In relation to the amendment in the second bullet point of amendment 2.6 (which inserts replacement wording for section 8.2.2 of the access arrangement information), Country Energy has not deleted the words 'and Additional Services' from section 8.2.2. Instead, Country Energy has made a minor change by bracketing 'and Additional Services' with 'Monthly Metering Charges'. County Energy states it made the change so amendment 2.6 can be aligned with amendment 11.2 of the draft decision.[13]

Country Energy states in relation to amendment 2.7 of the draft decision that the structure and format of appendix D of the draft decision has been incorporated into appendix 2 of the revised access arrangement proposal.[14]

2.3 AER's analysis and considerations

The AER's analysis and consideration of the access arrangement proposal in relation to pipeline services is set out in chapter 2 of the draft decision.[15]

The AER notes that Country Energy has incorporated in full amendments 2.1–2.5 and 2.8–2.9 of the draft decision covering definitions, transportation services, additional services and non–reference services. The AER also notes that Country Energy's response in its revised access arrangement proposal to amendment 2.6 provides greater clarity regarding the treatment of additional services under the access arrangement information.

The AER considers that Country Energy's description of pipeline services and specification of reference services in the revised access arrangement proposal complies with r. 48(1)(b)–(c) of the NGR.

The AER has reviewed the changes Country Energy made to the structure of appendix 2 of the access arrangement proposal and notes that appendix D of the draft

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12 Country Energy, *Response to draft decision*, January 2010, p. 3.

13 Country Energy, *Response to draft decision*, January 2010, p. 3.

14 Country Energy, *Response to draft decision*, January 2010, p. 3.

15 AER, *Draft decision*, November 2009, pp. 5–11.

decision requires Country Energy to set out the fixed charge for volume transportation services and the capacity charge for contract transportation services in appendix 2 on a monthly basis.[16] However, Country Energy has set out the charges on an annual basis.[17] The AER notes that this is inconsistent with the main text of the revised access arrangement proposal which describes them as a 'monthly capacity charge' and 'monthly fixed charge'.[18] The AER considers that this inconsistency should be removed by changing all references to 'monthly capacity charge' and 'monthly fixed charge' in the main text of the revised access arrangement proposal to 'annual capacity charge' and 'annual fixed charge' respectively.

2.4 Conclusion

The AER accepts Country Energy's description of pipeline services and specification of reference services. The AER does not accept the use of the expressions 'monthly capacity charge' and 'monthly fixed charge' in the revised access arrangement proposal because 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.[19]

2.5 Revisions

The AER proposes the following revisions:

Revision 2.1: amend the revised access arrangement and revised access arrangement information to:

- delete the expression 'Monthly Capacity Charge' and replace it with 'Annual Capacity Charge'
- delete the expression 'Monthly Fixed Charge' and replace it with 'Annual Fixed Charge'.

Revision 2.2: 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 2.1.

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16 AER, *Draft decision*, November 2009, appendix D, pp. 153–155.

17 Country Energy, *Revised access arrangement proposal*, January 2010, appendix 2, pp. 55–57.

18 Country Energy, *Revised access arrangement proposal*, January 2010, p. 32.

19 NGR, r. 40(3).

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 opening capital base and projected capital base that Country Energy proposes for the access arrangement period.

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

The opening capital base forms the initial value of the projected capital base.[20] This chapter considers the components of the opening capital base and projected capital base, including the capital expenditure proposed by Country Energy.

The AER's consideration of Country Energy'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 $59.6 million ($nominal) is slightly lower than that set out in the draft decision of $59.7 million ($nominal).[21]

20 NGR, r. 78.

21 AER, *Draft decision*, November 2009, p. 33.

Table 3.1: Revised opening capital base ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Opening capital base	44 515	46 280	48 921	52 590	57 121	na
Capital expenditure	1727	2191	3816	3636	3013	14 383
Depreciation	564	1226	1332	1474	1588	6184
Adjustment for inflation	602	1676	1186	2368	1051	6883
Difference between actual and forecast capital expenditure (January-June 2006)					–25	–25
Return on difference					–13	–13
Closing capital base	46 280	48 921	52 590	57 121	59 559	na

Source: Country Energy, *Revised access arrangement information*, 1 January 2010, p. 22.
na: Not applicable.

3.2.1.1 Capital expenditure

The revised access arrangement proposal accepts amendment 3.1 of the draft decision to remove gas management costs of $1.4 million ($nominal).[22]

Country Energy updates the capital expenditure for 2008–09 to reflect actual capital expenditure and provides a revised forecast for 2009–10 to reflect the latest inflation information available and additional capital expenditure for new connections.[23]

3.2.1.2 Depreciation

The revised access arrangement proposal accepts the depreciation in the draft decision.[24]

3.2.1.3 Adjustment to the capital base for inflation

Country Energy accepts the methodology in the draft decision. [25] The revised inflation rates shown in Table 3.2.

22 Country Energy, *Revised access arrangement proposal*, January 2010, p. 8.

23 Country Energy, *Response to AER draft decision Wagga Wagga access arrangement proposal*, January 2010, p. 3, (Country Energy, *Response to draft decision*, January 2010).

24 Country Energy, *Revised access arrangement proposal*, January 2010, p. 22; AER, *Draft decision*, p. 32.

25 Country Energy, *Response to draft decision*, January 2010, p. 4.

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

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10
Total	1.33	3.54	2.33	4.35	1.79

Source: Country Energy, *Revised access arrangement information*, January 2010, p. 22.
Note: The CPI figure for June 2006 is the half year CPI, while the remainder as full year figures.

3.2.2 Projected capital base

The revised access arrangement proposes a projected capital base as set out at Table 3.3. The revised projected capital base of $77.9 million ($nominal) exceeds that of $75.4 million ($nominal) set out in the draft decision.[26] This is because of the revised capital expenditure for new connections and different cost escalators than approved in the draft decision.

Table 3.3: Revised projected capital base ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Opening capital base	59 559	63 119	67 132	71 016	74 582	na
Forecast capital expenditure	4386	4689	4620	4374	4232	22 301
Forecast depreciation	2285	2222	2382	2548	2724	12 161
Disposals	0	0	0	0	0	0
Adjustment for inflation (Indexation)	1459	1546	1645	1740	1827	8217
Closing capital base	63 119	67 132	71 016	74 582	77 918	na

Source: Country Energy, *Revised access arrangement information*, January 2010, p. 27.
na: Not applicable.

3.2.2.1 Capital expenditure

The revised access arrangement proposal proposes total capital expenditure of $22.3 million ($nominal) which exceeds that of $19.7 million ($nominal) set out in the draft decision.[27]

The revised capital expenditure forecasts reflect increased capital expenditure for increased new connections and the latest inflation information.[28]

26 AER, *Draft decision*, November 2009, p. 34.

27 AER, *Draft decision*, November 2009, p. 34.

28 Country Energy, *Response to draft decision*, January 2010, pp. 3, 6.

3.2.2.2 Cost Escalators

Apart from the cost escalator for polyethylene, the revised access arrangement proposal does not accept the draft decision relating to cost escalators.[29]

Labour

For the reasons outlined below, Country Energy submits a report from Econtech (the Econtech report) which updates the labour cost escalators to be used in escalating operating and capital expenditure over the access arrangement period.[30]

Country Energy submits that, the AER has incorrectly exercised its discretion under r. 79 of the NGR in accepting Country Energy's methodology and the proposed alternative forecasts.[31] Country Energy submits that data should be updated using the methodology in the revised access arrangement proposal.

Crude oil

The revised access arrangement proposal outlines that crude oil is a relevant input cost for the proposed capital expenditure of the Wagga Wagga gas distribution network. Country Energy submits that fuel and lubricants are significant components of the plant used in capital expenditure projects and the crude oil escalator is the best predictor of future movements in fuel and lubricant prices.[32]

3.2.2.3 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 a forecast[33]inflation rate of 2.45 per cent.

3.2.2.4 Opening capital base for the next access arrangement period

The revised access arrangement proposal accepts the draft decision to use the approved forecast capital expenditure estimate depreciation for the opening capital base in the next access arrangement period.[34]

3.2.2.5 Capital redundancy

The revised access arrangement proposal accepts the draft decision to delete the proposed capital redundancy policy.[35]

29 Country Energy, *Response to draft decision*, January 2010, p. 5.

30 Country Energy, *Further information to the revised access arrangement proposal*, 12 February 2010 and KPMG EconTech, *Labour cost forecasts*, 10 February 2010. The Econtech report was submitted to the AER in the consultation period for submissions on the draft decision to the revised access arrangement proposal.

31 NGR, r 79(6); Country Energy, *Response to draft decision*, January 2010, p. 4

32 Country Energy, *Response to draft decision*, January 2010, pp. 5–6.

33 Country Energy, *Response to draft decision*, January 2010, p. 6.

34 Country Energy, *Response to draft decision*, January 2010, p. 6.

35 Country Energy, *Response to draft decision*, January 2010, p. 6.

3.3 AER's analysis and considerations

The AER notes that Country Energy has incorporated in full amendments 3.8 and 3.9 of the draft decision.[36] Country Energy has not incorporated, however, amendments 3.1 to 3.7 of the draft decision. These issues are discussed below.

3.3.1 Opening capital base

3.3.1.1 Capital expenditure

The revised access arrangement proposal proposes conforming capital expenditure for 2008–09 is $42 000 ($nominal) and for 2009–10 is $188 000 ($nominal).[37] This reflects the removal of $1.4 m ($nominal) for network management and costs. The AER notes that the capital expenditure for 2008–09 is based actual data and the 2009–10 capital expenditure is estimated to reflect the latest inflation information and additional new connections.[38] In light of this, the AER considers the revised capital expenditure amount is consistent with the requirements of r. 79 of the NGR.

3.3.1.2 Adjustment to the capital base for inflation

The AER approves Country Energy's inflation rates up to 2008–09, but considers that its inflation rate of 1.79 per cent for 2009–10 is no longer the best forecast or estimate possible in the circumstances. For 2009–10, the AER estimates an inflation rate of 1.82 per cent. This takes into account the actual inflation rate for the period December 2008 to December 2009. This information was released on 27 January 2010 and was not available to Country Energy at the time it submitted its revised access arrangement proposal.

3.3.1.3 Summary on opening capital base

In light of the AER's proposed revisions to Country Energy's proposed inflation rates, the AER does not consider that Country Energy's proposed opening capital base is consistent with r. 77(2) and r. 74 of the NGR. The AER proposes to revise Country Energy's capital base as set out at revisions 3.2 to 3.7.

3.3.2 Projected capital base

3.3.2.1 Capital expenditure

The revised access arrangement proposal proposes forecast capital expenditure that is 13.0 per cent ($nominal) higher than approved in the draft decision.

The increase in forecast capital expenditure approved from the AER's proposed amount of $8.9 million (real, $2009–10)[39] to $11.1 million (real, $2009–10) reflects higher demand forecasts for new connections.[40] The AER considers this growth related capital expenditure is reasonable in light of the extra new connections

36 Country Energy, *Response to draft decision*, January 2010, p. 6.

37 AER, *Draft decision*, November 2009, p. 33; Country Energy, *Revised access arrangement information*, January 2010, p. 22.

38 Country Energy, *Response to draft decision*, January 2010, p. 3.

39 AER, *Draft decision*, November 2009, p. 98.

40 Country Energy, *Revised access arrangement information*, January 2010, p. 24.

consistent with the demand forecasts set out in the draft decision,[41]and is consistent with the new capital expenditure criteria requirements of r. 79 of the NGR.

The revised access arrangement proposal for asset replacement and refurbishment capital expenditure has been revised upwards. The AER considers that this is consistent with the implementation of the proposed cost escalators (discussed below). The AER considers that the revised asset replacement and refurbishment capital expenditure is consistent with the new capital expenditure criteria requirements of r. 79 of the NGR.

3.3.2.2 Cost escalators

The following sets out the AER's consideration of the labour and oil cost escalators that Country Energy submits should be incorporated into the revised access arrangement proposal. The AER notes that Country Energy has accepted the draft decision regarding the cost escalator for polyethylene.[42]

Labour

The revised access arrangement proposal submits an up-to-date labour cost escalator forecast using the methodology outlined in the Econtech report.[43] The AER approved this methodology in the draft decision.[44] The AER has examined the Econtech report and considers that the Econtech real labour cost forecasts are arrived at on a reasonable basis and represent the best forecast possible in the circumstances to be used in determining the capital expenditure forecasts.[45]

Crude Oil

The draft decision outlines that Country Energy has not justified the use of crude oil as an input for the proposed capital expenditure of the Wagga Wagga gas distribution network.[46] Country Energy submits that fuel and lubricants are key components of the plant used in capital expenditure projects and so applies the crude oil escalator to capital expenditure relating to the plant.[47]

In light of the revised access arrangement proposal and further explanation about how lubricants are used in capital expenditure,[48] the AER considers that the inclusion of oil cost escalators is appropriate. Further, the AER considers that the proposed crude oil escalator is consistent with r. 74(2) as it is arrived at on a reasonable basis and represents the best forecast possible in the circumstances.

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41 AER, *Draft decision*, November 2009, p. 99.

42 Country Energy, *Response to draft decision*, January 2010, p. 4.

43 Country Energy, *Country Energy Gas Networks revised access arrangement proposal for the Wagga Wagga natural gas distribution network July 2010,* 12 February 2010, attachment 1: KPMG Econtech report labour cost forecasts.

44 AER, *Draft Decision*, November 2009, p. 27.

45 NGR, r. 74(2).

46 AER, *Draft decision*, November 2009, pp. 27–28.

47 Country Energy, *Response to draft decision* January 2010, pp. 5–6.

48 Country Energy, *R Response to draft decision*, January 2010, pp. 5–6.

3.3.2.3 Summary on forecast capital expenditure

The AER considers that Country Energy has addressed the matters raised in the draft decision in accordance with r. 60 of the NGR and its revised proposal for capital expenditure, including relevant cost escalators, satisfies r. 79 and r. 74(2) of the NGR.

3.3.2.4 Depreciation

As a consequence of the AER's adjustment to the capital base for inflation under r. 79 and r. 74(2) of the NGR, the AER proposes revisions to Country Energy's forecast depreciation under r. 78 of the NGR.

3.3.2.5 Adjustment to the capital base for inflation

The AER approves Country Energy's methodology for adjusting the capital base for inflation. By updating this methodology to take account of more up-to-date estimates of inflation, the AER considers that a rate of 2.52 per cent (rather than 2.45 per cent in the revised access arrangement proposal) represents the best forecast or estimate possible in the circumstances.[49] The AER's full consideration of the appropriate inflation rate is contained in chapter 5 of the final decision.

3.3.2.6 Summary on projected capital base

In light of the adjustment to the capital base for inflation and the consequential revisions to depreciation, the AER does not consider that the revised projected capital base is consistent with r. 78 and r. 74(2) of the NGR.

3.4 Conclusion

Opening capital base

The AER does not approve the revised opening capital base for the access arrangement period as it does not comply with r. 77(2) of the NGR. The AER's proposed revisions 3.1–3.7 are set out below.

Revised capital base and depreciation

The AER does not approve Country Energy's revised capital base and depreciation for the access arrangement period as it does not comply with r. 78 of the NGR. The AER's proposed revisions 3.8–3.13 are set out below.

3.5 Revisions

The AER proposes the following revisions:

Revision 3.1: delete Table 13 in the revised access arrangement information and replace it with the following:

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

Table 3.4: CPI indexation of capital base (per cent)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10
Total	1.33	3.54	2.33	4.35	1.82

Revision 3.2: delete Table 3 in the revised access arrangement information and replace it with the following:

Table 3.5: Estimated total capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Regulatory allowance	827	1603	1692	1909	2089	8120
Actual/estimated expenditure	1727	2191	3816	3636	4412	15 783
Less gas management costs	-	-	-	-	1400	1400
Total capital expenditure	1727	2191	3816	3636	3012	14 383
Difference	(900)	(588)	(2124)	(1728)	(924)	(6264)

Revision 3.3: delete Table 4 in the revised access arrangement information and replace it with the following:

Table 3.6: Mains rehabilitation capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Regulatory allowance	233	514	557	611	656	2 571
Actual/estimated expenditure	332	647	547	940	1639	4 105
Variation	(99)	(133)	(10)	(328)	(983)	(1 534)

Revision 3.4: delete Table 5 in the revised access arrangement information and replace it with the following:

Table 3.7: Meter replacement capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Regulatory allowance	46	108	161	211	222	747
Actual/estimated expenditure	17	27	718	320	457	1539
Variation	29	81	(557)	(110)	(235)	(792)

Revision 3.5: delete Table 6 in the revised access arrangement information and replace it with the following:

Table 3.8: New connections capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
New Connections/Mains	1172	1394	1347	1011	1162	6086
Network Reinforcement	206	123	1204	1366	1153	4052
Total	**1379**	**1517**	**2551**	**2377**	**2316**	**10 140**
Regulatory allowance	437	744	726	824	950	3681
Variation	(942)	(773)	(1825)	(1553)	(1366)	(6459)

Revision 3.6: delete Table 10 in the revised access arrangement information and replace it with the following:

Table 3.9: Estimated conforming capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Asset replacement & refurbishment	349	674	1266	1260	2097	5646
Growth related	1379	1517	2551	2377	2316	10 140
Less Network Management Costs					1400	1400
Total	1727	2191	3816	3636	3012	14 383

Revision 3.7: delete Table 12 in the revised access arrangement information and replace it with the following:

Table 3.10: Calculation of the capital base as at 30 June 2010 ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10
Opening capital base	44 515	46 280	48 921	52 590	57 121
Capital expenditure	1727	2191	3816	3636	4412
Less network management costs					1400
Depreciation	564	1226	1332	1474	1588
Disposals					
Adjustment for inflation (indexation)	602	1676	1186	2368	1067
Less difference between actual and forecast capital expenditure (Jan–June 06)					25
Less adjustment					13
Closing capital base	46 280	48 921	52 590	57 121	59 574

Revision 3.8: delete Table 14 in the revised access arrangement information and replace it with the following:

Table 3.11: Forecast conforming capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Asset replacement & refurbishment	1997	1702	1871	1935	1452	8958
Growth related	2120	2602	2292	1934	2205	11 154
Total	4117	4304	4164	3869	3657	20 111

Revision 3.9: delete Table 15 in the revised access arrangement information and replace it with the following:

Table 3.12: Forecast mains refurbishments capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Refurbishment cost	1597	1470	1656	1541	943

Revision 3.10 delete Table 16 in the revised access arrangement information and replace it with the following:

Table 3.13: Forecast meter replacement capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Meter replacement cost	400	232	215	394	510

Revision 3.11: delete Table 17 in the revised access arrangement information and replace it with the following:

Table 3.14: Forecast new connection capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
New Connections and Mains	1173	1183	1196	1203	1207
Network Reinforcement	947	1419	1096	730	997
Total	2120	2602	2292	1934	2205

Revision 3.12: delete Table 18 in the revised access arrangement information and replace it with the following:

Table 3.15: Economic asset lives, remaining lives and written down values as at 30 June 2010 (units as stated)

Asset category	Economic life (yrs)	Remaining life (yrs)	WDV ($'000, nominal)
High Pressure	80	59	9093
Medium-High Pressure	50	35	11 295
Medium-Low Pressure	50	25	17 428
Low Pressure	50	31	137
Services	50	30	14 946
Meters & Regulators	15	8	1812
District Regulators	40	18	736
Gate Stations	50	45	3 078
SCADA & Telemetry	20	12	79
Total System Assets			58 605
Total Non System Assets	5	1	969

Revision 3.13: delete Table 19 in the revised access arrangement information and replace it with the following:

Table 3.16: Forecast depreciation for the access arrangement ($'000, nominal)

	Total economic life	Average remaining life	WDV 30/6/10	2010–11	2011–12	2012–13	2013–14	2014–15
System assets	53.4	34	58 605	2064	2225	2386	2554	2734
Non-system assets	5	1	969	223	0.00	0.00	0.00	0.00
Total	52.5	33	59 574	2287	2225	2386	2554	2734

Revision 3.14: delete Table 20 in the revised access arrangement information and replace it with the following:

Table 3.17: Country Energy's proposed capital base ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Opening capital base	59 574	63 155	67 202	71 150	74 810
Forecast capital expenditure	4367	4680	4641	4421	4284
Forecast depreciation	2287	2225	2386	2554	2734
Disposals	0	0	0	0	0
Adjustment for inflation (Indexation)	1501	1592	1693	1793	1885
Closing capital base	63 155	67 202	71 150	74 810	78 246

Revision 3.15: 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 3.14.

4 Depreciation

4.1 Introduction

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

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 Country Energy's depreciation schedule are located in chapter 4 of the draft decision.[50]

4.2 Revised access arrangement proposal

The revised access arrangement proposal proposes no revisions to its asset lives or the straight line methodology for calculating depreciation.[51]

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

Table 4.1: Revised depreciation for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10
Depreciation	564	1226	1332	1474	1588

Source: Country Energy, *Revised arrangement information*, January 2010, p. 21.

Table 4.2 shows the proposed forecast depreciation for the access arrangement proposal.

Table 4.2: Revised forecast depreciation for the access arrangement period ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Depreciation	2285	2222	2382	2548	2724

Source: Country Energy, *Revised arrangement information*, January 2010, p. 26.

50 AER, *Draft decision*, November 2009, pp. 37–40.

51 Country Energy, *Revised access arrangement information*, January 2010, pp. 21, 25–26.

4.3 AER's analysis and considerations

The AER approves the depreciation schedule for the access arrangement period as it complies with r. 88 and r. 89 of the NGR.[52]

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

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

	2010–11	2011–12	2012–13	2013–14	2014–15
Depreciation	2287	2225	2386	2554	2734

4.4 Conclusion

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

52 AER, *Draft decision*, November 2009, p. 40.

5 Rate of return

5.1 Introduction

The revised access arrangement proposal accepts the draft decision about the risk-free rate, equity beta and market risk premium used to estimate the weighted average cost of capital (WACC) parameters. The revised access arrangement proposal also accepts the methodology used to estimate the inflation forecast, which is used to index the capital base and derive nominal total revenue. However, it does not accept the draft decision's methodology for estimating the debt risk premium, and the estimate for gamma value.

This chapter sets out the AER's consideration of issues raised in the revised access arrangement proposal, including the update to the risk-free rate using the averaging period specified in the draft decision and the 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 AER's methodology for estimating the debt risk premium and proposes to use an average of Bloomberg BBB and CBASpectrum BBB+ fair value curves to estimate the debt risk premium in the draft decision. The revised access arrangement proposal outlines that the Bloomberg BBB fair value curve be extrapolated to a 10–year term based on information from the Bloomberg AAA fair value curve.[53]

The revised access arrangement proposal estimates the debt risk premium with reference to the same averaging period as adopted in determining the risk-free rate. Country Energy recognises that this rate will be updated closer to the time of the final decision using the same averaging period as that used to update the nominal risk-free rate.[54] Country Energy submits a new report from its consultant, the Competition Economists Group (the CEG report on the bond sample) that tests the accuracy of Bloomberg's and CBASpectrum's fair value estimates.[55]

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

53 Country Energy, *Revised access arrangement information*, January 2010, pp. 27–28.

54 Country Energy, *Revised access arrangement information*, January 2010, pp. 27–28.

55 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates, A report for Country Energy*, January 2010 (CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010).

Table 5.1: Revised WACC parameters

Parameter	Revised access arrangement proposal
Nominal risk-free rate (%)	5.47
Inflation (%)	2.45
Real risk-free rate (%)	2.95
Equity beta	0.80
Market risk premium (%)	6.5
Debt risk premium (%)	4.40
Debt to total assets (gearing) (%)	60
Nominal vanilla WACC (%)	10.19

Source: Country Energy, *Revised access arrangement information*, January 2010, p. 28.

5.3 Risk-free rate

5.3.1 Revised access arrangement proposal

The revised access arrangement proposal estimates a nominal risk-free rate of 5.47 per cent observed over the 15 day averaging period ending on 10 December 2009 which will be updated closer to the time of the final decision.[56]

5.3.2 AER's analysis and considerations

As outlined in the draft decision, the AER accepts Country Energy's proposal to use a 15 business day averaging period to estimate the risk-free rate which will be updated to the final decision date.

The final decision, uses a 15 business day averaging period commencing 22 February 2010 and ending 12 March 2010. Using this averaging period and Commonwealth Government Securities (CGS) yields with a 10-year maturity the nominal risk-free rate is 5.62 per cent (effective annual compounding rate).

5.4 Debt risk premium

5.4.1 Revised access arrangement proposal

The revised access arrangement proposal estimates debt risk premium of 4.40 per cent using the same averaging period as that used to estimate the nominal risk-free rate. The revised access arrangement proposal uses an average of Bloomberg's BBB and CBASpectrum's BBB+ fair value curves to estimate the debt risk premium. The revised access arrangement proposal extrapolates the Bloomberg BBB fair market curve to 10 years by applying the spread in the fair yields between the term of 7 and

56 Country Energy, *Revised access arrangement information*, January 2010, p. 27.

10 years from the Bloomberg AAA fair value curve. The debt risk premium will be updated closer to the time of the final decision over the same averaging period as that used to estimate the nominal risk-free rate.[57]

5.4.2 AER's analysis and considerations

In order to estimate the benchmark debt risk premium the AER must determine 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 selecting between these data sources is outlined. Refinements and augmentations to the approach are considered. Finally, the method, including any refinements or augmentations, is applied to select a data source and estimate the benchmark debt risk premium.

5.4.2.1 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:

- step 1: defining a population of corporate bonds that closely reflect the characteristics of bonds that would be issued by the benchmark service provider[58]
- 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.

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57 Country Energy, *Revised access arrangement information*, January 2010, pp. 27–28.

58 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 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.[59] 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.[60] 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.

A similar approach to that described above was reviewed by the Australian Competition Tribunal (Tribunal) which found that there was no compelling case for departing from the AER's methodology.[61] The Tribunal also noted that the AER needs to reconsider the data sources and methodology in future determinations.[62] 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.

5.4.2.2 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 7 years to 10 years

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

60 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

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

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

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

- 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 8 to 10 years. In order to do this the AER added the spread between Bloomberg's 8 and 10–year A fair value estimates to the Bloomberg eight year BBB fair value estimate.[63]

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.

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 7 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 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

63 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.

difference indicates the best estimate of the fair value curve possible in the circumstances.[64] The results of this analysis are shown in Table 5.2.

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 7 and 10 year fair value estimates provides a reasonable approach to extrapolating Bloomberg's BBB fair value curve to a term of ten years.

Increasing the number of bonds in the sample

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 2 and 6 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:[65]

- bonds which have observations available from at least one of Bloomberg, UBS and CBASpectrum

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

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

- floating rate bonds which have had their yields converted to fixed rates using prevailing swap rates
- bonds with other credit ratings.[66]

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 information sources: CBASpectrum, Bloomberg and UBS. Each data source has information available for different bonds. The AER 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.[67]

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.[68] The AER accepts that there is a mathematical basis for the proposed conversion between floating and fixed rates[69] and the CEG report on the bond sample demonstrates that in practice such a conversion provides reasonable results.[70] 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.[71]

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.

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

67 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. pp. 20–22.

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

69 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. pp. 12–13.

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

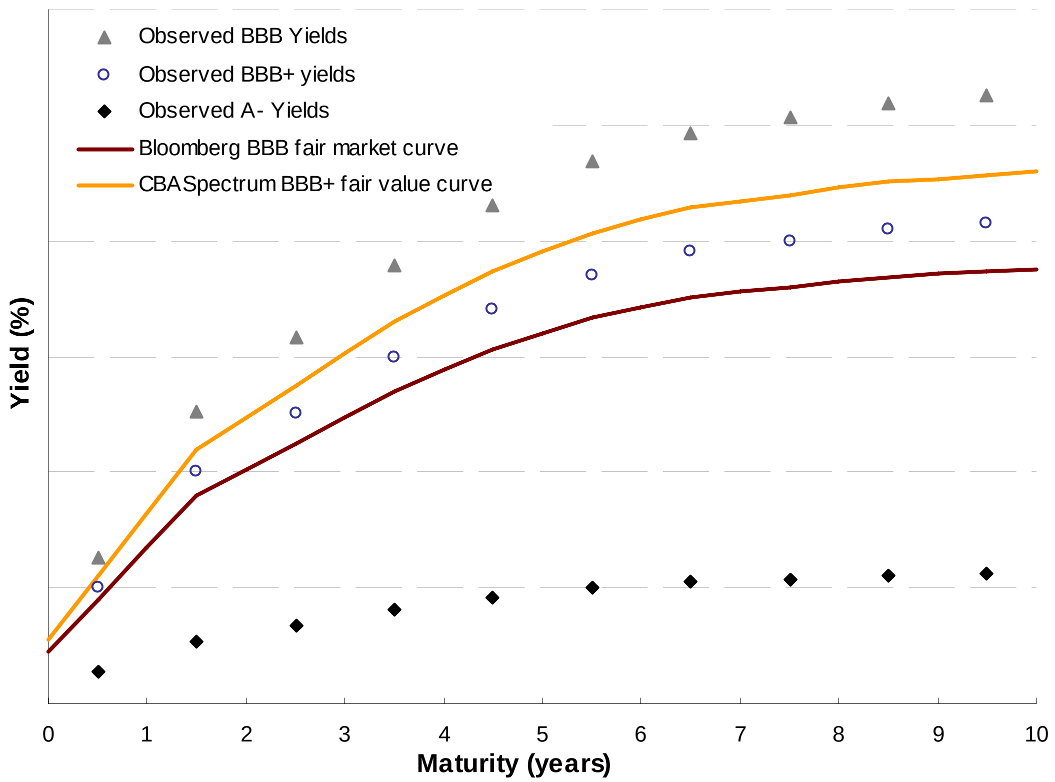
71 CEG, *Testing the accuracy of Bloomberg vs CBASpectrum fair value estimates*, January 2010. p. 14.

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 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.[72] 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 requires 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.

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

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 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[73] 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 proposal's to increase 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, even though a bond may be eligible for inclusion in the sample of bonds because it has certain characteristics[74] 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

73 AER, *Draft decision*, November 2009, pp. 67–68, 215–226; 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).

74 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.

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:[75]

- 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.[76]

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

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.

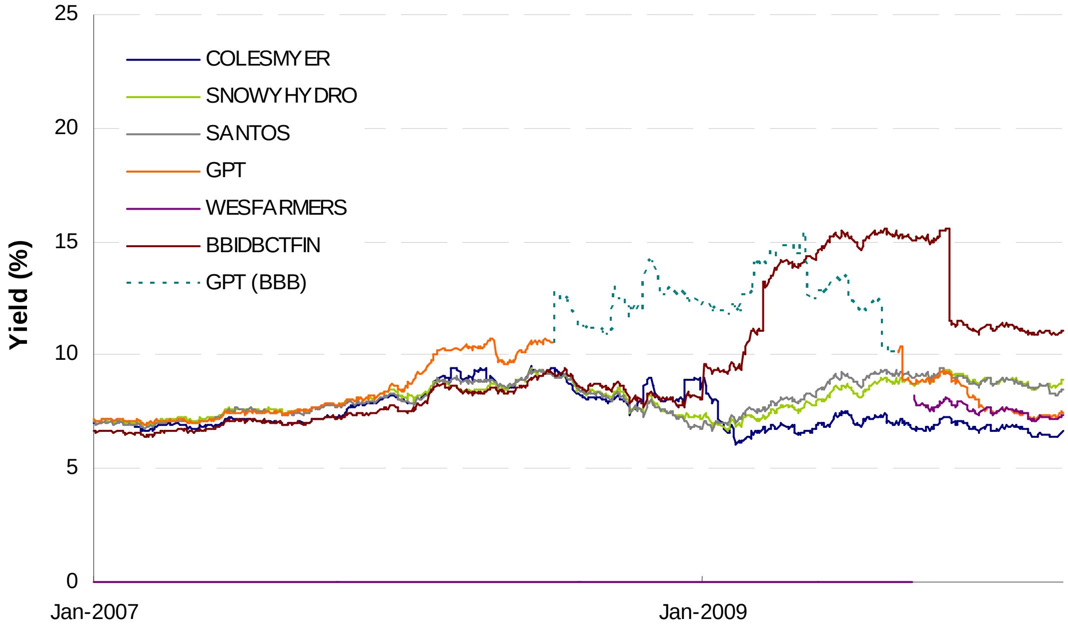
In step 2, as outlined above, prior to selecting the appropriate fair value curve, the AER identifies outliers in the population of bonds, to determine the relevant sample of bonds for analysis.

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

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

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.

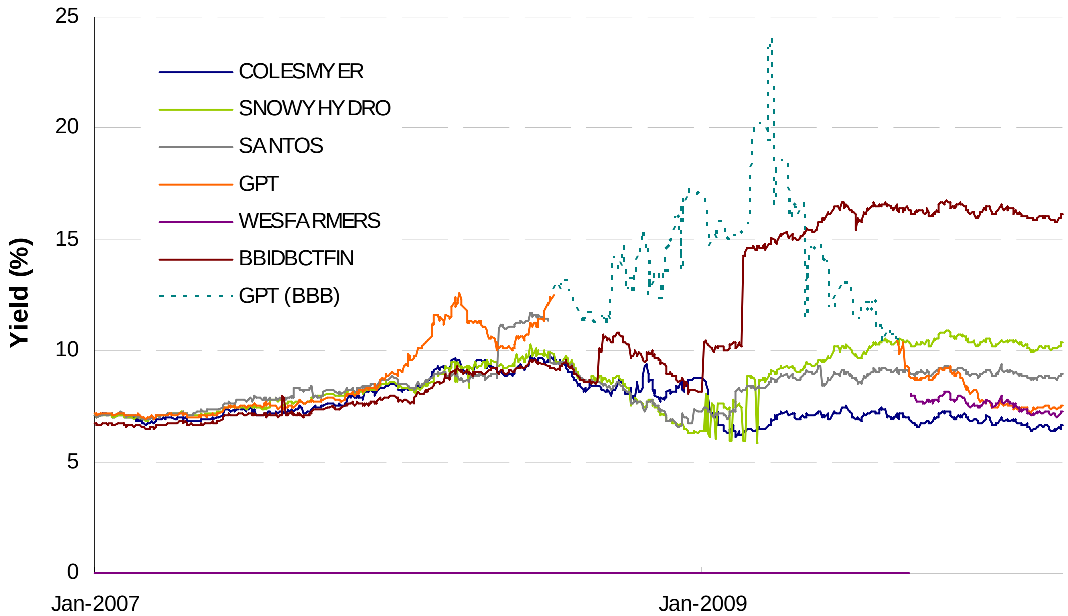
As shown in figure 5.2, based on data from UBS, the average observed yield for the BBI bond was around 7.5 per cent between January 2007 and December 2008 but this increased significantly to around 13 per cent between December 2008 and March 2010. Based on this initial inspection, the Chow test on the 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.[77]

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 the CBASpectrum data 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.

77 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, 22 February to 12 March 2010.

Table 5.4: Sample of BBB+ bonds—observed yields and fair values between 22 February to 12 March 2010 (per cent)

Issuer		**Average observed yield**		**Average**	**fair value**
	Bloomberg	CBASpectrum	UBS	Bloomberg	CBASpectrum
Coles Myer	6.54	6.50	6.48	7.32	7.25

Snowy Hydro	8.48	10.17	8.70	7.51	7.57
GPT	7.33	7.47	7.36	7.73	7.74
Wesfarmers	7.26	7.17	7.25	8.34	8.06
Santos	8.70	8.82	8.37	8.83	8.28

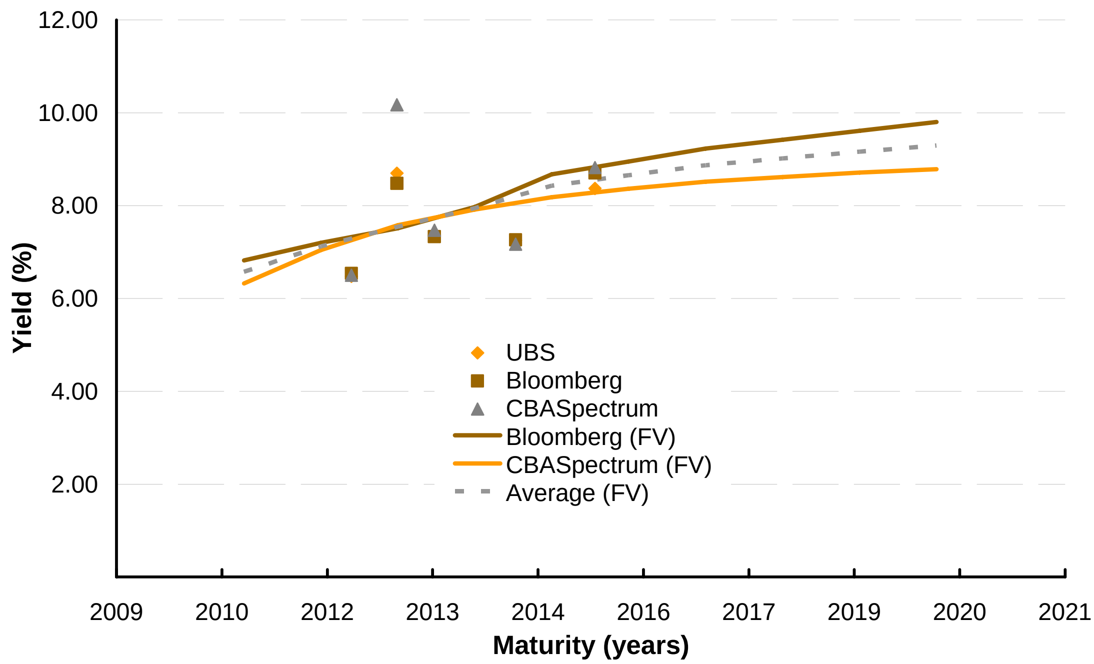
Source: Bloomberg, CBASpectrum, UBS, AER analysis.

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 22 February to 12 March 2010 (per cent)

		Fair value source		
		Bloomberg	CBASpectrum	Average
Observation source	UBS	0.74	0.54	0.62
	Bloomberg	0.61	0.50	0.53
	CBASpectrum	1.85	1.70	1.76

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:

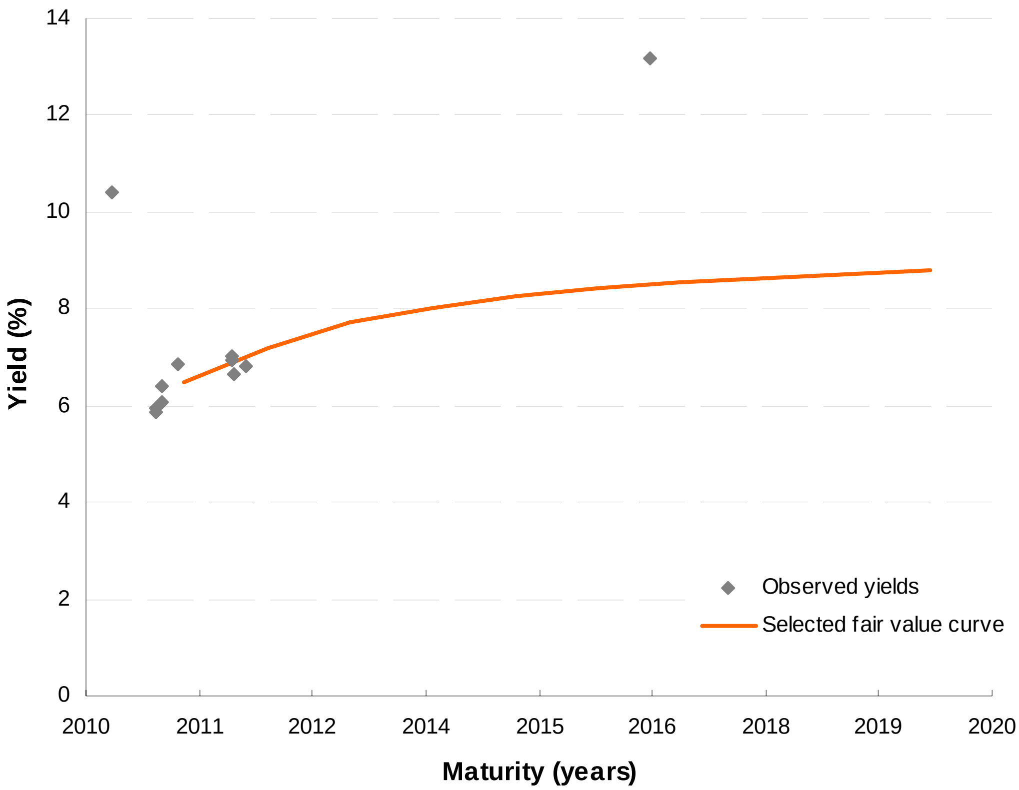
- BBB+ bonds observed from only one or two data sources (such as Bloomberg, CBASpectrum or UBS)
- floating rate bonds converted to fixed rate bonds
- A– and BBB rated bonds.

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

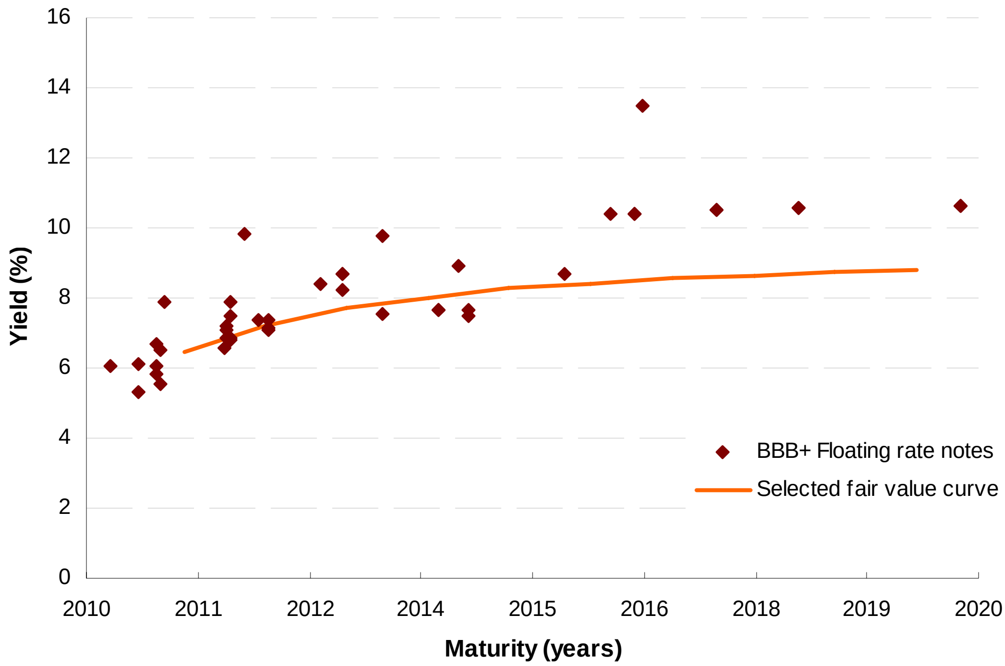


Source: Bloomberg, CBASpectrum, UBS, AER analysis.

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.[78] Recent market commentary also indicates that Reliance Rail may currently be experiencing concerns about its credit rating.[79] The AER therefore considers that the observations presented in figure 5.6 do not provide any new or reliable information.

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

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

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

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

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.[80]

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.

5.4.3 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+

[80] NGR, r. 74(2)(a).

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 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.[81]

The benchmark debt risk premium is estimated by averaging the yield on a ten year corporate bond over the 15 business days between 22 February 2010 and 12 March 2010 (to match the period used for estimating the risk-free rate). The resulting debt risk premium is 3.36 per cent. Adding this debt risk premium to the risk-free rate of 5.62 per cent provides a return on debt of 8.98 per cent, which is 0.89 per cent below that proposed in the revised access arrangement proposal.[82] The AER's proposed revisions are set out in section 5.9.

5.5 Market risk premium

5.5.1 Revised access arrangement proposal

The revised access arrangement proposal accepts the draft decision on the market risk premium (MRP) and adopts a value of 6.5 per cent, noting that this is a conservative value.[83] The revised access arrangement proposal has links the acceptance of an MRP of 6.5 per cent to a gamma value of 0.3[84].

5.5.2 AER's analysis and considerations

The revised access arrangement proposal accepts an MRP of 6.5 per cent as estimated by the AER in the draft decision.[85] The AER's consideration of Country Energy's proposed gamma value of 0.3 is set out in chapter 6 of the final decision.

For the reasons outlined in the draft decision, and consistent with the revised access arrangement proposal the AER considers that its estimation of an MRP of 6.5 per cent represents the best available estimate in the context of a gamma value of 0.65.[86]

5.6 Equity beta

5.6.1 Revised access arrangement proposal

The revised access arrangement proposal accepts the draft decision's equity beta of 0.8 in the draft decision.[87]

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81 NGR, r. 87.

82 Country Energy, *Revised access arrangement information*, January 2010, p. 28.

83 Country Energy, *Revised access arrangement information*, January 2010, p. 27.

84 Country Energy, *Revised access arrangement information*, January 2010, pp. 32–33.

85 Country Energy, *Revised access arrangement information*, January 2010, p. 27.

86 AER, *WACC review*, pp. 97, 176–178, 204–209, 214–216, 235–238.

5.6.2 AER's analysis and considerations

In the draft decision, the AER estimates that an equity beta of between 0.4 and 0.7 ensures that a service provider has the opportunity to recover at least its efficient costs incurred in providing reference services.[88] The AER concludes that the value of 0.8 is the best estimate of the equity beta arrived at on a reasonable basis in the circumstances.

5.7 Inflation forecast

5.7.1 Revised access arrangement proposal

The revised access arrangement proposal accepts the AER's approach to forecast inflation over the access arrangement period. It uses an inflation forecast of 2.45 per cent per annum as estimated in the draft decision.[89]

5.7.2 AER's analysis and considerations

As outlined in the draft decision, the AER's approach to estimate the inflation forecast over a 10-year period is to apply the RBA's short-term inflation forecasts extending out for two years and the mid-point of the Reserve Bank of Australia's (RBA) 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.[90]

In the draft decision, the AER outlines that the estimate of expected inflation is to be updated for the latest available RBA forecasts close to the time of the final decision.[91]

Table 5.6 shows the calculation of the inflation forecast for the access arrangement period using the RBA data. As a consequence, the AER uses an inflation forecast of 2.52 per cent per annum as the best estimate[92] of a 10-year inflation forecast for this final decision.[93]

Table.5.6: Final decision on inflation forecast (per cent)

	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.

87 Country Energy, *Revised access arrangement information*, January 2010, p. 28.

88 NGL, s. 24(2).

89 AER, *Draft decision*, November 2009, pp. 44–45.

90 AER, *Draft decision*, November 2009, p. 44.

91 AER, *Draft decision*, November 2009, p. 45.

92 NGR, r. 74(2).

93 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.

5.8 Conclusion

The AER does not approve the estimate for the nominal vanilla WACC of 10.19 per cent specified in the revised access arrangement proposal 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 Country Energy, based on the updated risk-free rate and debt risk premium. Table 5.7 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 and debt risk premium.

Table 5.7: Final decision on WACC parameters

Parameter	Revised access arrangement proposal	Final decision
Nominal risk-free rate (%)	5.47	5.62 [b]
Inflation (%)	2.45 [a]	2.52 [c]
Real risk-free rate (%)	2.95	3.02 [b]
Equity beta	0.8 [a]	0.8
Market risk premium (%)	6.5 [a]	6.5
Debt risk premium (%)	4.4	3.36 [b]
Debt to total assets (gearing) (%)	60	60
Nominal vanilla WACC (%)	**10.19**	**9.72 [b]**

a: Country Energy has adopted the inflation forecast, equity beta and MRP determined in the draft decision. Country Energy, *Revised access arrangement information*, January 2010, pp. 27–28, 32–33.

b: These figures have been updated using data for the 15 business days averaging period ending on 12 March 2009.

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

5.9 Revisions

The AER proposes the following revisions:

Revision 5.1: delete Table 21 in section 5.3.6 of the revised access arrangement information and replace it with the following:

Parameter	**Final decision**
Nominal risk-free rate (%)	5.62
Inflation (%)	2.52
Real risk-free rate (%)	3.02
Market risk premium (%)	6.5
Debt risk premium (%)	3.36
Debt to total assets (gearing) (%)	60
Equity beta	0.8
Nominal vanilla WACC (%)	**9.72**

Revision 5.2: 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 5.1.

6 Taxation

6.1 Introduction

This chapter sets out the revised access arrangement proposal 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

Country Energy uses a post-taxation framework to estimate its total revenue in the access arrangement period. It includes a taxation building block in its total revenue estimate.[94] The revised access arrangement proposal accepts the draft decision on the taxation standard life for high pressure mains.[95]

The revised access arrangement proposal does not accept the draft decision to use a gamma estimate of 0.65 and instead maintains its proposal for a gamma estimate of 0.3, consistent with its access arrangement proposal.[96] Country Energy submits that the gamma estimate of 0.3 that was applied by the IPART in the earlier access arrangement period should be adopted in the access arrangement period.[97]

Country Energy submits that the IPART recently released a discussion paper on the weighted average cost of capital (WACC) (IPART discussion paper) which states that there is evidence to support a gamma value towards the lower end of the range between 1 and 0.[98] Country Energy submits that the IPART discussion paper concludes that there is insufficient evidence for the IPART to move away from its estimated range for gamma of 0.3–0.5.[99]

6.3 AER's analysis and considerations

6.3.1 Estimated cost of corporate income taxation

The AER notes that Country Energy has incorporated in full amendment 6.1 of the draft decision, which requires the amendment of the taxation standard life for high pressure mains in the post-taxation revenue model (PTRM) to 50 years from 80 years.[100] As a result of this amendment the AER considers that the method for

94 Country Energy, *Revised access arrangement information*, January 2010, pp. 32–33.

95 Country Energy, *Response to the AER's draft decision on the Wagga Wagga natural gas distribution network access arrangement proposal*, January 2010, p. 8 (Country Energy, *Response to draft decision*, January 2010).

96 Country Energy, *Revised access arrangement information*, January 2010, p. 33.

97 Country Energy, *Revised access arrangement information*, January 2010, p. 33.

98 Country Energy, *Revised access arrangement information*, January 2010, p. 33.

99 Country Energy, *Revised access arrangement information*, January 2010, p. 33. The AER notes that the IPART previously adopted a range of values for gamma of 0.3–0.5. See IPART, *IPART's cost of capital after the AER's WACC review: Lessons from the GFC, Other Industries—Discussion paper*, November 2009, p. 62.

100 Country Energy, *Response to draft decision*, January 2010, p. 8.

estimating the cost of corporate income taxation for each regulatory year of the access arrangement period is arrived at on a reasonable basis.[101]

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 AER considers that the method proposed by Country Energy 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 estimate is no longer the best possible in the circumstances as required by r. 74(2)(b) of the NGR.

Therefore, the AER requires Country Energy 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)

The AER has considered the appropriate value of gamma as part of its recent review of the WACC parameters for electricity transmission and distribution network service providers (WACC review). The AER has also considered the value for gamma (including new information submitted following the WACC review) as part of the recent draft decision on Jemena NSW Gas Networks' access arrangement proposal, as well as draft determinations for the Queensland and the South Australian electricity distribution network service providers.[102]

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. [103] 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. Other than the IPART discussion paper, Country Energy has not provided any new evidence to support its proposed gamma estimate of 0.3.

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 that should be adopted by the AER.

On this basis, the AER considers that the 0.65 value for gamma estimated in the WACC review still represents the best estimate of gamma, arrived at on a reasonable basis, currently available.[104] Therefore, the AER requires Country Energy to revise its estimated gamma as set out in revision 6.3.

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

102 AER, *Draft decision, Jemena access arrangement proposal for the NSW gas networks 1 July 2010–30 June 2015*, February 2010; AER, *Draft decision, Queensland electricity distribution determination*, 25 November 2009; AER, *Draft decision: South Australian electricity distribution determination*, 25 November 2009.

103 IPART, *IPART's cost of capital after the AER's WACC review: Lessons from the GFC, Other Industries—Discussion paper*, November 2009, p. 62.

104 AER, *Draft decision*, November 2010, p. 57.

6.4 Conclusion

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

The AER does not approve the revised gamma of 0.3 as it does not comply with r. 74(2) of the NGR.

6.5 Revisions

The AER proposes the following revisions:

Revision 6.1: delete Table 24 in the revised access arrangement information and replace it with the following:

	2010–11	**2011–12**	**2012–13**	**2013–14**	**2014–15**
Forecast tax depreciation	1915	2021	2125	2226	2335

Revision 6.2: delete table 25 in the revised access arrangement information and replace it with the following:

	2010–11	**2011–12**	**2012–13**	**2013–14**	**2014–15**
Tax payable	486	451	495	541	587
Less value of imputation credits	316	293	322	352	382
Net tax allowance	170	158	173	189	205

Revision 6.3: delete all references to a gamma value of 0.3 in the revised access arrangement information and replace them with a gamma value of 0.65.

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 to 6.3.

7 Operating expenditure

7.1 Introduction

This chapter sets out the AER's analysis and consideration of the revised access arrangement proposal relating to forecast operating expenditure. [105]

The AER's analysis and consideration of the access arrangement proposal as relevant to operating expenditure is set out in the chapter 7 of the draft decision. The draft decision sets out four amendments in relation to operating expenditure. Amendment 7.1 sets out the AER's operating expenditure forecasts. It also requires Country Energy to make any and all consequential amendments necessary to take account of and reflect these forecasts throughout its access arrangement proposal.[106] Amendments 7.2, 7.3 and 7.4 require Country Energy to change the method used to recover the costs of unaccounted for gas (UAG).[107] This chapter considers these issues.

7.2 Revised access arrangement proposal

7.2.1 Forecast operating expenditure

The revised access arrangement proposal forecasts operating expenditure of $14.3 million ($2009–10) over the access arrangement period.[108] This is an increase of $1.8 million ($2009–10) or 14.8 per cent compared to the operating expenditure approved in the draft decision.[109] The main reason for this increase is that Country Energy updated estimates for actual expenditure for 2008–09. The actual total operating expenditure for 2008–09 is $2.1 million ($2009–10) and is substantially higher than the estimate of $1.8 million ($2009–10) included in the access arrangement proposal.[110]

Country Energy submits it does not accept the draft decision relating to cost escalators.[111]

The revised forecast operating expenditure for the access arrangement period is set out in Table 7.1.

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105 AER, *Draft decision*, November 2009, pp. 62–81.

106 AER, *Draft decision*, November 2009, pp. 80–81.

107 AER, *Draft decision*, November 2009, p. 81.

108 Country Energy, *Access arrangement information*, January 2010, p. 30.

109 Country Energy, *Access arrangement information*, January 2010, p. 30; AER, *Draft decision*, November 2009, p. 81.

110 This is sourced from Country Energy, *Access arrangement information*, January 2010, p. 11 and Country Energy, *Access arrangement information*, 1 July 2009, p. 12. The AER has converted nominal dollars to real dollars ($2009–10).

111 Country Energy, *Response to the AER's draft decision on the Wagga Wagga natural gas distribution network access arrangement proposal*, January 2010, p. 4 (Country Energy, *Response to draft decision*, January 2010).

Table 7.1: Revised forecast operating expenditure ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Controllable costs					
Network operations and maintenance	1283	1315	1345	1370	1397
Marketing	167	156	115	115	115
Direct gas network management	398	408	418	425	434
Corporate allocation	409	419	429	437	445
Non controllable costs					
Self insurance	1	1	1	1	1
Debt raising costs	37	38	40	41	42
Unaccounted for gas	546	520	491	466	442
Total operating expenditure	2841	2858	2839	2856	2877

Source: Country Energy, *Revised access arrangement information*, January 2010, p. 30.

Country Energy submits additional information in the consultation period on the draft decision and the revised access arrangement proposal. The report from Econtech[112] (the Econtech report) updates labour cost forecasts to be used in escalating operating and capital expenditure over the access arrangement period.[113]

7.3 AER's analysis and considerations

7.3.1 Forecast operating expenditure

Country Energy has not incorporated proposed amendment 7.1 in full. Country Energy does not accept the draft decision's requirement to use a different data source for cost escalators than proposed by Country Energy.[114] Country Energy however accepts in principle in the revised access arrangement proposal[115] all other operating expenditure aspects of the draft decision which require it to:

- use the 2008–09 expenditure (rather than 2009–10) as the base year on which to project operating expenditure over the access arrangement period
- remove network growth adjustment from escalation of marketing expenditure

112 Econtech, *Labour cost forecasts prepared for Country Energy Gas Pty Ltd*, 10 February 2010.

113 Country Energy, *Country Energy Gas Networks' revised access arrangement proposal for the Wagga Wagga natural gas distribution network 1 July 2010*, 12 February 2010, p. 1. (Country Energy, *Letter to the AER*, 12 February 2010).

114 Country Energy, *Response to draft decision*, 6 January 2010, p. 8.

115 The AER notes that the actual forecast values included in Amendment 7.1 of the draft decision have not been applied because they have been updated for actual base year expenditure.

- apply a higher unit rate to forecast debt raising costs (10.4 bppa instead of 8.1 bppa) in accordance with the expected number of bond issues
- apply a lower forecast operating expenditure for self insurance
- include unaccounted for gas (UAG) expenditure in forecast operating expenditure.[116]

The AER's analysis and consideration of variations from the draft decision are set out below.

7.3.1.1 Variations from initial access arrangement proposal

Revisions to the base year expenditure

The revised access arrangement proposal accepts the draft decision to select 2008–09 as the base year and updates estimates for operating expenditure in this year with actual values.[117] Table 7.2 sets out operating expenditure for 2008–09 proposed in the access arrangement proposal and its revised access arrangement proposal as well as the differences between these values.

Table 7.2: Variation in base year 2008–09 operating expenditure ($'000, real, 2009–10 unless otherwise stated)

	Access arrangement proposal	Revised access arrangement proposal	Variation	Percentage difference (%)
Controllable costs[a]				
Network operations and maintenance	1232	1223	–9	–0.7
Marketing	112	123	11	10.1
Direct gas network management	316	379	64	20.1
Corporate allocation	189	367	178	94.6
Total operating expenditure	1848	2092	244	13.2

Source: Country Energy, *Revised access arrangement information*, January 2010, p. 11 and Country Energy, *Access arrangement information*, 1 July 2009, p. 12.

a: Note the AER has converted nominal dollar values as submitted by Country Energy to real 2009–10 dollar values.

The AER notes significant variations in Country Energy's 2008–09 operating expenditure in relation to corporate allocation, direct gas network management and marketing categories between its access arrangement proposal and its revised access

116 Country Energy, *Response to draft decision*, January 2010, p. 8; AER, *Draft decision*, November 2009, p. 80.

117 Country Energy, *Revised access arrangement information*, January 2010, pp. 11–12, 29.

arrangement proposal. As required in the draft decision, the 2008–09 expenditure is taken as the base year on which to project operating expenditure over the access arrangement period. Therefore revisions to Country Energy's base year expenditure are relevant because they result in changes to its forecast operating expenditure.

In explaining these variations Country Energy submits that at the time of preparing the access arrangement proposal, a substantial amount of gas network management costs and corporate allocations relating to a third party contract had not been allocated to the gas business. Therefore when estimating the proportion of actual and forecast expenses to be allocated to the Wagga Wagga network for 2008–09 in the access arrangement proposal, the gas network management and corporate allocations were understated. Country Energy further submits that the revised access arrangement proposal includes the Wagga Wagga network's allocated share of the actual costs for corporate allocation and gas network management for 2008–09.[118]

The revised operating expenditure for 2008–09 reflects actual expenditure for the base year rather than estimates as provided in the access arrangement proposal. The AER notes that this operating expenditure is broadly in line with Country Energy's operating expenditure incurred (and forecast by the Independent Pricing and Regulatory Tribunal (IPART)) over the earlier access arrangement period.[119] The AER considers that the revised operating expenditure for 2008–09 is the appropriate expenditure on which to base Country Energy's forecast operating expenditure.

Step change in corporate allocation expenditure

Country Energy submits that the small increase in corporate allocation costs in 2009–10 (8.2 per cent increase in real terms[120]) is also relevant in the access arrangement period, and reflects step changes in several corporate services categories.[121] These include:

- health and safety resulting in increased staff training, increased workplace trainer requirements and changes in work practices within the field to improve safety for employees
- learning and development resulting in skills and competency development programs, assessment validations, course development, competency assessments, project management, leadership development, staff training to achieve competency for field staff and expenditure to address recommendations from a coroners inquest in relation to field staff
- information services resulting in upgrades to financial systems and the service desk.[122]

Country Energy submits that these step changes are either the result of externally imposed obligations or lead to improvements in network efficiency.[123] The AER notes

118 Country Energy, email to the AER, 10 February 2010, p. 2.

119 Country Energy, *Revised access arrangement information*, January 2010, p. 11.

120 Country Energy, *Revised access arrangement information*, January 2010, p. 11.

121 Country Energy, *Revised access arrangement information*, January 2010, p. 32.

122 Country Energy, *Revised access arrangement information*, January 2010, p. 32.

that these step changes are expected to continue over the access arrangement period. The AER considers that the step changes identified by Country Energy should be approved as they are either the result of external factors or lead to improvements in network efficiency. The AER also notes that the proposed step changes are relatively minor in absolute terms (approximately $20 000 per annum).[124]

The AER considers that Country Energy's 2008–09 corporate allocation expenditure plus the proposed step change included in the revised access arrangement proposal[125] provides the appropriate expenditure on which to base Country Energy's forecast operating expenditure.

Increase in marketing costs

Country Energy submits that the increase in marketing costs in 2009–10 (34.1 per cent increase in real terms)[126] that continues in the first two years of the access arrangement period reflects full year payments made under its incentive program.[127] The incentive program is operated by the retailers and is offered to existing households to connect and install gas appliances runs during autumn and winter each year. As the program commenced in autumn 2009 only a small number of payments has been received in the 2008–09 base year.[128] Country Energy has confirmed that actual expenditure incurred over the 2009 winter period which relates to the incentive program is in line with forecasts.[129] The AER notes that for the final three years of the access arrangement period, forecast marketing expenditure is actually lower than the 2008–09 base year as a result of the cessation of the incentive program.[130]

The AER considers that while Country Energy's forecast marketing expenditure is higher than the proposed forecast included in the draft decision, it has been adequately substantiated and is consistent with the requirements of r. 74 and r. 91 of the NGR.

7.3.1.2 Cost escalators

Labour

Country Energy submits that while the AER considers the approach adopted to forecast the labour cost escalators to be appropriate, it would be unreasonable for the AER to substitute a different or, what it considers, a more desirable methodology.[131] In the draft decision, under r. 74(2) of the NGR the AER uses up-to-date labour escalator forecasts based on a report by Access Economics.[132]

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123 Country Energy, email to the AER, 11 March 2010.

124 Country Energy, email to the AER, 10 February 2010, Gas global opex model.

125 Country Energy, email to the AER, 10 February 2010, Gas global opex model.

126 Country Energy, *Revised access arrangement information*, January 2010, p. 11.

127 Country Energy, *Revised access arrangement information*, January 2010, p. 31.

128 Country Energy, *Revised access arrangement information*, January 2010, p. 31.

129 Country Energy, email to the AER, 10 February 2010, p. 2.

130 Country Energy, email to the AER, 10 February 2010, Gas global opex model.

131 Country Energy, *Response to draft decision*, January 2010, p. 4.

132 AER, *Draft decision*, November 2009, pp. 27–28.

Country Energy submits that the AER has incorrectly exercised its discretion under r. 79 of the NGR in using a data source other than that submitted by the service provider and proposing alternative forecasts.[133] Country Energy submits that as the AER has approved its methodology, it provides updated labour cost escalator forecasts from the Econtech report.[134]

For reasons outlined in chapter 3, the AER is satisfied that the proposed cost escalator for labour complies with the requirements of r. 91 and r. 74(2) of the NGR. As a result, the AER has revised forecast operating expenditure by applying up to date labour cost escalator forecast using the Econtech report's methodology as submitted by Country Energy on 12 February 2010.[135] As outlined in the draft decision, the AER approves this methodology[136] and considers that the Econtech report's real labour cost forecasts are consistent with r. 91 of the NGR and represent the best forecast possible in the circumstances.[137]

7.3.1.3 Self insurance

The AER notes that the revised access arrangement proposal has accepted the operating expenditure for self insurance as approved in the draft decision.[138] As a consequence the AER outlines relevant reporting requirements for the self insurance event approval.

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:[139]

> …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.[140]

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 estimate of the amount of the obligation.[141] However for contingent liabilities the

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133 NGR, r 79(6); Country Energy, *Response to draft decision*, January 2010, p. 4.

134 Country Energy, *Letter to the AER*, 12 February 2010, attachment 1, KPMG Econtech report labour costs forecasts.

135 Country Energy, *Letter to the AER*, 12 February 2010, attachment 1, KPMG Econtech report labour costs forecasts.

136 AER, *Draft decision*, November 2009, p. 71.

137 NGR, r. 74(2).

138 Country Energy, *Revised access arrangement information*, January 2010, p. 34.

139 AASB 137, *Provisions, contingent liabilities and contingent assets*, paragraph 10.

140 AASB 137, *Provisions, contingent liabilities and contingent assets*, paragraph 13(b).

141 AASB 137, *Provisions, contingent liabilities and contingent assets*, paragraph 14.

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 considers that that when a self insurance event approved by the AER occurs during the access arrangement period, the AER should be notified as part of Country Energy's annual compliance reporting. 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.

7.3.1.4 Unaccounted for gas

Country Energy submits that it has included operating expenditure for UAG to provide transparency and incentives for Country Energy to minimise UAG over the access arrangement period.[142] In calculating the costs of UAG Country Energy has adopted the methodology proposed by the AER in the draft decision.[143]

As discussed in chapter 9, Country Energy updates its demand forecast from those submitted in the revised access arrangement proposal. This revision affects the

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142 Country Energy, *Revised access arrangement information*, January 2010, p. 34.

143 Country Energy, *Revised access arrangement information*, January 2010, p. 35.

estimation of the forecast operating expenditure for UAG as this estimate is based on a percentage of forecast demand. Given this revision, the AER considers the estimate for UAG costs set out in Table 7.3 are arrived at on a reasonable basis and represent the best estimate or forecast possible in the circumstances.[144]

Table 7.3: Revised forecast unaccounted for gas (units as stated)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Total load (GJ)	1 565 930	1 577 862	1 587 802	1 598 625	1 609 373	7 939 592
Weighted average UAG (%)	5.75	5.40	5.10	4.80	4.50	
UAG quantity (GJ) = total load x weighted average UAG	90 041	85 205	80 978	76 734	72 422	405 379
Delivered gas price ($'000, real 2009–10/GJ)	5.98	6.02	5.99	6.00	6.02	
Total UAG costs ($'000, real 2009–10) = UAG quantity x delivered gas price / 1000	538	513	485	460	436	2433

Source: Table is based on information from chapter 9 of the final decision; Wilson Cook, Review of expenditure of ACT and NSW gas DNSPs, C*ountry Energy's Wagga Wagga Network*, 29 October 2009, p. 11; ACIL, *Fuel resource, new entry and generation costs in the NEM, Final report*, April 2009, p. 69 (for new CCGT SWNSW).

The AER requires Country Energy to amend its forecast operating expenditure as outlined in revision 7.1 to take into adjustments made to UAG.

7.3.2 Summary

As outlined above, the AER does not consider that the forecast operating expenditure revised by Country Energy complies with r. 91 of the NGR and accordingly the AER proposes to make revisions to:

- the forecast operating expenditure for UAG based on the revised demand forecast which is discussed in chapter 9 of the final decision
- the forecast operating expenditure in the revised access arrangement proposal by applying the more up to date labour cost escalator forecasts from the Econtech report which was submitted after Country Energy submitted its revised access arrangement proposal.

144 NGR r. 4(2).

7.4 Conclusion

The AER does not approve the revised forecast operating expenditure as it does not comply with r. 91 of the NGR.

7.5 Revisions

The AER proposes the following revisions:

Revision 7.1: delete Table 23 in the revised access arrangement information and replace it with the following:

Table 7.4: Country Energy's forecast operating expenditure ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Controllable costs					
Network operations and maintenance	1281	1317	1357	1392	1422
Marketing	166	156	116	117	117
Direct gas network management	398	409	421	432	441
Corporate allocation	408	420	433	444	453
Non controllable costs					
Self insurance	1	1	1	1	1
Debt raising costs	37	38	40	41	42
Unaccounted for gas	538	513	485	460	436
Total operating expenditure	2829	2855	2853	2888	2913

Revision 7.2: 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 7.1.

8 Total revenue

8.1 Introduction

This chapter sets out the estimate of total revenue requirements for each year of the access arrangement period.

This chapter also sets out the X factors applied to Country Energy's reference tariffs as part of the calculation of the CPI adjustment.

8.2 Revised access arrangement proposal

The revised access arrangement proposal proposes the total revenue requirement for each year of the access arrangement period and X factors set out in Table 8.1.

Table 8.1: Revised total revenue requirements and X factors ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	6069	6432	6841	7237	7600
Return of capital	826	675	737	808	896
Operating expenditure	2910	3000	3052	3146	3247
Benchmark tax liability	386	358	393	429	464
Total costs	10 192	10 466	11 023	11 619	12 207
X factor [a] (%)	–19.7 [b]	–2.5	–2.5	–2.5	–2.5

Source: Table 8.1 is based on information found at Country Energy, *Revised access arrangement information*, 6 January 2010, p. 36.
a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factor is P0.

8.3 AER's analysis and considerations

Part A of the final decision considers the building blocks for total revenue proposed in the revised access arrangement proposal.

8.3.1 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 tariff revenue over the access arrangement period.

8.3.2 Total revenue, P0 adjustment and X factors

The AER has estimated total revenue, P0 adjustment and X factors based on its decisions regarding the building block components discussed in chapters in Part A of the final decision. These estimates are summarised in Table 8.2.

The final decision results in a total revenue requirement over the access arrangement period of $48.8 million ($2009–10), compared to $53.4 million ($2009–10) proposed in the revised access arrangement proposal. The main reasons for this difference reflect that the AER:

- does not approve the proposal cost escalators for escalating the operating and capital expenditure
- does not approve the proposed weighted average cost of capital (WACC)

Table 8.2: Final decision total revenue and X factors ($'000, nominal unless otherwise stated)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	5788	6136	6529	6913	7269
Depreciation	786	633	693	761	848
Operating and maintenance	2901	3001	3074	3190	3299
Corporate income tax	170	158	173	189	205
Total	9645	9928	10 470	11 054	11 621
X factor tariff revenue [a] (%)	-12.8	-2.5	-2.5	-2.5	-2.5
Smooth revenue path	9324	9915	10 530	11 188	11 884

Source: Table 8.2 is based on information from Part A of the final decision.
a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factor is P0.

8.4 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.

8.5 Revisions

The AER proposes the following revisions:

Revision 8.1: delete Tables 29 and 30 in the revised access arrangement information and replace them with the following:

Table 8.3: Forecast total revenue requirements for the Access Arrangement ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	5788	6136	6529	6913	7269
Depreciation	786	633	693	761	848
Operating and maintenance	2901	3001	3074	3190	3299
Corporate income tax	170	158	173	189	205
Total	9645	9928	10 470	11 054	11 621
X factor tariff revenue [a] (%)	-12.8	-2.5	-2.5	-2.5	-2.5

a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factor is P0.

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.

Part B—Tariffs

9 Demand forecasts

9.1 Introduction

This chapter examines Country Energy's 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 Country Energy's access arrangement proposal in relation to demand forecasts is set out in chapter 9 of the draft decision.[145]

9.2 Revised access arrangement proposal

The revised access arrangement proposal proposes demand forecasts set out at Table 9.1. Country Energy did not revise the average, maximum and minimum demands.

9.2.1 Volume load forecasts

The revised access arrangement proposal accepts the draft decision to increase customer numbers by 315 per year based on a 90 per cent penetration rate of new dwellings per year (Country Energy had proposed a penetration rate of 50 per cent).[146]

The revised access arrangement information includes updated actual customer numbers for 2008–09 and a revised estimate for 2009–10[147] which is 91 customers per year higher than those set out in the draft decision.

The revised access arrangement proposal, inadvertently omits the forecast load of two customers who were reclassified from contract to volume customers. The load associated with these reclassified customers is 70 706 GJ during the access arrangement period.[148] On 3 March 2010 Country Energy provided additional information to include these customers.[149]

The total volume load forecast in the revised access arrangement proposal is 0.4 per cent higher than approved in the draft decision.

9.2.2 Contract load forecasts

Country Energy revises its load forecast for contract customers in late January 2010 because a contract customer deactivated its gas connection.[150] Consequently, Country Energy submits a revised forecast load for contract customers taking account of this

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145 AER, *Draft Decision*, November 2009, pp. 92–98.

146 Country Energy, *Response to AER draft decision Wagga Wagga access arrangement proposal*, January 2010, pp. 8–9 (Country Energy, *Response to draft decision*, January 2010).

147 Country Energy, *Revised access arrangement information*, January 2010, p. 6; Country Energy, *Response to draft decision*, January 2010, pp. 8–9.

148 Infrastructure and Regulation Services, *Country Energy gas load forecast Wagga Wagga gas distribution system*, June 2009, pp. 2, 26 (confidential).

149 Country Energy, email to the AER, 3 March 2010.

150 Country Energy, *Letter to the AER*, 12 February 2010, p. 2.

updated information.[151] This results in a revised total contract load that is 5.1 per cent lower than the access arrangement proposal.

9.2.3 Total load forecasts

As a result of the change in volume and contract loads, the revised total load forecast is 1.9 per cent lower than proposed in the draft decision.

151 Country Energy, *Letter to the AER*, 12 February 2010, p. 2.

Table 9.1: Revised total annual forecast load, customer numbers and volume load

	2005–06	2006–07	2007–08	2008–09	2009–10[a]	2010–11[a]	2011–12[a]	2012–13[a]	2013–14[a]	2014–15[a]
Volume load										
Volume customers (no.)	17 272	17 378	17 999	18 378	18 670	18 960	19 250	19 540	19 830	20 120
Total volume load (GJ)	924 104	810 992	856 547	880 904	893 967	919 586	931 867	942 157	953 330	964 427
Contract load										
Contract customers (no)	15	16	17	15	15	14	14	14	14	14
Bomen zone load (GJ)	b	b	b	b	b	461 372	461 193	461 013	460 834	460 655
Central/fringe zone load (GJ)	b	b	b	b	b	184 972	184 802	184 632	184 461	184 291
Total contract load (GJ)	627 876	628 662	705 879	723 569	681 694	646 344	645 995	645 645	645 295	644 946
Total load	1 551 980	1 439 654	1 562 426	1 574 473	1 575 661	1 565 930	1 577 862	1 587 802	1 598 625	1 609 373
Contract MDQ										
Bomen zone MDQ (GJ)	b	b	b	b	b	2884	2884	2884	2884	2884
Central/Fringe zone MDQ (GJ)	b	b	b	b	b	1084	1084	1084	1084	1084

Source: Country Energy, *Revised access arrangement information*, 1 July 2010, pp. 6, 19, Country Energy, *Submission to the AER*, 12 February 2010, p. 2 and Country Energy, email to the AER, 3 March 2010.
a: Forecast.
b: Actual contract load and MDQ disaggregated by zones for the previous access arrangement period was not provided.
no. Number.
MDQ: Maximum daily quantity

9.3 AER’s analysis and considerations

The section outlines the AER’s consideration of the revised access arrangement proposal for volume customer numbers, volume load forecasts and contract load forecasts.

9.3.1 Volume customer numbers

The AER considers that the revised customer numbers, which adds 91 new volume customers to Country Energy’s 2009–10 demand forecasts are arrived at on a reasonable basis and represent the best forecast possible in the circumstances.[152]

9.3.2 Volume load forecasts

In estimating the revised volume load forecasts, the AER considers Country Energy follows the original methodology as approved in the draft decision. The AER therefore considers that the revised volume load forecasts are consistent with r. 74(2) of the NGR as they are arrived at on a reasonable basis and represent the best forecasts possible in the circumstances.

9.3.3 Contract load forecasts

Given the loss of a contract customer, the AER considers that the revised contract load forecasts are consistent with r. 74(2) of the NGR as they are arrived at on a reasonable basis and represent the best forecasts possible in the circumstances.

9.4 Conclusion

The AER approves the revised demand forecasts as these comply with r. 74(2) of the NGR.

152 NGR, r. 74(2).

10 Reference tariffs

10.1 Introduction

This chapter sets out the AER's consideration of the revised tariff proposal against the requirements in the NGR.

The AER's analysis and consideration of the access arrangement proposal in relation to the allocation of costs and tariff setting is set out in chapter 10 of the draft decision.[153]

The AER notes that Country Energy has incorporated in full the proposed amendment 10.1 of the draft decision in relation to reference tariffs which was the only amendment required by the AER. This requires Country Energy to delete a procedure for the addition and deletions of reference tariffs.[154]

10.2 Revised access arrangement proposal

The revised access arrangement proposal proposes five tariff classes; three volume tariff classes (small, medium and large) and two contract tariff classes (Bomen and Central).[155]

The tariff structure remains largely unchanged from the earlier access arrangement, except for the merger of the central and fringe zone tariffs for contract transportation services.[156]

Table 10.1 shows the revised expected revenue for each tariff class is between avoidable costs and stand alone costs.

Table 10.1: Revised avoidable and stand alone cost

		Avoidable cost	**Expected revenue**	**Stand-alone cost**
Volume	Small	2.85	8.73	47.88
	Medium	0.08	0.35	0.88
	Large	0.02	0.10	0.36
Contract	Bomen	0.10	0.28	1.09
	Central	0.04	0.18	1.21

Source: Country Energy, email to the AER, 11 March 2010, attachment, *Marginal and Stand Alone Cost Analysis*.

153 AER, *Draft decision*, November 2009, pp. 99–104.

154 Country Energy, *Response to the AER's Draft Decision Wagga Wagga Access Arrangement Proposal*, January 2010, p. 9 (Country Energy, *Response to the draft decision*, January 2010.).

155 Country Energy, *Revised access arrangement proposal*, January 2010, pp. 55–56.

156 Country Energy, *Revised access arrangement information*, January 2010, p. 38.

The revised access arrangement proposal outlines that the reference tariffs reflect the cost of providing the reference services.[157]

10.3 AER's analysis and considerations

In the revised access arrangement proposal Country Energy continues to classify customers into five tariff classes. The AER considers that Country Energy has satisfied r. 94(1) of the NGR, which requires customers for reference services to be divided into tariff classes. The AER considers that tariff classes have been constituted with regard to the need to group customers for reference services together on an economically efficient basis and need to avoid unnecessary transaction costs.[158] Since Country Energy does not expect any customers will take up non–reference services during the access arrangement period, the requirement to demonstrate 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 is compliant with r. 94(3) of the NGR as Country Energy demonstrates for all tariff classes that expected revenue is between stand alone and avoidable costs.

The AER considers that Country Energy has not explicitly provided evidence that each tariff or each charging parameter in a tariff class takes into account the long run marginal costs. However, this is implicitly done by increasing the capital base for capital expenditure consistent with r. 79 of the NGR. In circumstances where capital expenditure is above the long run marginal costs, these amounts take the form of capital contributions and are not added to the capital base.[159]

The AER considers that the charging parameters have been determined having regard to transaction costs and responsiveness of customers to price signals in relation to transport services, as required by r. 94(4)(b) of the NGR. Country Energy provides analysis to support its claim that it has considered how large fixed charges might impact customers disconnection and connection rates, even if this provides the most efficient tariff structure.

10.4 Conclusion

The AER approves the methodology for allocation costs and for setting the reference tariffs as they comply with r. 93 and r. 94 of the NGR.

157 Country Energy, *Revised access arrangement information*, January 2010, p. 38.

158 NGR, r. 94(2).

159 Country Energy, *Revised access arrangement proposal*, January 2010, p. 27.

11 Tariff variation mechanism

11.1 Introduction

This chapter sets out the AER's consideration of issues that arise the revised access arrangement proposal in relation to the revised tariff variation mechanisms.

The AER's analysis and consideration of Country Energy's access arrangement proposal in relation to the tariff variation mechanism is set out in chapter 11 of the draft decision.

The AER notes that Country Energy incorporates in full amendments 11.4–11.5, 11.7, 11.10, 11.11, 11.13 and 11.15 of the draft decision. Further, amendments 11.2 and 11.12 of the draft decision are incorporated with only minor changes.[160] This chapter considers issues that Country Energy has not accepted.

11.2 Annual tariff variation formula mechanism

11.2.1 Equalisation of revenue

11.2.1.1 Revised access arrangement proposal

Country Energy demonstrates that for its reference services the net present value of the proposed revenue is equal to the net present value of the revenue requirement.[161]

11.2.1.2 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.[162]

The AER considers that the proposed methodology for equalising revenue in the revised access arrangement proposal complies with r. 92(2) of the NGR. However, the final decision revises the total revenue and as a consequence the expected revenue also changes. For this reason, revision 11.1 reflects the changes to forecast total revenue[163] arising from the 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.

11.2.1.3 Conclusion

The AER does not approve the revised reference tariffs in appendix 2 of the revised access arrangement proposal as they do not comply with r. 92(2) of the NGR.

11.2.1.4 Revisions

The AER proposes the following revisions:

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160 Country Energy, *Response to the AER's Draft Decision Wagga Wagga Access Arrangement Proposal*, January 2010, pp. 9–11 (Country Energy, *Response to the draft decision*, January 2010).

161 Country Energy, *Post Tax Revenue Model (PTRM)*, January 2010 (confidential).

162 NGR, r. 92(2).

163 NGR, r. 76.

Revision 11.1: amend the revised access arrangement proposal to:

- delete the Table in section A.2 in appendix 2 of the revised access arrangement proposal and replace it with the following:

	Maximum Meter Flow Rate (m3/hr)	($nominal), excluding GST 1 July 2010–30 June 2011
Volume		
Small	10	
Yearly Charge $		176.8986
$/GJ		6.2709
Medium	30	
Yearly Charge $		308.4153
$/GJ		2.3586
Large	150	
Yearly Charge $		924.5324
$/GJ		2.3586

- delete the Table in section A.3 in appendix 2 of the revised access arrangement proposal and replace it with the following:

	($nominal), excluding GST 1 July 2010–30 June 2011
Contract	
($/GJ of MDQ/Year)	
Bomen	96.3731
Central	165.8304

- delete the Table in section A.4 in appendix 2 of the revised access arrangement proposal and replace it with the following:

Meter Type	Initial Monthly Metering Charge ($nominal) excluding GST July 2010–30 June 2011
6GT	555.64
4GT.	540.15
AL5000	582.11
AL2300	550.09
AL1000	485.83
7M175	489.18
5M175	480.62
3M175	508.13

- delete the Table in section A.5 in appendix 2 of the revised access arrangement proposal and replace it with the following:

Additional Service	Initial Charges 1 July 2010–30 June 2011 ($ nominal) excluding GST
Meter Testing Service	240.43
Special Meter Reading Service	41.61
Reconnection Service	48.55
Disconnection Service	41.61
Business Disconnection/Reconnection Service	98.25
After Hours Reconnection Service	115.59
Deactivation Service	451.06

11.2.2 Side constraint

11.2.2.1 Revised access arrangement proposal

The revised access arrangement proposal outlines that it does not support a side constraint in the tariff variation formula mechanism as it limits its ability to signal the true costs of providing services to customers and creates cross subsidies. Instead, the revised access arrangement proposal includes a modified side constraint.[164] Country Energy submits that the modification is necessary to align the AER's proposed amendment with the NSW electricity distribution final decision.[165]

11.2.2.2 AER's analysis and considerations

The AER considers in this instance that a side constraint which is consistent between Country Energy's gas and electricity businesses is desirable and is another relevant factor to consider when determining whether a tariff variation mechanism is appropriate.[166] The AER agrees that the amendments made by Country Energy to the AER's proposed side constraint (amendment 11.1 of the draft decision) are appropriate.

11.2.2.3 Conclusion

The AER has had regard to factors in r. 97(3) of the NGR and for the reasons outlined above approves the changes made by Country Energy to the side constraint.

11.2.3 Additional services

11.2.3.1 Revised access arrangement proposal

The revised access arrangement proposal makes a minor change to amendment 11.2 of the draft decision regarding clause 8.2.2 of the revised access arrangement information to bracket 'Additional Services' with 'Monthly Metering Charges'. This was done to align amendment 11.2 with amendment 2.6 of the draft decision.[167]

11.2.3.2 AER's analysis and considerations

The AER notes that the revised access arrangement proposal provides greater clarity regarding the treatment of additional services under clause 8.2.2 of the access arrangement information.

11.2.3.3 Conclusion

The AER approves the changes made to clause 8.2.2 of the revised access arrangement proposal.

11.2.4 CPI formula

11.2.4.1 Revised access arrangement proposal

The revised access arrangement proposal states that the CPI formula it originally proposed is consistent with the CPI formula used in the AER's final decision for NSW electricity distribution service providers. In order to maintain consistency between its electricity and gas businesses, Country Energy has not accepted the AER's CPI reformulation amendment (amendment 11.3 of the draft decision).[168]

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164 AER, *Draft decision*, November 2009, p. 114; Country Energy, *Revised access arrangement information*, January 2010, p. 40.

165 Country Energy, *Response to draft decision*, January 2010, p. 9.

166 NGR, r. 97(3)(e).

167 Country Energy, *Response to draft decision*, January 2010, p. 9.

168 AER, *Draft decision*, November 2009, p. 109.

However, to address the AER's concern about the CPI formula, Country Energy has clarified the definition of change in CPI in the revised access arrangement proposal.[169]

11.2.4.2 AER's analysis and considerations

The AER considers in this instance that a CPI formula which is consistent between Country Energy's gas and electricity businesses is desirable and is another relevant factor to consider when determining whether a tariff variation mechanism is appropriate.[170] However, the AER considers the revised definition of 'change in CPI' is not consistent with the AER's final decision for NSW electricity distribution service providers.[171] As required in revision 11.2, the definition of 'change in CPI' must be amended to the definition in the AER's final decision for NSW electricity distribution service providers. Further, the definition of 'change in CPI' must include an example of how the CPI formula will be implemented within the access arrangement period. An example will make the CPI formula easier to understand, reducing administrative costs for the AER, the service provider, and users and potential users.[172]

11.2.4.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR, and it does not approve the definition of 'change in CPI' in the revised access arrangement. The AER's revision 11.2 makes the definition of 'change in CPI' consistent with AER's final decision for NSW electricity distribution service providers. Further, revision 11.2 provides an example of how the CPI formula will be applied within the access arrangement period.

11.2.4.4 Revisions

The AER proposes the following revisions:

Revision 11.2 amend the revised access arrangement proposal to delete the 'change in the CPI' definition in the glossary section 14 and replace it with the following:

> **Change in CPI** means the number derived, with respect to regulatory year 't', from the application of the following formula:
>
> $$\Delta CPI_{t} = \left(\frac{CPI_{\text{MAR (t-2)}} + CPI_{\text{JUN (t-2)}} + CPI_{\text{SEP (t-1)}} + CPI_{\text{DEC (t-1)}}}{CPI_{\text{MAR (t-3)}} + CPI_{\text{JUN (t-3)}} + CPI_{\text{SEP (t-2)}} + CPI_{\text{DEC (t-2)}}} \right) - 1$$
>
> $CPI_{\text{month, (year)}}$ means the CPI for the quarter and financial year indicated
>
> For example when determining tariff for the 2011–12 financial year the following CPI formula is used:

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169 Country Energy, R*esponse to draft decision*, January 2010, p. 9; Country Energy, *Revised access arrangement proposal*, January 2010, p. 45.

170 NGR, r. 97(3)(e).

171 AER, *Final decision: New South Wales distribution determination 2009–10 to 2013–14*, 28 April 2009, p. 62.

172 NGR, r. 97(3)(b).

$$\Delta CPI_{2012} = \left(\frac{CPI_{\text{MAR 2010}} + CPI_{\text{JUN 2010}} + CPI_{\text{SEP 2010}} + CPI_{\text{DEC 2010}}}{CPI_{\text{MAR 2009}} + CPI_{\text{JUN 2009}} + CPI_{\text{SEP 2009}} + CPI_{\text{DEC 2009}}} \right) - 1$$

where:

$CPI_{\text{MAR 2010}}$ is the March quarter data for the 2009–2010 financial year which corresponds to the period 1 January 2010 to 31 March 2010

$CPI_{\text{JUN 2010}}$ is the June quarter data for the 2009–2010 financial year which corresponds to the period 1 April 2010 to 30 June 2010

$CPI_{\text{SEP 2010}}$ is the September quarter data for the 2010–2011 financial year which corresponds to the period 1 July 2010 to 30 September 2010

$CPI_{\text{DEC 2010}}$ is the December quarter data for the 2010–2011 financial year which corresponds to the period 1 October 2010 to 31 December 2010

11.2.5 Verification of actual gas quantities

11.2.5.1 Revised access arrangement proposal

The revised access arrangement proposal incorporates the requirement to provide an independent statement allowing the AER to verify the actual gas quantities used in the tariff variation mechanism (amendment 11.6 of the draft decision). However, Country Energy does not accept the periods and frequency of gas quantity data that needs to be audited or verified. Country Energy states that this provides benefit in terms of annual tariff variations and it will incur significant extra cost in providing audited quarterly quantities.[173]

11.2.5.2 AER's analysis and considerations

In the draft decision the AER requires Country Energy to provide an independent statement to verify actual gas quantities used in the tariff formula variation mechanism.[174] The AER requires the audited statement in order to provide it with adequate oversight.[175] The AER recognises that the audit statement will increase Country Energy's administrative costs.[176] Having regard to the factors in r. 97(3) of the NGR, the AER considers that the quantities do not need to be independently audited, but instead verified by an officer of the service provider.

In the draft decision the AER required that a verification statement should provide for quarterly and annual gas quantities for the calendar year.[177] The AER agrees with Country Energy that the annual and quarterly quantity data should be for the latest financial year rather than the calendar year. This is because the latest financial year at

173 Country Energy, *Response to draft decision*, January 2010, pp. 9–10.

174 AER, *Draft decision*, November 2009, p. 110.

175 NGR, r. 97(4).

176 NGR, r. 97(3)(b).

177 AER, *Draft decision*, November 2009, p. 110.

the time of the tariff variation review is the year used for quantity variable input in the tariff variation formula mechanism.[178]

Further, the AER in the draft decision requires the annual gas quantities to be divided into quarterly data.[179] The AER considers that having the quantities for the latest financial year further divided into quarterly data will increase Country Energy's administrative costs.[180] Having regard to the factors in r. 97(3) of the NGR, the AER considers that the annual quantities do not need to be further divided into quarterly.

11.2.5.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR and does not approve Country Energy's amendment regarding the use of an audit statement to verify actual gas quantities used in the tariff variation mechanism in the revised access arrangement proposal. Instead, the AER’s revision 11.3 requires Country Energy to provide a statement to verify annual gas quantity data.[181]

11.2.5.4 Revisions

The AER proposes the following revisions:

Revision 11.3 amend the revised access arrangement proposal to delete section 12.6(g)(3) and replace it with the following:

> a statement to support the Gas Quantity inputs in the tariff variation formula. The statement must be provided by an officer of Country Energy Gas and the Quantity input must reflect the most recent actual financial year Quantity available at the time of the tariff variation assessment.

11.3 Cost pass through tariff variation mechanism

11.3.1 General pass through events and material impact

11.3.1.1 Revised access arrangement proposal

The revised access arrangement proposal incorporates a general pass through event and amends its definition of material impact for cost pass through events in accordance with amendments 11.8 and 11.9 of the draft decision.[182] However, in doing so, Country Energy submits that it is aligning the definition of a general pass through event and material impact with that agreed between EnergyAustralia and the AER in the recent electricity distribution determination merits review.[183]

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178 The latest financial year at the time of the tariff variation review is the t-2 year in the tariff variation formula mechanism. For the tariff variations it is the most recent financial year that actual data can be provided.

179 AER, *Draft decision*, November 2009, p. 110.

180 NGR, r. 97(3)(b).

181 NGR, r. 97(3)(e).

182 AER, *Draft decision*, November 2009, p. 111.

183 Country Energy, *Response to draft decision*, January 2010, p. 10.

11.3.1.2 AER's analysis and considerations

The AER considers in this instance that a definition for a general pass through event and material impact which is consistent between Country Energy's gas and electricity businesses is desirable and is another relevant factor to consider when determining whether a tariff variation mechanism is appropriate.[184] The AER also considers that the materiality definition in section 12.5.1(a) of the revised access arrangement proposal should be updated to reflect the terminology in the NGR and NGL.[185]

11.3.1.3 Conclusion

The AER accepts Country Energy's definition of the general pass through event. However, having regard to factors in r. 97(3) of the NGR, the AER does not approve the change made by Country Energy to the material impact definition in section 12.5.1(a) of the revised access arrangement proposal. As outlined in revision 11.4, the AER requires the materiality threshold definition to be amended to reflect the wording in the NGR and NGL.

11.3.1.4 Revisions

The AER proposes the following revisions:

Revision 11.4 amend the revised access arrangement proposal to delete section 12.5.1(a) and replace it with the following:

> Material impact for a *Pass Through Event* means the event would exceed 1 per cent of the smoothed forecast revenue specified in the final decision in the years of the access arrangement period that the costs are incurred, except each tax change event in section 12.5.1(b).

11.3.2 Giving effect to a pass through event

11.3.2.1 Revised access arrangement proposal

The revised access arrangement proposal proposes to modify amendment 11.12 of the draft decision to make it clear that additional services are reference services. Country Energy incorporates the amendments as stand alone paragraphs and has reworded the second sentence of the amendment in the first bullet point of amendment 11.12 to provide greater clarity.[186]

11.3.2.2 AER's analysis and considerations

The AER considers that the changes to amendment 11.12 of the draft decision proposed by Country Energy improve the readability of the provision and provide greater clarity.

11.3.2.3 Conclusion

The AER approves the changes made by Country Energy to amendment 11.12 of the draft decision.

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184 NGR, r. 97(3)(e).

185 NGR, r. 97(3)(e).

186 Country Energy, *Response to draft decision*, January 2010, p. 11.

11.3.3 Notification period

11.3.3.1 Revised access arrangement proposal

The revised access arrangement proposal incorporates a requirement to notify the AER that an event has occurred within 90 business days. Country Energy states that a 90 business days notification period rather than the three months as required in the draft decision[187] is consistent with the recent NSW electricity distribution determination.[188]

11.3.3.2 AER's analysis and considerations

The AER accepts this revision for consistency with the NSW electricity determination[189] however, considers that amendment 11.14 needs to be modified to make it clear that the requirement to advise the AER of a pass through event within 90 business days is separate from a notification of a pass through event under section 12.5 of the revised access arrangement proposal. Further, the AER considers that Country Energy only needs to advise the AER within 90 business days of pass through events that have, or are likely to have, a material impact.[190]

11.3.3.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR and it, does not approve the change made by Country Energy to the cost pass through notification.

11.3.3.4 Revision

The AER proposes the following revision:

Revision 11.5 amend the revised access arrangement proposal to delete section 12.5.3(e) and replace it with the following:

> Country Energy must advise the Regulator if Country Energy becomes aware that a *Pass Through Event* has occurred (other than a Tax Change event), which has, or likely to have, an Material impact.
>
> Country Energy must advise the Regulator of such a *Pass Through Event* within 90 business days of becoming aware of the event. This section 12.5.3(e) is not an application to vary the Reference Tariffs.

11.3.4 Number of pass through events during the access arrangement period

11.3.4.1 Revised access arrangement proposal

The revised access arrangement proposal modifies amendment 11.16 of the draft decision to remove the inference that only one pass through event can be considered to vary reference tariffs over the course of an access arrangement period.[191]

187 AER, *Draft decision*, November 2009, p. 117.

188 Country Energy, *Response to draft decision*, January 2010, p. 11.

189 NGR, r. 97(3)(e).

190 NGR, r. 97(3)(e).

191 Country Energy, *Response to draft decision*, January 2010, p. 11.

11.3.4.2 AER's analysis and considerations

In the draft decision the AER's amendment 11.6 requires Country Energy to make it clear that in the circumstances that more than one cost pass through event is proposed at the same time, the threshold relates to each separate event.[192] The AER does not intend amendment 11.6 to prevent Country Energy from passing through more than one cost pass through event within an access arrangement period. However, to provide more clarity the AER accepts Country Energy's rewording of the amendment, but considers an additional sentence should be added which states that each individual cost pass through event must be subject to a threshold level. The AER considers that each cost pass through event must be subject to a threshold level in order to take into account the administrative costs of the reference tariff variation mechanism on the AER, Country Energy and users or potential users.[193]

11.3.4.3 Conclusion

The AER has had regard to the factors in r. 97(3) of the NGR, the AER does not accept Country Energy's proposed modification of amendment 11.16 of the draft decision.

11.3.4.4 Revision

The AER proposes the following revision:

Revision 11.6 amend the revised access arrangement proposal to delete the first sentence in section 12.5 and replace it with the following:

> Reference Tariffs may be varied if there is a material impact on the cost to Country Energy of providing Reference Services as a result of any *Pass Through Event*, whether singular or several, listed below (*Pass Through Event*), which may occur on one or more occasion in the Access Arrangement period (1 July 2010 – 30 June 2015), where the costs were not incorporated in the determination of Reference Tariffs incorporated in this Access Arrangement or, if there has been a previous review of the Reference Tariffs at the review. Each individual *Pass Through Event* must have a material impact on the cost to Country Energy of providing Reference Services in order for the cost associated with that event to be passed onto consumers.

Revision 11.7: 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 11.1 to 11.6.

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192 AER, *Draft decision*, November 2009, p. 113.

193 NGR, r. 97(3)(b).

Part C—Other provisions of an access arrangement

12 Non–tariff components

12.1 Introduction

This chapter considers the non–tariff components of the revised access arrangement proposal. The NGR sets out criteria for determining the terms and conditions on which service providers are to grant third parties access to reference services.

The AER's analysis and consideration of the access arrangement proposal in relation to non-tariff components is set out in chapter 12 of the draft decision.

The AER notes that Country Energy has incorporated in full in its access arrangement proposal amendments 12.1, 12.2, 12.4–12.7, 12.9, 12.10, 12.14–12.25, 12.27–12.29 and 12.32–12.36 of the draft decision.[194] This chapter considers issues that Country Energy has not accepted.

12.2 Terms and conditions

12.2.1 Exclusion of liability under standard user agreement

12.2.1.1 Revised access arrangement proposal

The revised access arrangement proposal submits that amendment 12.3 of the draft decision is not required because it cannot be held negligent for events over which it has no control.[195]

12.2.1.2 AER's analysis and considerations

Clause 12.12 of the terms and conditions in appendix 1 of the access arrangement proposal[196] (standard user agreement) provides that Country Energy will not be liable for any penalty or damages for failing to convey gas through the distribution system if the failure arises out of any accident or cause beyond its reasonable control. Amendment 12.3 of the draft decision requires Country Energy to amend clause 12.12 of the standard user agreement so the exclusion of liability would not apply to penalties or damages arising from Country Energy's negligence.[197]

The AER notes Country Energy's submission that in order to establish negligence, the matters to which the negligence relates must be in the reasonable control of Country Energy and, therefore, where Country Energy has no control over events it cannot be held to be negligent.[198]

In light of Country Energy's submission, the AER accepts that the concept of events being beyond Country Energy's reasonable control is sufficient to exclude liability for negligence.

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194 Country Energy, *Response to draft decision*, January 2010, pp. 12–20.

195 Country Energy, *Response to draft decision*, January 2010, p. 12.

196 Country Energy, *Access arrangement proposal*, 1 July 2009, appendix 1, Terms and Conditions.

197 AER, *Draft decision*, November 2009, p. 122.

198 Country Energy, *Response to draft decision*, January 2010, p. 12.

12.2.1.3 Conclusion

The AER approves the revised access arrangement proposal and does not require amendment 12.3 of the draft decision to be made.

12.2.2 Force majeure under standard user agreement

12.2.2.1 Revised access arrangement proposal

The revised access arrangement proposal does not make amendment 12.8 of the draft decision because the definition in section 14 of the access arrangement is in line with other force majeure obligations.[199]

12.2.2.2 AER's analysis and considerations

The AER notes that Country Energy does not identify which definition it is referring to in section 14 of the access arrangement. The only definition which appears to be relevant is the definition of 'Force Majeure Event' inserted by amendment 12.9 of the draft decision. Country Energy has made this amendment. Making this amendment without making amendment 12.8 of the draft decision does not address all of the AER's concerns with Country Energy's force majeure provision.[200]

Country Energy submits that it has not made amendment 12.8 (which makes the force majeure provision apply for the benefit of all parties) because its other force majeure provisions do not apply to the benefit of other parties. The AER considers that notwithstanding Country Energy's other force majeure obligations, it is reasonable that clause 9 of the standard user agreement apply for the benefit of all parties. The AER is not aware of any reason why users should not be able to rely on the force majeure clause for events beyond their reasonable control which results in the party being unable to perform its obligations under the standard user agreement. Country Energy has not demonstrated why the force majeure provision should only apply for its benefit. The AER notes the force majeure clause approved by the Victorian Essential Services Commission for SP AusNet's 2008–2012 access arrangement[201] and the clause proposed by ActewAGL as part of its access arrangement revision proposal for 2010–2015[202] apply for the benefit of all parties to the user agreement. The AER also notes that the revised force majeure provision[203] is virtually identical to

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199 Country Energy, *Response to draft decision*, January 2010, p. 12.

200 AER, *Draft decision*, November 2009, pp. 125–126; Country Energy, *Access arrangement proposal*, 1 July 2009, appendix 1, Terms and Conditions, clause 9.

201 SP AusNet, *Gas access arrangement revision 2008—2012*, Part C, Terms and Conditions, clause 10, viewed 4 February 2010, ttp://www.esc.vic.gov.au/NR/rdonlyres/0F1F5595-4804-4B6D-993A-998ABA97C3CB/0/OTHSPAusNetTandCReleaseDocument20080514New.pdf>.

202 ActewAGL Distribution, *Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network*, January 2010, clauses 3.50–3.53 (ActewAGL, *Revised access arrangement proposal*, January 2010).

203 Country Energy, *Revised access arrangement proposal*, 6 January 2010, appendix 1, Terms and Conditions, clause 9. The original drafting for the provision is set out in Country Energy, Access arrangement proposal, 1 July 2009, appendix 1, Terms and Conditions, clause 9.

that used by SP AusNet[204] other than the fact that it only applies for the benefit of Country Energy.

The AER considers that a force majeure provision which applies to the benefit of all parties to the standard user agreement promotes the efficient use of natural gas services in the long term interests of consumers of natural gas.

12.2.2.3 Conclusion

The AER does not approve the revised force majeure provision set out in the standard user agreement attached to the revised access arrangement proposal because the provision is not consistent with the national gas objective.[205]

12.2.2.4 Revision

The AER proposes the following revision:

Revision 12.1: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to:

- delete '*Country Energy Gas*' in the first line of clause 9.1 and replace it with 'a party'
- delete *'Country Energy Gas'* ' in the last line of clause 9.1 and replace it with 'the party's'
- delete *'Country Energy Gas'* in the first line of clause 9.2 and replace it with 'A party'
- delete *'Country Energy Gas'* in the last two lines of clause 9.2 and replace it with 'that party'
- delete *'Country Energy Gas'* in the first line of clause 9.3 and replace it with 'a party'
- delete 'the *User*' in clause 9.3 and replace it with 'to the other party'.

12.2.3 Limitation of liability under standard user agreement

12.2.3.1 Revised access arrangement proposal

The revised access arrangement proposal outlines that amendment 12.11 of the draft decision goes beyond the scope of s. 68A of the *Trade Practices Act 1974* (TPA) by providing users with a discretion that is otherwise retained and to be determined by the court. Country Energy submits that the amendment is without precedent, creates uncertainty and results in an unmanageable risk for Country Energy.[206]

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204 SP AusNet, *Gas access arrangement revision 2008—2012*, Part C, Terms and Conditions, clause 10, viewed 4 February 2010, ttp://www.esc.vic.gov.au/NR/rdonlyres/0F1F5595-4804-4B6D-993A-998ABA97C3CB/0/OTHSPAusNetTandCReleaseDocument20080514New.pdf>.

205 NGR, r. 100.

206 Country Energy, *Response to draft decision*, January 2010, p. 13.

Country Energy submits that s. 68A(2) of the TPA is a statutory right and its inclusion in the standard user agreement (through amendment 12.11 of the draft decision) is confusing and superfluous.[207]

The revised access arrangement proposal also outlines that the warranty implied by s. 69 of the TPA is a statutory right 'available to all Users to rely upon in contracting with' Country Energy and does not need to be specified in the standard user agreement.[208]

12.2.3.2 AER's analysis and considerations

The revised access arrangement proposal outlines that amendment 12.11 of the draft decision is without precedent.[209] However, ActewAGL's, *Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network*, January 2010 includes a similar provision.[210] The AER does not accept that the amendment creates uncertainty and results in an unmanageable risk for Country Energy. The amendment requires the user to establish that the limitation of liability is not fair and reasonable in the circumstances. In the AER's view, the user has to establish this on an objective basis. If the user and Country Energy are not able to agree whether the objectivity requirement has been met then the matter may need to be resolved by a court of law.

The AER notes that clause 12.2 of the standard user agreement reproduces the relevant parts of the statutory rights granted to users under s. 68A(1)(b) of the TPA. Country Energy includes clause 12.2 in the standard user agreement attached to its access arrangement proposal[211] and its revised access arrangement proposal.[212] The AER notes that Country Energy does not want to set out in the standard user agreement the statutory rights in s. 68A(2) of the TPA. However, Country Energy is prepared to set out the statutory rights in s. 68A(1)(b) of the TPA (through clause 12.2 of the standard user agreement). The AER is not able to determine why Country Energy makes this distinction or how this may impact users. In the circumstances, the AER considers that amendment 12.11 should be made as it has the same purpose as clause 12.2, that is, it informs users of their statutory rights.

The AER notes that amendment 12.11 also informs users that they have statutory rights under s. 69 of the TPA which affect how Country Energy can limit its liability. Country Energy submits that the implied warranty under s. 69 of the TPA is a statutory right available to all users to rely on in contracting with Country Energy and does not need to be specified in the standard user agreement.[213] For the reasons

207 Country Energy, *Response to draft decision*, January 2010, p. 13.

208 Country Energy, *Response to draft decision*, January 2010, p. 13.

209 Country Energy, *Response to draft decision*, January 2010, p. 13.

210 ActewAGL Distribution, *Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network*, June 2009, clause 3.67 (ActewAGL, *Access arrangement proposal*, June 2009). This provision has been retained in ActewAGL, *Revised access arrangement proposal*, January 2010, clause 3.64.

211 Country Energy, *Access arrangement proposal*, 1 July 2009, appendix 1, Terms and Conditions, clause 12.2.

212 Country Energy, *Revised access arrangement proposal*, 6 January 2010, appendix 1, Terms and Conditions, clause 12.2.

213 Country Energy, *Response to draft decision*, January 2010, p. 13.

discussed above, the AER considers that the existence of such rights should be explicitly mentioned in the standard user agreement.

The AER considers that amendment 12.11 goes no further than setting out a user's rights under ss. 68A(1)(b), 68A(2) and 69 of the TPA and should be made to the standard user agreement. The AER considers that providing users with this information promotes the efficient use of natural gas services in the long term interests of consumers of natural gas.

12.2.3.3 Conclusion

The AER does not approve Country Energy's proposed limitation of liability provision in its standard user agreement[214] because the provision is not consistent with the national gas objective.[215]

12.2.3.4 Revisions

The AER proposes the following revision:

Revision 12.2: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to:

- include a new clause 12.2A after clause 12.2:

  12.2A *Country Energy Gas'* liability will not be limited in this way if:

  (a) the User establishes that such a limitation is not fair or reasonable in the circumstances for the purposes of section 68A(2) of the *Trade Practices Act 1974* (Cth); or

  (b) the condition or warranty is implied under section 69 of the *Trade Practices Act 1974* (Cth).

- include at the start of clause 12.13: 'Subject to clauses 12.2 to 12.2A,'.

12.2.4 Required bank guarantee

12.2.4.1 Revised access arrangement proposal

The revised access arrangement proposal outlines that it is not necessary to make amendments 12.12 and 12.13 of the draft decision because it is not appropriate to prescribe the manner in which a bank must guarantee credit. Country Energy has removed its proposed definition of 'Required Bank Guarantee Amount' from the revised access arrangement proposal and its pro forma bank guarantee from the standard user agreement.[216]

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214 Country Energy, *Revised access arrangement proposal*, 6 January 2010, appendix 1, Terms and Conditions, clause 12.2.

215 NGR, r. 100.

216 Country Energy, *Response to draft decision*, January 2010, p. 13.

12.2.4.2 AER's analysis and considerations

The AER made amendments 12.12 and 12.13 in the draft decision in response to Country Energy's inclusion of a pro forma bank guarantee as an attachment to its standard user agreement[217] and the inclusion of the definition of 'Required Bank Guarantee Amount' in its access arrangement proposal.[218]

In light of Country Energy's submission that it has formed the view that it is not appropriate to prescribe the manner in which a bank must guarantee credit,[219] and the fact that it has removed the pro forma bank guarantee and the definition of 'Required Bank Guarantee Amount' from its revised access arrangement proposal, the AER considers it is no longer necessary that Country Energy make amendments 12.12 and 12.13.

12.2.4.3 Conclusion

The AER approves that Country Energy does not need to make amendments 12.12 and 12.13 of the draft decision.

12.2.5 Deactivation under standard user agreement

12.2.5.1 Revised access arrangement proposal

The AER notes that Country Energy removes from the standard user agreement the requirement to deactivate in accordance with the network code when customers make deactivation requests directly to Country Energy.[220]

Following submission of its revised access arrangement proposal, Country Energy has advised that it should not have removed from the standard user agreement the requirement to deactivate in accordance with the network code when customers make deactivation requests directly to Country Energy. Country Energy has confirmed that the requirement should be reinstated.[221]

12.2.5.2 AER's analysis and considerations

The AER considers that the requirement to deactivate in accordance with the network code when customers make deactivation requests directly to Country Energy should be reinstated in the standard user agreement.

12.2.5.3 Conclusion

The AER does not accept Country Energy's clause 5.16 of the standard user agreement because a preferable alternative exists that complies with the applicable

217 Country Energy, *Access arrangement proposal*, 1 July 2009, appendix 1, Terms and Conditions, schedule 1.

218 Country Energy, *Access arrangement proposal*, 1 July 2009, section 15.

219 Country Energy, *Response to draft decision*, January 2010, p. 13.

220 Country Energy, *Revised access arrangement proposal*, January 2010, appendix 1, Terms and Conditions, clause 5.16. The original drafting for the provision is set out in Country Energy, *Access arrangement proposal*, 1 July 2009, appendix 1, Terms and Conditions, clause 5.17.

221 Country Energy, Email to the AER, 3 March 2010.

requirements of the NGL and NGR and is consistent with applicable criteria prescribed by the NGL and NGR.[222]

12.2.5.4 Revision

The AER proposes the following revision:

Revision 12.3: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to include the following at the end of clause 5.16:

> in accordance with the *Network Code*

12.3 Extensions and expansions requirements

12.3.1 Revised access arrangement proposal

Country Energy submits that it has not made amendment 12.30 of the draft decision regarding extensions of the pipeline because:

- it is not within the AER's functions and powers
- the rationale for the amendment is incorrect
- it is contrary to the purpose of extensions and expansions requirements
- it is not based on any analysis of the coverage criteria
- it has not been needed for the two prior access arrangement periods and there has been no change to circumstances or evidence of a problem to be solved
- the approach being adopted amounts to micromanagement and is inconsistent with incentive regulation
- it is inconsistent with the national gas objective.[223]

Country Energy submits that it is not within the economic functions and powers of the AER to require Country Energy to report annually on all expansions of the capacity of the pipeline. Country Energy submits that the proposed amendment 12.31 of the draft decision imposes costs on Country Energy for which there is no economic benefit and does not contribute to the national gas objective. The information will be available at each access arrangement revision and the AER has not demonstrated any economic benefit in providing the information annually between revisions.[224]

Country Energy has incorporated in full in its revised access arrangement proposal amendments 12.32–12.34 of the draft decision.[225]

222 NGR, r. 40(3).

223 Country Energy, *Response to draft decision*, January 2010, pp. 15–19.

224 Country Energy, *Response to draft decision*, January 2010, p. 19.

225 Country Energy, *Response to draft decision*, January 2010, p. 19.

12.3.2 AER's analysis and considerations

The AER considers that it is within its functions and powers to require Country Energy to apply to the AER to determine whether a high pressure pipeline extension forms part of the covered pipeline. The AER notes that r. 104(1) of the NGR provides that extension and expansion requirements may allow for the later resolution of the question of whether an access arrangement will apply to incremental services to be provided as a result of an extension to the pipeline.

The AER notes Country Energy's submission that critical to whether an extension or expansion should be included as part of the covered pipeline is whether it will or is likely to meet the coverage criteria in s. 15 of the NGL.[226] The AER notes that the pipeline coverage criteria set out in s. 15 of the NGL are applied by the National Competition Council when making pipeline coverage recommendations.[227] While the criteria set out in s. 15 of the NGL do not apply to the AER when making coverage determinations under an access arrangement, the AER may, depending on the circumstances at the time, wish to have regard to the criteria as well as such other matters as it considers appropriate.

Country Energy submits that the intention of the legislation is not to provide for each and every extension or expansion to be assessed by the regulator but, where a pipeline is already covered, that any extension or expansion should fall within the current determination. Country Energy forms this view based on s. 18 of the NGL.[228] The AER does not agree with Country Energy's interpretation of s. 18 of the NGL. Section 18 of the NGL provides that an extension to, or expansion of, a covered pipeline must be taken to be part of the covered pipeline if, by operation of the extension and expansion requirements under the access arrangement, the access arrangement will apply to pipeline services provided by means of the covered pipeline as extended or expanded. The AER considers that s. 18 of the NGL does not prevent the AER from making coverage datermiantions at a later time if it is allowed by operation of the extensions and expansions requirements under the access arrangement.

Country Energy submits that the draft decision is based on the view that high pressure distribution pipes have characteristics similar to transmissions pipelines. Country Energy states that this is only true to the extent that high pressure pipes operate at higher pressure than medium pressure pipelines and are made of steel, beyond this, the statement is incorrect.[229] Country Energy also submits that the proposed amendment has not been required for the two prior access arrangement periods and there has been no change to circumstances or evidence of a problem to be solved.[230] Notwithstanding the IPART's previous decisions regarding Country Energy's extensions and expansions policy, the AER considers that it is important to distinguish between in-fill development within the geographic reach of the existing network and developments serving new areas outside the existing geographic reach of

226 Country Energy, *Response to draft decision*, January 2010, p. 17.

227 NGL, chapter 3, part 1 and s. 97.

228 Country Energy, *Response to draft decision*, January 2010, p. 17.

229 Country Energy, *Response to draft decision*, January 2010, p. 16.

230 Country Energy, *Response to draft decision*, January 2010, p. 18.

the network when determining whether a pipeline extension is covered by default under the access arrangement. This is because there is a potential to extend pipelines to new areas and customers which warrants consideration by the AER. New areas outside the current geographic reach of the network will be more likely serviced by high pressure pipelines so the AER considers that if a high pressure pipeline extension is planned then an application should be made to the AER for a determination as to whether or not the extension is part of the covered pipeline. In order to provide greater certainty regarding whether a pipeline is a high pressure pipeline extension, the AER has decided to include a definition in revision 12.4 below.

The AER considers that its requirement to seek a coverage determination for high pressure pipeline extensions does not amount to micromanagement and is not inconsistent with incentive regulation. Rule 104(1) of the NGR clearly envisages that the AER can, subsequent to its final decision, determine whether incremental services can be provided as a result of an extension to the pipeline, particularly if these services are priced at the current reference tariff as if they are regulated services.

The AER understands that Country Energy collects or can collect the following information in relation to its extensions and expansions:[231]

- the total number of customers added to the network each year
- the total length of the network each year, categorised as low, medium low and medium high, or high pressure pipelines
- the predominant areas of extension activity (by suburb or region as appropriate). A predominate area of extension activity is an extension to the network to include new greenfield developments or where a pipeline is extended to an existing locality to which the service was not formerly available.

The AER requests that Country Energy provides this information to the AER each year of the access arrangement period. To the extent necessary, the AER may seek to exercise its information gathering powers under the NGL.

For the reasons set out above and in section 12.5.3 of the draft decision,[232] the AER proposes the revision set out below to Country Energy's extensions and expansions requirements in the revised access arrangement proposal. The AER considers that its proposed revision is consistent with the national gas objective.[233]

12.3.3 Conclusion

The AER does not approve Country Energy's proposed extensions and expansions requirements because 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.[234]

231 Country Energy, email to the AER, 3 March 2010.

232 AER, *Draft decision*, November 2009, pp. 139–142.

233 NGR, r. 100.

234 NGR, r. 40(3).

12.3.4 Revision

The AER proposes the following revision:

Revision 12.4: delete the text in section 7.1.1 in the revised access arrangement proposal and replace it with the following:

7.1.1.1 High pressure pipeline extensions

(a) If *Country Energy Gas* proposes a high pressure pipeline extension of the *Covered Pipeline* it must apply to the *Regulator* in writing to determine whether the proposed extension will be taken to form part of the *Covered Pipeline* and will be covered by this *Access Arrangement*. The application must describe the extension and set out why the extension is necessary.

(b) The application must be made before the proposed high pressure pipeline extension comes into service.

(c) After considering the application, and undertaking such consultation as the *Regulator* considers appropriate, the *Regulator* will inform *Country Energy Gas* of its determination.

(d) The determination may be made on such reasonable conditions as determined by the *Regulator* and will have the operation specified in the determination.

(e) For the purposes of this section 7, a high pressure pipeline extension means a pipeline extension:

(i) with an operating pressure greater than 400kPa;

(ii) that exceeds 500 metres in length; and

(iii) which is located more than one kilometre from a transmission pipeline and that transmission pipeline has an operating pressure greater than 3000kPa.

7.1.1.2 Other pipeline extensions

(a) Subject to this section 7.1.1.2, any low, medium low or medium high pressure pipeline extension of the *Network*, or any pipeline extension of the *Network* which is not a high pressure pipeline extension within the meaning of section 7.1.1.1(e), will be treated as part of the *Network* and accordingly will be the subject of coverage under this *Access Arrangement*.

(b) *Country Energy Gas* may apply to the *Regulator* in writing for a determination by the *Regulator* that paragraph (a) will not apply to the pipeline extension referred to in the application.

(c) After considering an application and undertaking such consultation as the *Regulator* considers appropriate, the *Regulator* will advise *Country Energy Gas* whether or not it makes the determination.

(d) A determination may be made on such reasonable conditions determined by the *Regulator* and will have the operation specified in the determination.

12.4 Trigger events

12.4.1 Revised access arrangement proposal

The revised access arrangement proposal does not make amendment 12.37 of the draft decision[235] which requires amendments to the provision of the access arrangement proposal which dealt with Country Energy's proposed trigger events. Country Energy submits that it has reviewed its position regarding the trigger events it included in its access arrangement proposal and has decided not to include them in its revised access arrangement proposal because the proposed events can be catered for under an application to vary the access arrangement under r. 65 of the NGR.[236]

Country Energy submits that it has incorporated the majority of amendment 12.38 of the draft decision. Country Energy submits that before an amendment to the NGL or NGR can qualify as a trigger event, it must materially affect the operation of the access arrangement.[237] Country Energy has incorporated this amendment in its revised access arrangement proposal.[238]

12.4.2 AER's analysis and considerations

The AER makes amendment 12.37 of the draft decision in response to the trigger events proposed by Country Energy in its access arrangement proposal.[239] As a result of Country Energy's decision to no longer include these trigger events in its revised access arrangement proposal,[240] the AER considers that amendment 12.37 of the draft decision is not required.

Amendment 12.38 of the draft decision creates a trigger event for amendments to the NGL or NGR which, in the AER's view, affects the terms and conditions of the access arrangement. The purpose of the amendment is to address concerns that the approved terms and conditions of access may be inconsistent with the national retail energy and gas connections frameworks when they are introduced.[241] The AER notes that the proposed national energy customer framework includes the proposed national energy retail law and rules.[242] The AER also notes that Country Energy has modified amendment 12.38 the amendment to the NGL or NGR is a trigger event if it materially affects the operation of the access arrangement.[243] Country Energy submits that the trigger event should not apply to non-material changes which may not affect Country Energy's obligations under the access arrangement.[244]

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235 Country Energy, *Response to draft decision*, January 2010, p. 20.

236 Country Energy, *Response to draft decision*, January 2010, p. 20.

237 Country Energy, *Response to draft decision*, January 2010, p. 20.

238 Country Energy, *Revised access arrangement proposal*, 6 January 2010, clause 9.3.1.2(a).

239 AER, *Draft decision*, November 2009, pp. 145–148.

240 Country Energy, *Response to draft decision*, January 2010, p. 20.

241 AER, *Draft decision*, November 2009, p. 148.

242 Ministerial Council on Energy, Standing Committee of Officials, Bulletin No. 170, *National energy customer framework—release of second exposure draft*, 27 November 2009.

243 Country Energy, *Revised access arrangement proposal*, 6 January 2010, clause 9.3.1.2(a).

244 Country Energy, *Response to draft decision*, January 2010, p. 20.

The AER notes that r. 51(2) of the NGR provides that a trigger event may consist of any significant circumstance or conjunction of circumstances. Rule 51(2) of the NGR does not state that a trigger event is limited to a significant circumstance or conjunction of circumstances but that a trigger 'may' consist of any significant circumstance or conjunction of circumstances.

Notwithstanding this, 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 significant circumstances or conjunction of circumstances.

Given this NGR requirement, the AER considers it would be more appropriate for an access arrangement review to be triggered if any amendment to the NGL or NGR, or the commencement in operation in NSW of the national retail law or rules, affects users' terms and conditions of access under the access arrangement and results in more favourable conditions for users than those under the access arrangement. Where these circumstances occur, Country Energy must notify the AER so that the AER may consult with interested parties in order to determine whether the circumstances are likely to be significant and constitute a trigger event. Where the AER finds this to be the case, it may move 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 Country Energy, subject to the NGR.[245]

12.4.3 Conclusion

The AER does not require Country Energy to make amendment 12.37 of the draft decision. The AER does not approve the proposed change to amendment 12.38 of the draft decision.

12.4.4 Revisions

The AER proposes the following revision:

Revision 12.5: amend the revised access arrangement proposal to delete section 9.3 and replace it with the following:

9.3 **Trigger Event**

9.3.1 If an amendment to the *NGL* or the *NGR* takes effect or the National Energy Retail Law or the National Energy Retail Rules commence operation in New South Wales and:

(a) this affects the terms and conditions on which *Users* or *Customers* obtain access under this *Access Arrangement*; and

(b) this results in more favourable conditions for *Users* or *Customers* than those under this *Access Arrangement*,

Country Energy Gas is required to notify the *Regulator* no later than one month following this and to also provide contact details of its *Users* to the *Regulator* at this time.

245 NGR, r. 65(2).

9.3.2 The *Regulator* may consult with interested parties in order to determine whether the circumstances outlined in section 9.3.1 are circumstances that are likely to be significant and constitute a trigger event.

9.3.3 Following the consultation in section 9.3.2, the *Regulator* will notify *Country Energy Gas* whether the circumstances constitute a trigger event, in which case the *Revisions Submission Date* fixed in this *Access Arrangement* will advance to a date 6 months from the date of the trigger event or such other date as determined by the *Regulator* and subject to the *NGR*.

12.5 Overruns

12.5.1 Revised access arrangement proposal

The revised access arrangement proposal incorporated in full amendment 12.26 of the draft decision.[246]

The AER received further information from Country Energy on its revised access arrangement proposal in the consultation period on the draft decision and the revised access arrangement proposal. In its submission Country Energy states that there is a minor inconsistency between the overruns provision in section 10.2.4(d) of the revised access arrangement proposal and section 8.1.3 of the revised access arrangement information which means that amendment 12.26 of the draft decision can no longer be fully incorporated. Country Energy submits that the highest unauthorised overrun in a year is the most appropriate MDQ to be used to ensure the efficient and effective operation of the pipeline.[247]

12.5.2 AER's analysis and considerations

The AER has considered Country Energy's submission and agrees that the highest unauthorised overrun in a year is the most appropriate MDQ to be used rather than the highest in the month the fifth overrun occurred.

12.5.3 Conclusion

The AER approves the revised amendment to section 10.2.4(d) of the revised access arrangement.

12.5.4 Revision

The AER proposes the following revision:

Revision 12.6: amend the revised access arrangement proposal to delete the word 'fifth' where it last appears in section 10.2.4(d) and replace it with 'highest'.

246 Country Energy, *Response to draft decision*, January 2010, p. 15.

247 Country Energy, *Country Energy Gas networks' revised access arrangement proposal for the Wagga Wagga natural gas distribution network 1 July 2010*, 12 February 2010, p. 1.

12.6 Capacity trading requirements

12.6.1 Revised access arrangement proposal

The revised access arrangement proposal incorporates in full the amendments 12.27–12.29 of the draft decision.[248]

12.6.2 AER's analysis and considerations

The AER notes that r. 105(1) of the NGR requires that capacity trading requirements must provide for transfer of capacity:

> (a) if the service provider is registered as a participant in a particular gas market—in accordance with rules or Procedures governing the relevant gas market; or
>
> (b) if the service provider is not so registered, or the relevant rules or Procedures do not deal with capacity trading—in accordance with this rule.

Amendment 12.27 of the draft decision requires the following to be included in Country Energy's capacity trading requirements:

> To the extent that the NGR does not apply (because *Country Energy Gas* is registered as a participant in a gas market and the rules or procedures of the gas market deal with capacity trading), the capacity trading requirements in this *Access Arrangement* are subject to the Gas Retail Market Business Rules to Support Retail Competition in Gas for the NSW and ACT gas retail market (or, if these rules are no longer applicable, any other rules or procedures which govern the gas market in which *Country Energy Gas* is a registered participant) in force from time to time

The AER has reconsidered amendment 12.27 following a submission from ActewAGL on an equivalent amendment to its access arrangement proposal.[249] The AER is concerned that amendment 12.27 may not unambiguously reflect the intent of r. 105(1) of the NGR. The AER considers that the provision should be simplified and reworded to more accurately reflect r. 105(1) of the NGR.

12.6.3 Conclusion

The AER does not accept Country Energy's proposed capacity trading requirements as they do not accurately reflect the requirements of r. 105(1) of the NGR.

12.6.4 Revision

The AER proposes the following revision:

Revision 12.7: amend the revised access arrangement proposal to delete the first paragraph of section 8 and replace it with the following:

> Transfers of capacity will be undertaken:

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248 Country Energy, *Response to draft decision*, January 2010, p. 15.

249 ActewAGL Distribution, *Access arrangement information addendum for the ACT, Queanbeyan and Palerang gas distribution network*, January 2010, pp. 135–136.

(a) where *Country Energy Gas* is registered as a participant in a gas market—in accordance with the Gas Market Rules for that gas market; or

(b) if *Country Energy Gas* is not so registered or the relevant Gas Market Rules do not deal with capacity trading—in accordance with NGR 105 and this section 8.

For the purposes of this section 8, Gas Market Rules means the Retail Market Business Rules to Support Retail Competition in Gas for the NSW and ACT gas retail market (or, if these rules are no longer applicable, any other rules or procedures which govern the gas market in which *Country Energy Gas* is a registered participant) from time to time.

Revision 12.8: 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 12.1 to 12.7.

13 Typographical errors and omissions

13.1 Introduction

This chapter sets out typographical errors and omissions identified in the revised access arrangement proposal which require correction as part of the revisions in the final decision.

13.2 Typographical errors identified by Country Energy and the AER

Following submission of the revised access arrangement proposal, Country Energy provided the AER with a list of typographical errors which it has identified in the revised access arrangement proposal and revised access arrangement information which require correction.[250]

The AER has reviewed the list of typographical errors provided by Country Energy and is prepared to make revisions to the revised access arrangement proposal and revised access arrangement information to correct the typographical errors which are relevant to the AER's proposed access arrangement and access arrangement information. The revisions set out below include other typographical errors and omissions identified by the AER in reviewing the revised access arrangement proposal and revised access arrangement information.

13.3 Conclusion

The AER approves the correction of the typographical errors in the revised access arrangement proposal and revised access arrangement information identified by Country Energy which are relevant to the AER's proposed access arrangement and access arrangement information. The AER also considers that the typographical errors and omissions in the revised access arrangement proposal and revised access arrangement information which it has identified require correction.

13.4 Revisions

The AER proposes the following revisions:

Revision 13.1: amend the revised access arrangement proposal to:

- delete all references to '*distribution pipeline*' in the second paragraph in section 1.1 and replace them with '*Distribution Pipeline*'
- delete 'Network' in section 1.2 and replace it with '*Network*'
- delete 'Country Energy Gas' Network' in section 2.1 and replace it with '*Country Energy Gas' Network*'
- delete 'Gas' in section 2.2 and replace it with '*Gas*'

250 Country Energy, email to the AER, 3 March 2010.

- delete all references to '*terms and conditions*' in section 5.1 and replace them with '*Terms and Conditions*'

- delete all references to 'gas' in section 5.2.1 and replace them with '*Gas*'

- delete 'gas supply' in section 5.4.1 and replace it with '*Gas Supply*'

- delete all references to 'reconnecting', 'supply' and 'disconnection' in section 5.4.3 and replace them with '*Reconnecting*', '*Supply*' and '*Disconnection*' respectively

- delete 'gas' in section 5.5.1 and replace it with '*Gas*'

- delete 'users' in section 5.5.5 and replace it with '*Users*'

- delete all references to 'gas' in sections 5.5.5, 5.5.6 and 5.5.7 and replace them with '*Gas*'

- delete 'supply' in section 6.1.1(a) and replace it with '*Supply*'

- delete 'supply' and 'gas' in section 6.1.2(f) and replace them with '*Supply*' and '*Gas*' respectively

- delete '*terms and conditions*' in section 9.1(a) and replace it with '*Terms and Conditions*'

- delete 'gas meter' in the last paragraph in section 10.2.1 and replace it with '*Gas Meter*'

- delete 'gas' in section 10.2.4(f) and replace it with '*Gas*'

- delete 'connection' in section 10.2.5 and replace it with '*Connection*'

- delete all references to 'Network' in the text under the '*Retail project event*' heading in section 12.5 and replace it with '*Network*'

- delete 'pass through event' in the text under the '*Climate change (Carbon Pollution Reduction Scheme)*' heading in section 12.5 and replace it with '*Pass Through Event*'

- correct the formatting of the last paragraph in section 12.5.2 by making it paragraph (d) of the section and change the font size to be the same as the rest of the section

- delete '12.4' in section 12.5.6 and replace it with '12.5'

- delete '12.5(b)' in section 12.6(c) and replace it with '12.6(b)'.

Revision 13.2: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to:

- delete 'Interrupt' in clause 5.1(b) and replace it with '*Interrupt*'

- delete 'Deactivate' in clause 5.17 and replace it with '*Deactivate*'
- delete 'clause 6.21' in clause 6.21 and replace it with 'clause 6'
- delete 'clause 6.22' in clause 6.22 and replace it with 'clause 6'
- delete 'clauses 6.5 to 6.11' in clause 6.26 and replace it with 'clauses 6.1 to 6.4'
- change the font for '11.5' in clause 11.5 so it is the same as font used for the rest of the clause
- delete all references to 'Supplier's Authorisation' in clause 11.15 and replace them with *'Suppliers Authorisation*'
- delete the semi colon at the end of clauses 12.6, 12.7, 12.8 and 12.9 and replace it with a full stop.

Revision 13.3: amend the revised access arrangement information to:

- delete '*Agreement*' from the fourth bullet point in section 2.3.5 and replace it with 'Agreement'
- delete all references to 'unaccounted for gas' from the last bullet point in section 2.3.5 and replace it with '*Unaccounted for Gas*'
- delete 'services' from the first line in section 3 and replace it with '*Services*'
- delete '*Gas Supply (Gas Meters)*' from the last paragraph in sections 5.2.1 and 5.2.1.1, and replace them with 'Gas Supply (Gas Meters)'
- delete 'supplied' in section 5.2.1.1 and replace it with '*Supplied*'
- delete 'service' in section 5.2.1.2 and replace it with '*Service*' and correct the formatting for the first two bullet points in the section
- correct the formatting between the last two paragraphs in section 6.2.2
- delete all references to 'gas', 'customers' and 'connect' in section 6.2.2 and replace them with '*Gas*', '*Customers*' and '*Connect*' respectively
- delete 'gas network' from the second paragraph in section 6.2.3 and replace it with '*Gas Network*'
- delete 'Contract (high pressure) *Customers*' and 'Volume (low pressure) *Customers*' from the second paragraph in section 8.1.1 and replace them with '*Contract Customers* (high pressure)' and '*Volume Customers* (low pressure)' respectively
- delete 'Customers' from the last paragraph in section 9.3 and replace it with '*Customers*'.

Revision 13.4: amend the revised access arrangement proposal to:

- include a definition for Access Arrangement Period means 1 July 2010 to 30 June 2015 in section 14
- include a definition for Next Access Arrangement Period means the period commencing 1 July 2015 for the next access arrangement in section 14
- include a definition for Earlier Access Arrangement Period means 1 January 2006 to 30 June 2010 in section 14.

Appendix A—Revisions

The AER proposes the following revisions:

Revision 2.1: amend the revised access arrangement and revised access arrangement information to:

- delete the expression ‘Monthly Capacity Charge’ and replace it with ‘Annual Capacity Charge’
- delete the expression ‘Monthly Fixed Charge’ and replace it with ‘Annual Fixed Charge’.

Revision 2.2: 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 2.1.

Revision 3.1: delete Table 13 in the revised access arrangement information and replace it with the following:

Table 3.4: CPI indexation of capital base (per cent)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10
Total	1.33	3.54	2.33	4.35	1.82

Revision 3.2: delete Table 3 in the revised access arrangement information and replace it with the following:

Table 3.5: Estimated total capital expenditure for the earlier access arrangement period ($’000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Regulatory allowance	827	1603	1692	1909	2089	8120
Actual/estimated expenditure	1727	2191	3816	3636	4412	15 783
Less gas management costs	-	-	-	-	1400	1400
Total capital expenditure	1727	2191	3816	3636	3012	14 383
Difference	(900)	(588)	(2124)	(1728)	(924)	(6264)

Revision 3.3: delete Table 4 in the revised access arrangement information and replace it with the following:

Table 3.6: Mains rehabilitation capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Regulatory allowance	233	514	557	611	656	2571
Actual/estimated expenditure	332	647	547	940	1639	4105
Variation	(99)	(133)	10	(328)	(983)	(1534)

Revision 3.4: delete Table 5 in the revised access arrangement information and replace it with the following:

Table 3.7: Meter replacement capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Regulatory allowance	46	108	161	211	222	747
Actual/estimated expenditure	17	27	718	320	457	1539
Variation	29	81	(557)	(110)	(235)	(792)

Revision 3.5: delete Table 6 in the revised access arrangement information and replace it with the following:

Table 3.8: New connections capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
New Connections/Mains	1172	1394	1347	1011	1162	6086
Network Reinforcement	206	123	1204	1366	1153	4052
Total	**1379**	**1517**	**2551**	**2377**	**2316**	**10 140**
Regulatory allowance	437	744	726	824	950	3681
Variation	(942)	(773)	(1825)	(1553)	(1366)	(6459)

Revision 3.6: delete Table 10 in the revised access arrangement information and replace it with the following:

Table 3.9: Estimated conforming capital expenditure for the earlier access arrangement period ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10	Total
Asset replacement & refurbishment	349	674	1266	1260	2097	5646
Growth related	1379	1517	2551	2377	2316	10 140
Less Network Management Costs					1400	1400
Total	1727	2191	3816	3636	3012	14 383

Revision 3.7: delete Table 12 in the revised access arrangement information and replace it with the following:

Table 3.10: Calculation of the capital base as at 30 June 2010 ($'000, nominal)

	Jan–June 2006	2006–07	2007–08	2008–09	2009–10
Opening capital base	44 515	46 280	48 921	52 590	57 121
Capital expenditure	1727	2191	3816	3636	4412
Less network management costs					1400
Depreciation	564	1226	1332	1474	1588
Disposals					
Adjustment for inflation (indexation)	602	1676	1186	2368	1067
Less difference between actual and forecast capital expenditure (Jan–June 06)					25
Less adjustment					13
Closing capital base	46 280	48 921	52 590	57 121	59 574

Revision 3.8: delete Table 14 in the revised access arrangement information and replace it with the following:

Table 3.11: Forecast conforming capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15	Total
Asset replacement & refurbishment	1997	1702	1871	1935	1452	8958
Growth related	2120	2602	2292	1934	2205	11154
Total	4117	4304	4164	3869	3657	20111

Revision 3.9: delete Table 15 in the revised access arrangement information and replace it with the following:

Table 3.12: Forecast mains refurbishments capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Refurbishment cost	1597	1470	1656	1541	943

Revision 3.10 delete Table 16 in the revised access arrangement information and replace it with the following:

Table 3.13: Forecast meter replacement capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Meter replacement cost	400	232	215	394	510

Revision 3.11: delete Table 17 in the revised access arrangement information and replace it with the following:

Table 3.14: Forecast new connection capital expenditure for the access arrangement period ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
New Connections and Mains	1173	1183	1196	1203	1207
Network Reinforcement	947	1419	1096	730	997
Total	2120	2602	2292	1934	2205

Revision 3.12: delete Table 18 in the revised access arrangement information and replace it with the following:

Table 3.15: Economic asset lives, remaining lives and written down values as at 30 June 2010 (units as stated)

Asset category	Economic life (yrs)	Remaining life (yrs)	WDV ($'000, nominal)
High Pressure	80	59	9093
Medium-High Pressure	50	35	11 295
Medium-Low Pressure	50	25	17 428
Low Pressure	50	31	137
Services	50	30	14 946
Meters & Regulators	15	8	1812
District Regulators	40	18	736
Gate Stations	50	45	3 078
SCADA & Telemetry	20	12	79
Total System Assets			58 605
Total Non System Assets	5	1	969

Revision 3.13: delete Table 19 in the revised access arrangement information and replace it with the following:

Table 3.16: Forecast depreciation for the access arrangement ($'000, nominal)

	Total economic life	Average remaining life	WDV 30/6/10	2010–11	2011–12	2012–13	2013–14	2014–15
System assets	53.4	34	58 605	2064	2225	2386	2554	2734
Non-system assets	5	1	969	223	0.00	0.00	0.00	0.00
Total	52.5	33	59 574	2287	2225	2386	2554	2734

Revision 3.14: delete Table 20 in the revised access arrangement information and replace it with the following:

Table 3.17: Country Energy's proposed capital base ($'000, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Opening capital base	59 574	63 155	67 202	71 150	74 810
Forecast capital expenditure	4367	4680	4641	4421	4284
Forecast depreciation	2287	2225	2386	2554	2734
Disposals					
Adjustment for inflation (Indexation)	1501	1592	1693	1793	1885
Closing capital base	63 155	67 202	71 150	74 810	78 246

Revision 3.15: 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 3.14.

Revision 5.1: delete Table 21 in section 5.3.6 of the revised access arrangement information and replace it with the following:

Parameter	Final decision
Nominal risk-free rate (%)	5.62
Inflation (%)	2.52
Real risk-free rate (%)	3.02
Market risk premium (%)	6.5
Debt risk premium (%)	3.36
Debt to total assets (gearing) (%)	60
Equity beta	0.8
Nominal vanilla WACC (%)	**9.72**

Revision 5.2: 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 5.1.

Revision 6.1: delete Table 24 in the revised access arrangement information and replace it with the following:

	2010–11	2011–12	2012–13	2013–14	2014–15

Forecast tax depreciation	1915	2021	2125	2226	2335

Revision 6.2: delete table 25 in the revised access arrangement information and replace it with the following:

	2010–11	2011–12	2012–13	2013–14	2014–15
Tax payable	486	451	495	541	587
Less value of imputation credits	316	293	322	352	382
Net tax allowance	170	158	173	189	205

Revision 6.3: delete all references to a gamma value of 0.3 in the revised access arrangement information and replace them with a gamma value of 0.65.

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 to 6.3.

Revision 7.1: delete Table 23 in the revised access arrangement information and replace it with the following:

Table 7.4: Country Energy's forecast operating expenditure ($'000, real, 2009–10)

	2010–11	2011–12	2012–13	2013–14	2014–15
Controllable costs					
Network operations and maintenance	1281	1317	1357	1392	1422
Marketing	166	156	116	117	117
Direct gas network management	398	409	421	432	441
Corporate allocation	408	420	433	444	453
Non controllable costs					
Self insurance	1	1	1	1	1
Debt raising costs	37	38	40	41	42
Unaccounted for gas	538	513	485	460	436
Total operating expenditure	2829	2855	2853	2888	2913

Revision 7.2: 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 7.1.

Revision 8.1: delete Tables 29 and 30 in the revised access arrangement information and replace them with the following:

Table 8.3: Forecast total revenue requirements for the Access Arrangement ($m, nominal)

	2010–11	2011–12	2012–13	2013–14	2014–15
Return on capital	5788	6136	6529	6913	7269
Depreciation	786	633	693	761	848
Operating and maintenance	2901	3001	3074	3190	3299
Corporate income tax	170	158	173	189	205
Total	9645	9928	10 470	11 054	11 621
X factor tariff revenue [a] (%)	-12.8	-2.5	-2.5	-2.5	-2.5

a: Negative values for X indicate real price increases under the CPI–X formula.
b: X factor is P0.

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 11.1: amend the revised access arrangement proposal to:

- delete the Table in section A.2 in appendix 2 of the revised access arrangement proposal and replace it with the following:

	Maximum Meter Flow Rate (m3/hr)	($nominal), excluding GST 1 July 2010–30 June 2011
Volume		
Small	10	
Yearly Charge $		176.8986
$/GJ		6.2709
Medium	30	
Yearly Charge $		308.4153
$/GJ		2.3586
Large	150	
Yearly Charge $		924.5324
$/GJ		2.3586

- delete the Table in section A.3 in appendix 2 of the revised access arrangement proposal and replace it with the following:

	($nominal), excluding GST 1 July 2010–30 June 2011
Contract	
($/GJ of MDQ/Year)	
Bomen	96.3731
Central	165.8304

- delete the Table in section A.4 in appendix 2 of the revised access arrangement proposal and replace it with the following:

Meter Type	Initial Monthly Metering Charge ($nominal) excluding GST July 2010–30 June 2011
6GT	555.64
4GT.	540.15
AL5000	582.11
AL2300	550.09
AL1000	485.83
7M175	489.18
5M175	480.62
3M175	508.13

- delete the Table in section A.5 in appendix 2 of the revised access arrangement proposal and replace it with the following:

Additional Service	Initial Charges 1 July 2010–30 June 2011 ($ nominal) excluding GST
Meter Testing Service	240.43
Special Meter Reading Service	41.61
Reconnection Service	48.55
Disconnection Service	41.61
Business Disconnection/Reconnection Service	98.25
After Hours Reconnection Service	115.59
Deactivation Service	451.06

Revision 11.2 amend the revised access arrangement proposal to delete the 'change in the CPI' definition in the glossary section 14 and replace it with the following:

> Change in CPI means the number derived, with respect to regulatory year 't', from the application of the following formula:

$$\Delta CPI_{t} = \left(\frac{CPI_{\text{MAR (t-2)}} + CPI_{\text{JUN (t-2)}} + CPI_{\text{SEP (t-1)}} + CPI_{\text{DEC (t-1)}}}{CPI_{\text{MAR (t-3)}} + CPI_{\text{JUN (t-3)}} + CPI_{\text{SEP (t-2)}} + CPI_{\text{DEC (t-2)}}} \right) - 1$$

$CPI_{\text{month, (year)}}$ means the CPI for the quarter and financial year indicated

For example when determining tariff for the 2011–12 financial year the following CPI formula is used:

$$\Delta CPI_{2012} = \left(\frac{CPI_{\text{MAR 2010}} + CPI_{\text{JUN 2010}} + CPI_{\text{SEP 2010}} + CPI_{\text{DEC 2010}}}{CPI_{\text{MAR 2009}} + CPI_{\text{JUN 2009}} + CPI_{\text{SEP 2009}} + CPI_{\text{DEC 2009}}} \right) - 1$$

where:

$CPI_{\text{MAR 2010}}$ is the March quarter data for the 2009–2010 financial year which corresponds to the period 1 January 2010 to 31 March 2010

$CPI_{\text{JUN 2010}}$ is the June quarter data for the 2009–2010 financial year which corresponds to the period 1 April 2010 to 30 June 2010

$CPI_{\text{SEP 2010}}$ is the September quarter data for the 2010–2011 financial year which corresponds to the period 1 July 2010 to 30 September 2010

$CPI_{\text{DEC 2010}}$ is the December quarter data for the 2010–2011 financial year which corresponds to the period 1 October 2010 to 31 December 2010

Revision 11.3 amend the revised access arrangement proposal to delete section 12.6(g)(3) and replace it with the following:

> a statement to support the Gas Quantity inputs in the tariff variation formula. The statement must be provided by an officer of Country Energy Gas and the Quantity input must reflect the most recent actual financial year Quantity available at the time of the tariff variation assessment.

Revision 11.4 amend the revised access arrangement proposal to delete section 12.5.1(a) and replace it with the following:

> Material impact for a *Pass Through Event* means the event would exceed 1 per cent of the smoothed forecast revenue specified in the final decision in the years of the access arrangement period that the costs are incurred, except each tax change event in section 12.5.1(b).

Revision 11.5 amend the revised access arrangement proposal to delete section 12.5.3(e) and replace it with the following:

> Country Energy must advise the Regulator if Country Energy becomes aware that a *Pass Through Event* has occurred (other than a Tax Change event), which has, or likely to have, an Material impact.
>
> Country Energy must advise the Regulator of such a *Pass Through Event* within 90 business days of becoming aware of the event. This section 12.5.3(e) is not an application to vary the Reference Tariffs.

Revision 11.6 amend the revised access arrangement proposal to delete the first sentence in section 12.5 and replace it with the following:

> Reference Tariffs may be varied if there is a material impact on the cost to Country Energy of providing Reference Services as a result of any *Pass Through Event*, whether singular or several, listed below (*Pass Through Event*), which may occur on one or more occasion in the Access Arrangement period (1 July 2010 – 30 June 2015), where the costs were not incorporated in the determination of Reference Tariffs incorporated in this Access Arrangement or, if there has been a previous review of the Reference Tariffs at the review. Each individual *Pass Through Event* must have a material impact on the cost to Country Energy of providing Reference Services in order for the cost associated with that event to be passed onto consumers.

Revision 11.7: 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 11.1 to 11.6.

Revision 12.1: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to:

- delete '*Country Energy Gas*' in the first line of clause 9.1 and replace it with 'a party'
- delete *'Country Energy Gas'* ' in the last line of clause 9.1 and replace it with 'the party's'
- delete *'Country Energy Gas'* in the first line of clause 9.2 and replace it with 'A party'
- delete *'Country Energy Gas'* in the last line of clause 9.2 and replace it with 'that party'
- delete *'Country Energy Gas'* in the first line of clause 9.3 and replace it with 'a party'
- delete 'the *User*' in clause 9.3 and replace it with 'to the other party'.

Revision 12.2: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to:

- include a new clause 12.2A after clause 12.2:

> 12.2A *Country Energy Gas'* liability will not be limited in this way if:
>
> (a) the User establishes that such a limitation is not fair or reasonable in the circumstances for the purposes of section 68A(2) of the *Trade Practices Act 1974* (Cth); or
>
> (b) the condition or warranty is implied under section 69 of the *Trade Practices Act 1974* (Cth).

- include at the start of clause 12.13: 'Subject to clauses 12.2 to 12.2A,'.

Revision 12.3: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to include the following at the end of clause 5.16:

in accordance with the *Network Code*

Revision 12.4: delete the text in section 7.1.1 in the revised access arrangement proposal and replace it with the following:

7.1.1.1 High pressure pipeline extensions

(a) If *Country Energy Gas* proposes a high pressure pipeline extension of the *Covered Pipeline* it must apply to the *Regulator* in writing to decide whether the proposed extension will be taken to form part of the *Covered Pipeline* and will be covered by this *Access Arrangement*. The application must describe the extension and set out why the extension is necessary.

(b) The application must be made before the proposed high pressure pipeline extension comes into service.

(c) After considering the application, and undertaking such consultation as the *Regulator* considers appropriate, the *Regulator* will inform *Country Energy Gas* of its decision.

(d) The decision may be made on such reasonable conditions as determined by the *Regulator* and will have the operation specified in the decision.

(e) For the purposes of this section 7, a high pressure pipeline extension means a pipeline extension:

(i) with an operating pressure greater than 400kPa;

(ii) that exceeds 500 metres in length; and

(iii) which is located more than one kilometre from a transmission pipeline and that transmission pipeline has an operating pressure greater than 3000kPa.

7.1.1.2 Other pipeline extensions

(a) Subject to this section 7.1.1.2, any low, medium low or medium high pressure pipeline extension of the *Network*, or any pipeline extension of the *Network* which is not a high pressure pipeline extension within the meaning of section 7.1.1.1(e), will be treated as part of the *Network* and accordingly will be the subject of coverage under this *Access Arrangement*.

(b) *Country Energy Gas* may apply to the *Regulator* in writing for a determination by the *Regulator* that paragraph (a) will not apply to the pipeline extension referred to in the application.

(c) After considering an application and undertaking such consultation as the *Regulator* considers appropriate, the *Regulator* will advise *Country Energy Gas* whether or not it makes the determination.

(d) A determination may be made on such reasonable conditions determined by the *Regulator* and will have the operation specified in the determination.

Revision 12.5: amend the revised access arrangement proposal to delete section 9.3 and replace it with the following:

9.3 **Trigger Event**

9.3.1 If an amendment to the *NGL* or the *NGR* takes effect or the National Energy Retail Law or the National Energy Retail Rules commence operation in New South Wales and:

(a) this affects the terms and conditions on which *Users* or *Customers* obtain access under this *Access Arrangement*; and

(b) this results in more favourable conditions for *Users* or *Customers* than those under this *Access Arrangement*,

Country Energy Gas is required to notify the *Regulator* no later than one month following this and to also provide contact details of its *Users* to the *Regulator* at this time.

9.3.2 The *Regulator* may consult with interested parties in order to determine whether the circumstances outlined in section 9.3.1 are circumstances that are likely to be significant and constitute a trigger event.

9.3.3 Following the consultation in section 9.3.2, the *Regulator* will notify *Country Energy Gas* whether the circumstances constitute a trigger event, in which case the *Revisions Submission Date* fixed in this *Access Arrangement* will advance to a date 6 months from the date of the trigger event or such other date as determined by the *Regulator* and subject to the *NGR*.

Revision 12.6: amend the revised access arrangement proposal to delete the word ‘fifth’ where it last appears in section 10.2.4(d) and replace it with ‘highest’.

Revision 12.7: amend the revised access arrangement proposal to delete the first paragraph of section 8 and replace it with the following:

Transfers of capacity will be undertaken:

(a) where *Country Energy Gas* is registered as a participant in a gas market—in accordance with the Gas Market Rules for that gas market; or

(b) if *Country Energy Gas* is not so registered or the relevant Gas Market Rules do not deal with capacity trading—in accordance with NGR 105 and this section 8.

For the purposes of this section 8, Gas Market Rules means the Retail Market Business Rules to Support Retail Competition in Gas for the NSW and ACT gas retail market (or, if these rules are no longer applicable, any other rules or procedures which govern the gas market in which *Country Energy Gas* is a registered participant) from time to time.

Revision 12.8: 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 12.1 to 12.7.

Revision 13.1: amend the revised access arrangement proposal to:

- delete all references to '*distribution pipeline*' in the second paragraph in section 1.1 and replace them with '*Distribution Pipeline*'

- delete 'Network' in section 1.2 and replace it with '*Network*'

- delete 'Country Energy Gas' Network' in section 2.1 and replace it with '*Country Energy Gas' Network*'

- delete 'Gas' in section 2.2 and replace it with '*Gas*'

- delete all references to '*terms and conditions*' in section 5.1 and replace them with '*Terms and Conditions*'

- delete all references to 'gas' in section 5.2.1 and replace them with '*Gas*'

- delete 'gas supply' in section 5.4.1 and replace it with '*Gas Supply*'

- delete all references to 'reconnecting', 'supply' and 'disconnection' in section 5.4.3 and replace them with '*Reconnecting*', '*Supply*' and '*Disconnection*' respectively

- delete 'gas' in section 5.5.1 and replace it with '*Gas*'

- delete 'users' in section 5.5.5 and replace it with '*Users*'

- delete all references to 'gas' in sections 5.5.5, 5.5.6 and 5.5.7 and replace them with '*Gas*'

- delete 'supply' in section 6.1.1(a) and replace it with '*Supply*'

- delete 'supply' and 'gas' in section 6.1.2(f) and replace them with '*Supply*' and '*Gas*' respectively

- delete '*terms and conditions*' in section 9.1(a) and replace it with '*Terms and Conditions*'

- delete 'gas meter' in the last paragraph in section 10.2.1 and replace it with '*Gas Meter*'

- delete 'gas' in section 10.2.4(f) and replace it with '*Gas*'

- delete 'connection' in section 10.2.5 and replace it with '*Connection*'

- delete all references to 'Network' in the text under the '*Retail project event*' heading in section 12.5 and replace it with '*Network*'

- delete 'pass through event' in the text under the '*Climate change (Carbon Pollution Reduction Scheme)*' heading in section 12.5 and replace it with '*Pass Through Event*'

- correct the formatting of the last paragraph in section 12.5.2 by making it paragraph (d) of the section and change the font size to be the same as the rest of the section

- delete '12.4' in section 12.5.6 and replace it with '12.5'

- delete '12.5(b)' in section 12.6(c) and replace it with '12.6(b)'.

Revision 13.2: amend the terms and conditions in appendix 1 in the revised access arrangement proposal to:

- delete 'Interrupt' in clause 5.1(b) and replace it with '*Interrupt*'

- delete 'Deactivate' in clause 5.17 and replace it with '*Deactivate*'

- delete 'clause 6.21' in clause 6.21 and replace it with 'clause 6'

- delete 'clause 6.22' in clause 6.22 and replace it with 'clause 6'

- delete 'clauses 6.5 to 6.11' in clause 6.26 and replace it with 'clauses 6.1 to 6.4'

- change the font for '11.5' in clause 11.5 so it is the same as font used for the rest of the clause

- delete all references to 'Supplier's Authorisation' in clause 11.15 and replace them with *'Suppliers Authorisation*'

- delete the semi colon at the end of clauses 12.6, 12.7, 12.8 and 12.9 and replace it with a full stop.

Revision 13.3: amend the revised access arrangement information to:

- delete '*Agreement*' from the fourth bullet point in section 2.3.5 and replace it with 'Agreement'

- delete 'unaccounted for gas' from the last bullet point in section 2.3.5 and replace it with '*Unaccounted for Gas*'

- delete 'services' from the first line in section 3 and replace it with '*Services*'

- delete '*Gas Supply (Gas Meters)*' from the last paragraph in sections 5.2.1 and 5.2.1.1, and replace them with 'Gas Supply (Gas Meters)'

- delete 'supplied' in section 5.2.1.1 and replace it with '*Supplied*'

- delete 'service' in section 5.2.1.2 and replace it with '*Service*' and correct the formatting for the first two bullet points in the section

- delete 'both CEG and' in section 5.3.5

- correct the formatting between the last two paragraphs in section 6.2.2

- delete all references to 'gas', 'customers' and 'connect' in section 6.2.2 and replace them with '*Gas*', '*Customers*' and '*Connect*' respectively

- delete 'gas network' from the second paragraph in section 6.2.3 and replace it with '*Gas Network*'

- delete 'Country Energy Gas' from the second paragraph in section 6.2.5 and replace it with '*Country Energy Gas*'

- delete 'Contract (high pressure) *Customers*' and 'Volume (low pressure) *Customers*' from the second paragraph in section 8.1.1 and replace them with '*Contract Customers* (high pressure)' and '*Volume Customers* (low pressure)' respectively

- delete 'Customers' from the last paragraph in section 9.3 and replace it with '*Customers*'.

Revision 13.4: amend the revised access arrangement proposal to:

- include a definition for Access Arrangement Period means 1 July 2010 to 30 June 2015 in section 14

- include a definition for Next Access Arrangement Period means the period commencing 1 July 2015 for the next access arrangement in section 14

- include a definition for Earlier Access Arrangement Period means 1 January 2006 to 30 June 2010 in section 14.

Glossary

AAG	Access arrangement guideline
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
Access Economics	Access Economics Pty Ltd
ACG	The Allen Consulting Group
ACIL	ACIL Tasman Pty Ltd.
ACT	Australian Capital Territory
ActewAGL	a partnership between ACTEW Distribution Limited and Jemena Networks (ACT) Pty Ltd trading as ActewAGL Distribution
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
ASX	Australian Stock Exchange
ATO	Australian Taxation Office
bppa	basis points per annum
CAPM	Capital Asset Pricing Model
CCGT	combined cycle gas turbine
CEG	Competition Economists Group
CGS	Commonwealth government securities
CIPD Report	CIPD Survey Report (2008)
Country Energy Group	The Country Energy Group includes the Country Energy electricity and gas businesses. Country Energy Gas Pty Limited (Country Energy) is a part of the Country Energy Group, which owns and operates the Wagga Wagga gas distribution network.
CPRS	Carbon Pollution Reduction Scheme
DGM	dividend growth model
DRP	debt risk premium
EBA	enterprise bargaining agreement
Econtech	KPMG Econtech Pty Ltd
EDD	effective degree day
EGW	electricity, gas and water

ETSA	ETSA Utilities
GasNet	GasNet Australia Group
GFC	Global Financial Crisis
GJ	gigajoule (1 000 000 000 joules)
HDD	Heating degree day efficiency data
IMF	International Monetary Fund
IRS	Infrastructure and Regulation Service Pty Ltd
ISR	Industrial special risk
JIA	Joint Industry Association
KPMG fraud survey	2004 KPMG fraud survey
MDQ	maximum daily quantity
MRP	market risk premium
NBER	National Bureau of Economic Research
NECF	National Energy Customer Framework
NEMMCO	National Electricity Market Management Company
NERA	NERA Economic Consulting
NIEIR	National Institute of Economic and Industry Research
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
PJ	petajoule (equal to 1000 terajoules)
PTRM	post taxation revenue model
QCA	Queensland Competition Authority
RBA	Reserve Bank of Australia
SAHA	SAHA International Limited
SAIDI	system average interruption duration index
SCADA	supervisory control and data acquisition

SKM	Sinclair Knight Merz Pty Ltd
TJ	terajoules (equal to 1000 gigajoules)
UAG	unaccounted for gas
UBS	Union Bank of Switzerland
WACC	weighted average cost of capital
WAPC	weighted average price cap
WDV	written down value
Wilson Cook	Wilson Cook & Co Limited