Access arrangement final decision

Multinet Gas (DB No. 1) Pty Ltd

Multinet Gas (DB No. 2) Pty Ltd

2013–17

Part 1

March 2013

AUSTRALIAN ENERGY REGULATOR

Contents

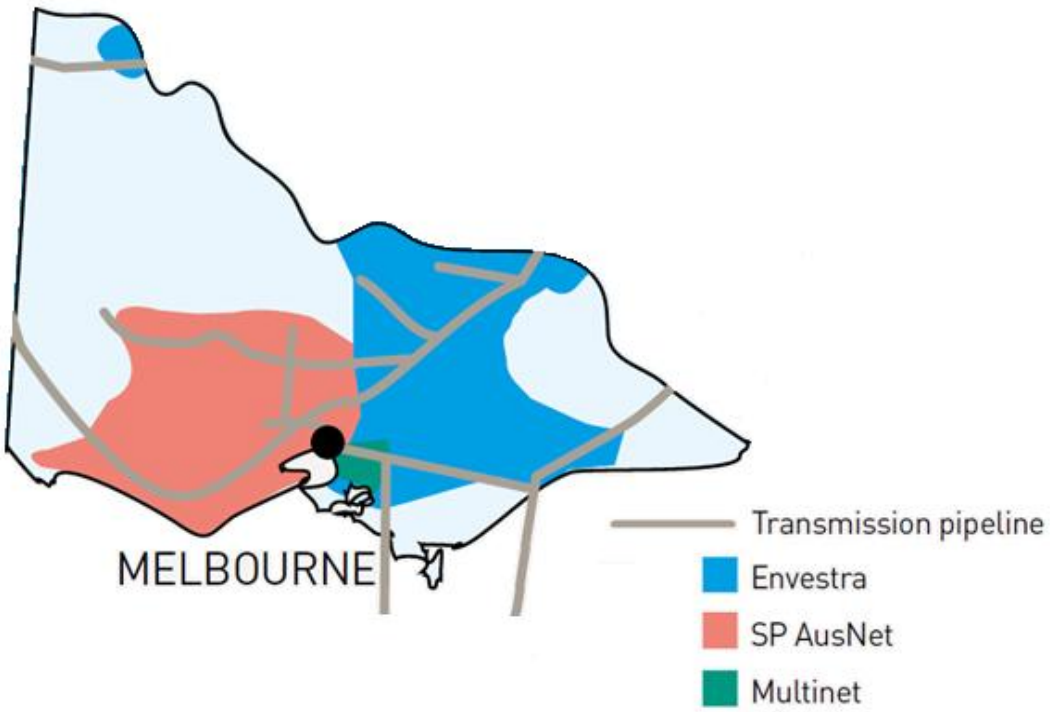
Shortened forms

Shortened form	Full title
2008–12 access arrangement	Access arrangement for Multinet effective from 1 January 2008 to 31 December 2012
2013–17 access arrangement	Access arrangement for Multinet effective from 1 January 200813 to 31 December 2017
2018–22 access arrangement	Access arrangement for Multinet effective from 1 January 2018 to 31 December 2022
ACCC	Australian Competition and Consumer Commission
AER	Australian Energy Regulator
access arrangement information	Multinet, Access arrangement information, 30 March 2012
revised access arrangement information	Multinet, Revised access arrangement information, 9 November 2012
access arrangement proposal	Multinet, Access arrangement proposal, 30 March 2012
revised access arrangement proposal	Multinet, Revised access arrangement proposal, 9 November 2012
capex	capital expenditure
CAPM	capital asset pricing model
CPI	consumer price index
Code	National Third Party Access Code for Natural Gas Pipeline Systems
DRP	debt risk premium
ESC	Essential Services Commission (Victoria)
MRP	market risk premium
Multinet	Multinet Gas (DB No.1) Pty Ltd (ACN 086 026 986), Multinet Gas (DB No.2) Pty Ltd (ACN 086 230 122)
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
opex	operating expenditure
PTRM	post tax revenue model
RAB	regulatory asset base
RFM	roll forward model
RPP	revenue pricing principles
WACC	weighted average cost of capital

1 About the review

The AER is responsible for the economic regulation of covered natural gas distribution and transmission pipelines in all states and territories except Western Australia. The AER is currently conducting a review of the revised access arrangements of the three Victorian gas distribution networks, including Multinet, and the Victorian gas transmission network. A map of the Victorian gas distribution and transmission networks in at Figure 1.1.

Figure 1.1 Map of the Victorian gas distribution and transmission networks



The National Gas Law (NGL) and National Gas Rules (NGR) provide the overarching regulatory framework for the gas distribution and transmission sectors.

The Victorian gas distribution networks are subject to 'full regulation', which requires a service provider[1] to submit an initial access arrangement to the AER for approval, and to revise it periodically (typically every five years). The access arrangement sets out the terms and conditions on which third parties can access the distribution pipeline.[2]

The provisions of an access arrangement must be consistent with the National Gas Objective (NGO) as detailed in the NGL. The NGO is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price,

1 Under s.8 of the NGL a service provider is a person who owns, controls or operates a gas pipeline.

2 Providers of gas distribution services typically negotiate contracts to sell pipeline services to customers such as energy retailers. Section 322 of the NGL provides that contracts between service providers and users may differ from those approved by the AER as part of an access arrangement review. In the event of a dispute, however, a user or prospective user may request dispute resolution by the AER under Chapter 6, Part 3 of the NGL. In the event that the AER makes an access determination in order to resolve the dispute, it must give effect to the access arrangement: s. 189.

quality, safety, reliability and security of supply of natural gas.[3] The AER is also guided by the Revenue and Pricing principles (RPP) in s. 24 of the NGL.[4]

As the owner and operator of a gas distribution network, Multinet is required to submit an access arrangement to the AER for approval. An access arrangement must describe all pipeline services Multinet proposes to offer. Multinet must also specify the pipeline services likely to be sought by a significant part of the market. These are referred to as references services. Multinet is required to specify the tariff and the terms and conditions on which those reference services will be provided.[5]

The reference services in this access arrangement are the gas haulage services provided by Multinet on its gas distribution network. These provide for the injection, withdrawal and conveyance of gas. The AER's final decision on the services covered by the access arrangement is set out in attachment 2 of the final decision.

1.1 AER final decision

The AER does not approve Multinet's revised access arrangement proposal.[6]

The AER's decision on Multinet's 2013–17 access arrangement proposal is made in accordance with the relevant sections of the NGL and NGR.

The AER's approval of an access arrangement proposal implies approval of every element of the proposal. It follows that, if the AER withholds its approval to any element of an access arrangement proposal, the proposal cannot be approved.[7]

As required by the NGL and NGR, in forming its decision the AER has:

- considered Multinet's revised access arrangement proposal and supporting information
- considered information provided by Multinet in response to information requests from the AER
- considered submissions from interested parties
- considered views expressed at stakeholder events
- undertaken its own analysis to verify the information provided by Multinet
- considered expert advice or analysis commissioned in relation to certain aspects of Multinet's access arrangement proposal.

For more on the steps undertaken by the AER in coming to this final decision, as well as an overview of the regulatory framework, see attachment 1.

The remainder of this document contains the AER's reasons for its final decision.

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3 NGL, s. 23; NGR, r 100(a).
4 Under s 28(2) of the NGL, the AER must take into account the revenue and pricing principles when exercising a discretion in approving or making those parts of an access arrangement relating to a reference tariff and may take into account the principles when performing or exercising any other AER economic regulatory function or power.
5 NGR, r. 101(a); r. 48(1)(c) and (d). A pipeline service means a service provided by means of a pipeline and includes a haulage service and a service ancillary to the provision of a haulage service: s 2 of the NGL.
6 NGR, r. 62.
7 NGR, r. 41.

In this final decision, the AER proposes revisions to the access arrangement for Multinet's distribution pipeline having regard to the NGL, NGR, Multinet's proposal and the AER's reasons for not approving that proposal.[8] The AER will make a decision giving effect to its own proposal within two months of this final decision.[9]

1.2 Structure of the final decision

This document is the AER's final decision on Multinet's access arrangement for the 2013–17 access arrangement period.

The final decision is set out as follows:

- Part 1: AER final decision – the final decision on Multinet's revised access arrangement proposal and a summary of reasons
- Part 2: attachments – detailed analysis of the various components of the final decision (excluding analysis based on confidential information)
- Part 3: appendices – detailed discussion of common, technical issues
- Part 4: confidential appendices – sections of the AER's analysis that include protected information

1.3 Tariffs for reference services

Tariffs for reference services are set at a level that allows a service provider the opportunity to earn sufficient revenue to cover the efficient cost of providing these services.[10] This is consistent with the NGO in that it promotes efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas.

The AER assesses Multinet's proposed tariffs by reference to its total revenue requirement and the likely usage of reference services over the access arrangement period. This information is used to calculate tariffs that will allow Multinet the opportunity to earn its total revenue requirement.

The AER uses the building block approach to determine the efficient level of costs to provide the reference services and therefore the amount of revenue required by Multinet. This approach is set out in r. 76 of the NGR and includes the following capital and non-capital costs of providing reference services:

- a return on the projected capital base incorporating:
  - the capital base—the AER's analysis of Multinet's proposed capital base is discussed in chapter 3 and attachment 3
  - capital expenditure—chapter 4 and attachment 4
  - a rate of return—chapter 5 and attachment 5
- an allowance for depreciation of the projected capital base—chapter 6 and attachment 6
- operating expenditure—chapter 7 and attachment 7

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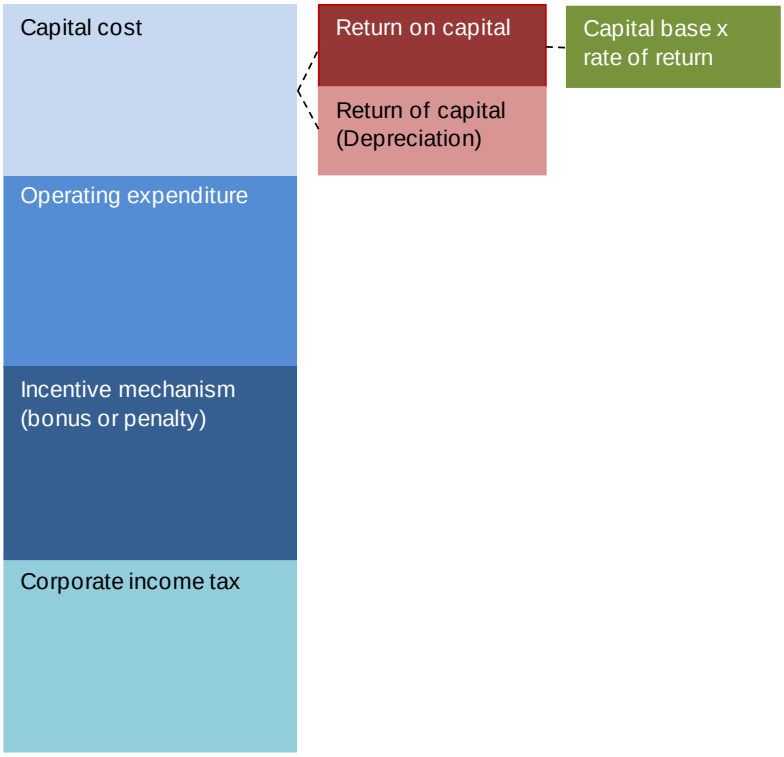
8 NGR, r. 64(1) and (2).
9 NGR, r. 64(4)
10 This approach is detailed within the Revenue and Pricing principles, NGL s. 24

- increments and decrements resulting from an incentive mechanism[11]—chapter 8 and attachment 8
- corporate income tax[12]—chapter 9 and attachment 9.

The building block approach is also shown in Figure 1.2.

Figure 1.2 Building block approach



These building block costs are used to determine Multinet's total revenue requirement for the five year access arrangement period.[13]

The AER must also consider the likely usage of the reference service to determine the appropriate tariff (or suite of tariffs). To do this, the AER forecasts the demand for reference services over the access arrangement period.[14] Tariffs are then set at a level that will allow Multinet to collect its total revenue requirement.

The discussion above describes the general approach to tariff setting. Specific detail on tariff setting and how tariffs can be varied is provided within the access arrangement. The AER's decision on these aspects of the access arrangement is provided at:

- chapter 11 and attachment 11 discuss how tariffs for reference services will be set

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11 This may relate to operating expenditure and/or capital expenditure depending on the incentive mechanism.
12 This will be included as a building block revenue component in the estimate of corporate income tax payable under the post-tax framework or in the return on the capital under the pre-tax framework. The AER employs the post-tax framework.
13 A summary of the AER's decision on Multinet's required revenue is provided in the next chapter (chapter 3).
14 The AER's decision on demand is discussed in chapter 10 and attachment 10.

- chapter 12 and attachment 12 discuss the mechanism for varying tariffs annually and arrangements for varying tariffs in certain pre-specified conditions.

1.4 Non-tariff components

Non-tariff components refer to the terms and conditions that are not directly related to the nature and level of tariffs paid by users, but which are important to the relationship between the network service provider and users. They include capacity trading requirements, queuing requirements, extension and expansion requirements, and other terms and conditions on which the reference services will be provided.[15]

In considering Multinet's revised proposal, the AER assesses whether the proposed terms and conditions are consistent with the NGO and the broader regulatory framework. Although parties can agree to terms that are different to those set out in Multinet's access arrangement proposal, the AER's approved terms and conditions can act as a starting point for negotiations.[16]

The AER's consideration of the access arrangement's non–tariff components is set out in attachment 13.

[15] NGR, r. 48(1).

[16] Under s. 322 of the NGL, subject to the queuing requirements of an access arrangement, a service provider may enter into an agreement with a user or prospective user about access to a pipeline service provided by means of a scheme pipeline that is different to an applicable access arrangement that applies to that pipeline service.

2 Total revenue

The total revenue requirement is a forecast of the efficient cost of providing gas distribution services over the access arrangement period.

The total revenue set out in this decision has been determined by assessing each building block cost of Multinet's access arrangement proposal. The AER has assessed whether these building block costs are consistent with the costs that would be incurred by an efficient provider of gas distribution services.

2.1 Final decision

The AER does not accept Multinet's (revised) proposed total revenue of $1003.7 million ($nominal).[17,18] The AER has calculated a total revenue allowance of $863.6 million ($nominal) over the access arrangement period.[19]

This revenue requirement is 14.0 per cent lower than Multinet's proposed revenue over the 2013–17 access arrangement period. The AER accepts that some aspects of Multinet's revised proposal are consistent with the requirements of the NGR. However, the AER has not approved all elements. The key elements of the AER's final decision that reduce Multinet's proposed revenue include:

- rate of return—the AER has calculated a rate of return of 7.03 per cent as compared to Multinet's proposal of 7.96 per cent. The reduction in total unsmoothed revenue attributable to the AER's final decision on the rate of return is $65.6 million ($nominal) or 6.5 per cent (see table 2.1).
- capital expenditure (capex)—the AER considers that $263.2 million ($nominal) is conforming capex as compared to Multinet's proposal of $330.7 million ($nominal) (a reduction of approximately 20.4 per cent). This will reduce overall revenue by approximately 0.8 per cent.
- operating expenditure[20] (opex)—the AER has calculated an opex allowance of $333.7 million ($nominal) as compared to Multinet's proposal of $365.2 million ($nominal) (a reduction of approximately 8.6 per cent). This will reduce overall revenue by approximately 3.1 per cent.

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17 The figures in this paragraph represent revenue smoothed across the access arrangement period.

18 The AER's smoothed revenues are derived from the AER's smoothed tariffs. Smoothed tariffs multiplied by forecast demand equals the smoothed revenue. The smoothed revenues are equal in net present value terms to Multinet's unsmoothed building block revenue requirements.

19 The revenue allowances are determined by smoothing the total building block revenue requirement of $867.7 million ($nominal).

20 Includes carryover amounts.

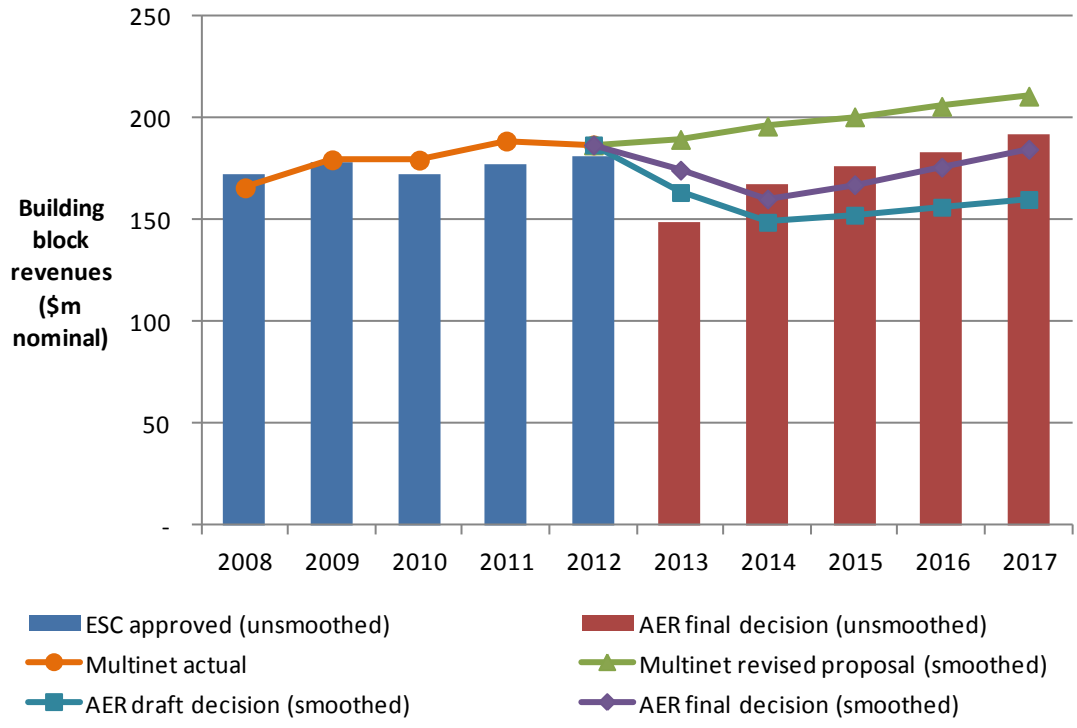
Table 2.1 Changes to Multinet's revised proposal total unsmoothed revenue, when AER's final decision WACC parameters are adopted

	Scenario WACC (per cent)	Revenue change ($million, nominal)	Revenue change (per cent)
Multinet's revised proposal	7.96	–	–
Cost of debt updated for the final decision averaging period	7.79	–10.2	–1.0
AER final decision WACC [a]			
(including both cost of debt and cost of equity updated for the final decision averaging period)	7.03	–65.6	–6.5

Source: AER analysis.
Notes: The above scenario analysis was undertaken using the proposed Post-tax Revenue Model, with the formulae in the 'WACC' sheet corrected for the AER's approach.
(a) This scenario only differs from the second scenario due to the AER's final decision on the appropriate risk free rate used to estimate the cost of equity.

Figure 2.1 compares Multinet's revised proposal with the AER's final decision for revenues over the 2013–17 access arrangement period and the revenue approved by the ESC over the 2008–12 access arrangement period.

Figure 2.1 AER's final decision compared to Multinet's revenue requirement and approved revenue for 2008–12 ($million, nominal)



Source: AER analysis.

The AER's final decision on Multinet's total revenue is arrived at by summing the building block costs. These costs are shown in table 2.2 and are each discussed in greater detail in this final decision and the attachments to this decision.

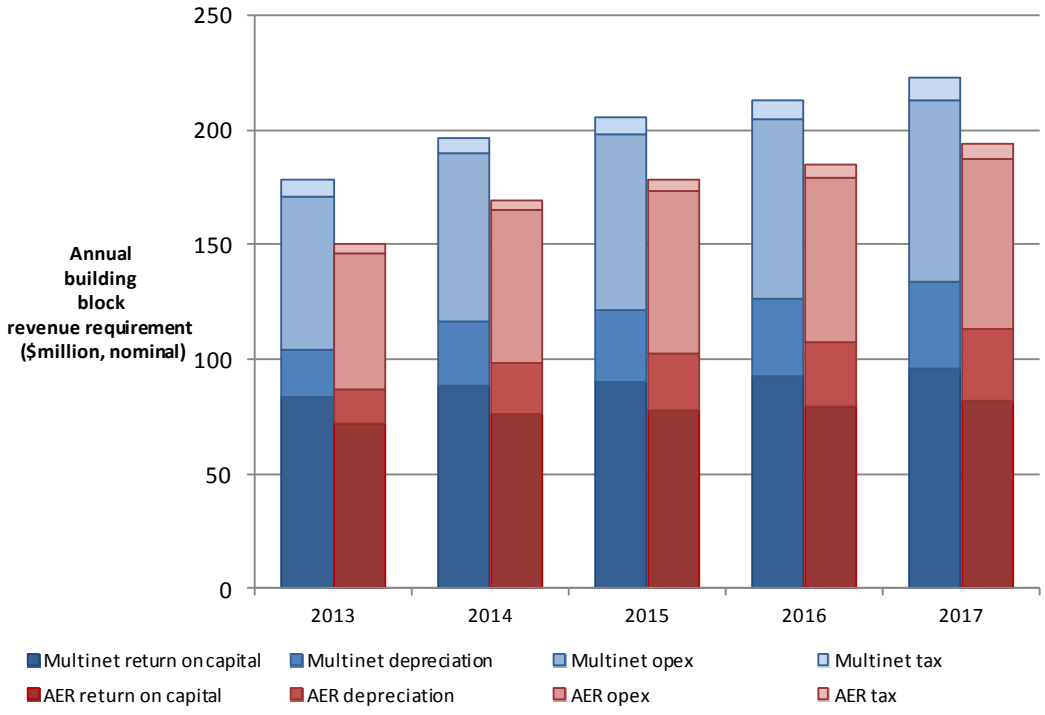
Table 2.2 AER's final decision on Multinet's revised proposal revenue requirements for its reference services ($million, nominal)

	2013	2014	2015	2016	2017	Total
Return on capital	72.1	76.3	77.5	79.2	81.9	387.0
Regulatory depreciation	14.7	22.3	25.3	28.0	30.9	121.2
Operating expenditure	59.0	66.2	70.3	71.7	74.4	341.6
Efficiency carry-over	–	–	–	–	–	–
Net corporate income tax allowance	4.7	4.4	4.8	5.6	6.8	26.3
Less: ancillary reference service revenues	1.5	1.5	1.6	1.6	1.7	7.9
Annual building block requirement (unsmoothed)	148.9	167.8	176.4	182.8	192.3	868.2
Annual expected revenue (smoothed)	174.6	160.5	167.5	176.1	184.9	863.6
X factor	13.3%	5.0%	–2.0%	–2.5%	–2.5%	n/a

Source: AER analysis.

The effect of each component of the AER's final decision on Multinet's (revised) proposed total (unsmoothed) revenue requirement is displayed in figure 2.2. This shows that the AER's final decision will reduce Multinet's revised proposals for the return on capital, opex, depreciation and tax building blocks.

Figure 2.2 AER's final decision and Multinet's revised proposal revenue requirement (unsmoothed), by building block ($million, nominal)



Source: AER analysis.

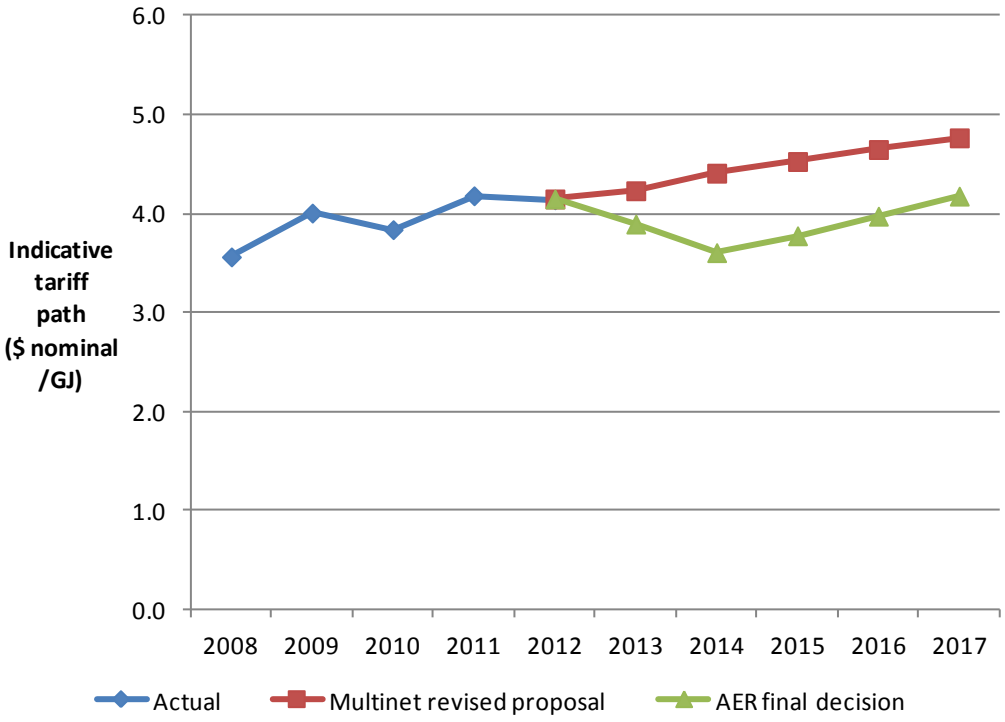
2.2 Impact on reference tariffs

The AER's final decision will reduce Multinet's proposed forecast reference tariffs by 14.0 per cent on average over the 2013–17 access arrangement period (in nominal dollar terms).

The AER's final decision will result in average reference service distribution charges ($/GJ of demand) for the 2013–17 access arrangement period that are 1.5 per cent lower than average reference service charges per GJ for the 2008–12 access arrangement period.

These lower reference tariffs are largely driven by the AER's final decision on a lower rate of return and lower opex forecast. The indicative tariff path arising from the AER's final decision compared with that in Multinet's revised proposal is shown in Figure 2.3.

Figure 2.3 Indicative reference tariff paths for Multinet's reference services from 2013 to 2017 ($/GJ, nominal)



Source: AER analysis.
Note: This chart shows an indicative tariff path, based on forecast revenues and forecast demand for Multinet's network. Multinet's actual tariffs will first be updated on 1 July 2013 to reflect the AER's decision. For this reason, the indicative 2013 tariff above is an average of the higher 2012 tariffs, and lower 2013 tariffs (from 1 July 2013 to 31 December 2013) to reflect the AER's decision. On 1 January 2014, the AER's final decision forecasts that actual tariffs will increase to reflect CPI.

3 Capital base

The capital base accounts for the value of Multinet's regulated assets, including gas distribution pipelines, connections, IT systems, plant and equipment, motor vehicles and buildings. It is the value on which Multinet can earn a rate of return and depreciation allowance.[21] It is therefore a fundamental input to the calculation of these building blocks.

As part of this final decision, the AER is required to assess Multinet's proposed opening values for its capital base for each year of the 2008–12 and 2013–17 access arrangement periods. To carry out this assessment, the AER:

- determines the value of the opening capital base as at 1 January 2008 (the first year of the 2008–12 access arrangement period)
- rolls forward[22] the capital base from 1 January 2008 to determine the opening capital base as at 1 January 2013
- rolls forward the projected capital base for each year of the 2013–17 access arrangement period (using forecast depreciation, forecast capex, disposals and inflation approved by the AER in this final decision) to determine the closing capital base as at 31 December 2017.

The full final decision and the AER's detailed reasons and analysis on the capital base can be found in attachment 3.

3.1 Final decision

The AER does not approve Multinet's proposed opening capital base of $1046.2 million as at 1 January 2013. The AER has calculated an opening capital base of $1024.9 million ($nominal). The AER's capital base roll forward for the 2008–12 access arrangement period is set out in Table 3.1.

Table 3.1 AER's final decision on Multinet's capital base roll forward for the 2008–12 access arrangement period ($million, nominal)

	2008	2009	2010	2011	2012
Opening capital base	1090.5	1080.2	1041.6	1026.2	1034.2
Net capex	38.8	13.2	38.3	62.3	45.6
Less: regulatory depreciation	49.1	51.8	53.6	54.3	54.9
Closing capital base	1080.2	1041.6	1026.2	1034.2	1024.9

Source: AER analysis.
Note: Totals may not add due to rounding.

Based on the AER's approved opening capital base for Multinet (as at 1 January 2013) and the final decisions on forecast capex and forecast depreciation, the AER has determined a projected closing

[21] The AER's decision on these aspects of the access arrangement are at attachments 5 and 6.
[22] The opening capital base value for a regulatory year is rolled forward by indexing it for inflation, adding any conforming capex, and subtracting depreciation and other possible factors (for example, disposals or customer contributions). Following this process, the AER arrives at a closing value of the capital base at the end of the relevant year.

capital base as at 31 December 2017 of $1169.1 million ($nominal). Table 3.2 sets out the AER's projected capital base roll forward for Multinet during the 2013–17 access arrangement period.

Table 3.2 AER's final decision on Multinet's projected capital base roll forward during the 2013–17 access arrangement period ($million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	1024.9	1084.8	1102.6	1126.3	1164.4
Net capex	74.5	40.2	48.9	66.1	35.6
Less: straight-line depreciation	40.3	49.5	52.9	56.1	60.0
Indexation	25.6	27.1	27.6	28.2	29.1
Closing capital base	1084.8	1102.6	1126.3	1164.4	1169.1

Source: AER analysis
Note: Totals may not add due to rounding.

3.2 Summary of analysis and reasons

As noted above, in order to assess Multinet's proposed capital base, the AER must consider the following inputs:

- the opening capital base as at 1 January 2008
- the opening capital base as at 1 January 2013
- the projected capital base as at 31 December 2017 (including the depreciation approach to be used to roll forward the capital base from 2013–17 at the next access arrangement review).

3.2.1 Opening capital base as at 1 January 2008

The AER does not approve Multinet's proposed opening capital base as at 1 January 2008.

In its revised proposal, Multinet adopted the revisions that the AER required in its draft decision. However, the AER has considered further information that supports the need to apply an additional 6 months of indexation to Multinet's capital base. This is to transition from the Essential Services Commission Victoria's (ESC) modelling framework to the AER's modelling framework.[23]

The additional six months of indexation will align Multinet's capital base with the AER's approach at 1 January 2013.

The AER has determined Multinet's opening capital base as at 1 January 2008 to be $1090.5 million ($2012), after adjusting for an additional 6 months of inflation to align Multinet's capital base with the AER's modelling framework.

[23] The ESC was the body responsible for making the final decision on Multinet's 2008–12 access arrangement proposal. The ESC's approach indexed the capital base each financial year, while the AER's approach will index the base at each calendar year.

3.2.2 Opening capital base as at 1 January 2013

The AER does not approve Multinet's proposed opening capital base as at 1 January 2013.

Multinet is required by its 2008–12 access arrangement to roll forward the capital base during that period using the ESC's estimate of 2012 capex.

Multinet instead proposed to roll forward the capital base using a revised estimate of 2012 capex. Multinet submitted that the application of the ESC's approach would result in reduced revenues [24] which would not be consistent with the operation of its incentive mechanism under its 2008–12 access arrangement.

The AER considers that the impact of the ESC's approach depends on actual capex for 2012. Since actual capex values for 2012 are not yet available, it is not possible to determine at present whether the ESC's approach would be inconsistent with the operation of the 2008–12 incentive mechanism. An assessment of this will only be possible at the time of the AER's assessment of Multinet's 2017–22 access arrangement proposal. Consequently, the AER does not approve Multinet's revised proposal to roll forward the capital base during the 2008–12 access arrangement period using its revised estimate of 2012 capex. The AER has adjusted Multinet's roll forward of its capital base for 2012 capex using the ESC's approach specified in the current access arrangement.

In addition, the indexation adjustment to the opening capital base as at 1 January 2008 will also have an impact on the opening capital base as at 1 January 2013. The AER has made the adjustment to account for this.

As a result of these adjustments, the AER determines Multinet's opening capital base as at 1 January 2013 to be $1024.9 million ($nominal).

3.2.3 Projected closing capital base as at 31 December 2017

The AER does not approve Multinet's projected capital base as at 31 December 2017. The AER's forecast of Multinet's projected capital base as at 31 December 2017 is $1169.1 million ($nominal).

The AER's decision on the projected capital base reflects the decrease in the opening capital base as at 1 January 2013. It also reflects adjustments to other components of Multinet's proposal that have had a consequential effect on the projected capital base as at 31 December 2017. These are discussed in other attachments and include:

- a reduction in forecast capex allowances (see attachment 3)
- a reduction in forecast depreciation allowance (see attachment 6).

The AER approves Multinet's proposal to use forecast depreciation to establish its opening capital base as at 1 January 2018 for the next access arrangement review. This is consistent with the AER's draft decision.[25]

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[24] Multinet, *Revised access arrangement information*, November 2012, p. 130.
[25] AER, *Draft decision for Multinet*, September 2012, p. 11.

4 Capital expenditure

Forecast capital expenditure (capex) is an estimate of the cost of new assets that are likely to be required by a network business during an access arrangement period for the efficient operation of the network. The final approved level of capex is used in conjunction with the opening capital base and rate of return as an input in the return on capital building block.

Capex is broken down into several categories:

- Augmentation capex—assets that expand the capacity of the network or provide connections to new customers
- Refurbishment and upgrade capex—used to replace or upgrade aging, obsolete or inefficient assets
- Non-network capex—includes IT, plant and equipment, motor vehicles and buildings.

The amount of overall capex required will vary based on the circumstances facing the service provider. Factors that influence the required level of capex include the age and condition of existing assets, and changes in both the number of customers connected to the network and demand profile of customers.

The AER assesses the capex forecasts of regulated gas network businesses to determine whether they comply with the applicable NGL and NGR requirements.[26] In particular, the forecast capex must:

- be arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances[27]
- be expenditure that would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of providing pipeline services[28]
- be justifiable on a ground stated in r. 79(2) of the NGR.

As well as assessing forecast capex, the AER reviews actual capex undertaken during the previous access arrangement periods (specifically the period 2007–11). This assessment is used to set the opening capital base as at 1 January 2013 (see chapter 3).

In assessing Multinet's proposed capex for both the previous and upcoming regulatory access agreement periods, the AER reviewed Multinet's revised proposal and supporting material. This included information on Multinet's reasoning and, where relevant, business cases, audited regulatory accounts, and other relevant information. In addition, the AER engaged consultants to review aspects of Multinet's capex proposals.

The full final decision and the AER's detailed reasons and analysis on the capital expenditure can be found in attachment 4.

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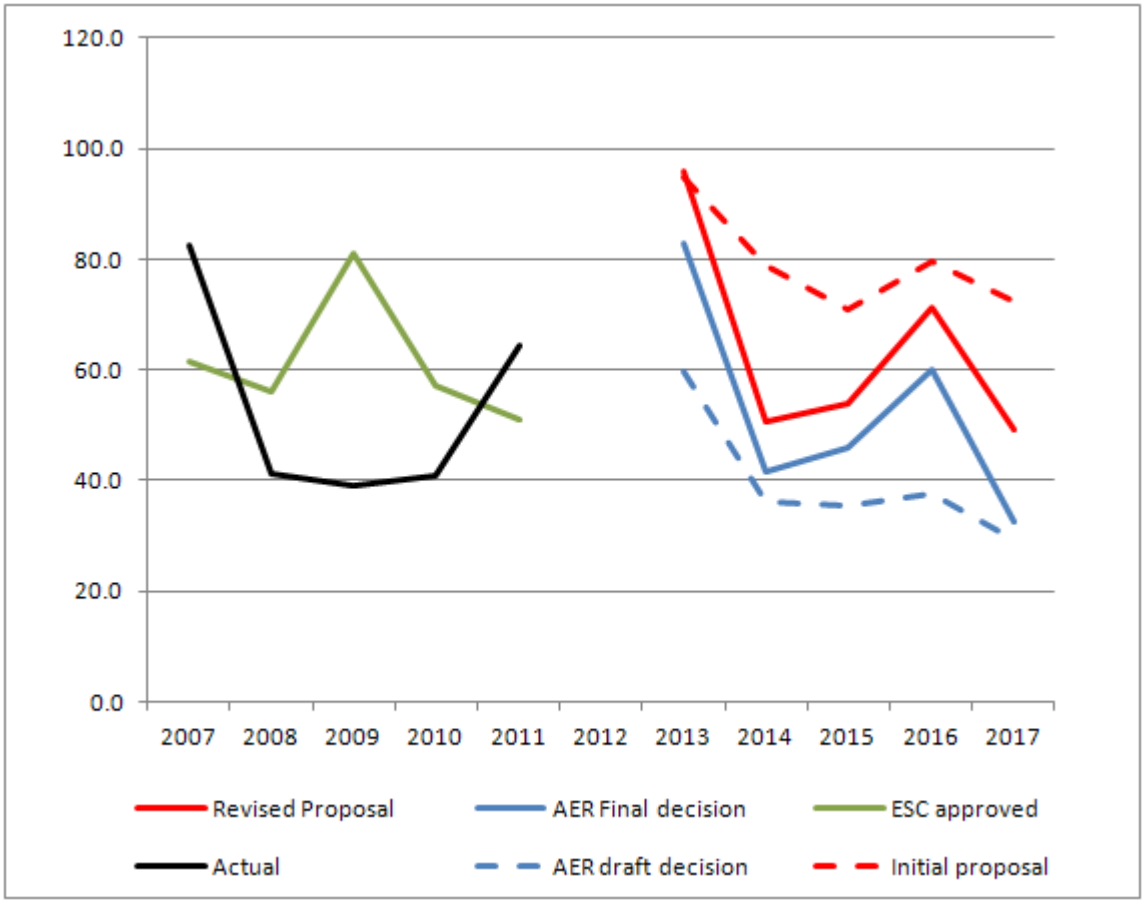
26 NGR, rr. 74(2); 79; 100(a); NGL, s 23.
27 NGR, r 74(2).
28 NGR, r. 79(1)

4.1 Final decision

The AER does not approve Multinet's revised capex proposal for the 2013–17 access arrangement period of $300.3 million ($2012). The AER considers that a capex allowance of $242.5 million ($2012) complies with the requirements in the NGR.[29]

Figure 4.1 compares Multinet's actual and approved capex for the 2008–12 access arrangement period, and its proposed and approved forecast capex for the 2013–17 period.

Figure 4.1 Comparison of Multinet's historical, proposed and approved capex ($million, 2012)



Source: AER analysis

Table 4.1 compares the AER's final decision against Multinet's proposals and the AER's draft decision by capex category.

[29] NGR, rr .74(2) and 79(1).

Table 4.1 AER approved capital expenditure for the 2013–17 access arrangement period ($million, 2012)

Category	Multinet initial proposal	AER draft decision	Multinet revised proposal	AER final decision
Mains replacement	121.3	44.8	83.8	56.7
Residential connections	96.0	61.5	73.9	69.8
Commercial/industrial connections	12.7	4.2	6.6	6.6
Meters	14.0	11.2	15.0	12.2
Augmentation	35.1	7.4	35.4	23.7
IT	46.9	35.6	48.4	45.7
SCADA	7.4	1.0	2.2	1.1
Other	46.1	32.4	38.8	34.7
Internal direct overheads	16.4	0.0	16.7	12.7
Indirect overheads	-	0.0	0.0	0.0
GROSS TOTAL	396.0	198.4	321.0	263.2
Customer contributions	20.7	20.7	20.7	20.7
Government contributions	-	0.0	0.0	0.0
NET TOTAL	375.3	177.7	300.3	242.5

Source: AER analysis.

The AER approves Multinet's proposed capex for 2007–11 of $231.7 million as conforming capex for the purpose of setting the capital base as at 1 January 2013.

4.2 Summary of analysis and reasons

The AER has determined a forecast capex allowance for Multinet of $242.5 million ($2012). This represents a reduction of $57.8 million ($2012) from Multinet's revised forecast capex.

The main differences between the AER's final decision and Multinet's revised proposal relate to mains replacement, augmentation and contractor overheads applied in internal cost build ups.

4.2.1 Mains replacement

Distribution mains are the pipes that convey gas to service pipes at each end user point. Multinet's largest mains replacement program is its low pressure to high pressure (LP to HP) mains replacement. This involves upgrading the low and medium pressure mains to high pressure mains. This reduces the safety risk associated with aging cast iron and unprotected steel pipes and provides increased ability to manage demand growth.

LP to HP mains replacement

The AER does not accept Multinet's LP to HP mains replacement capex because the proposed volume is not prudent and efficient, and the estimate of the unit rates is not the best forecast in the circumstances, as required under the NGR.[30] Unit rates refer to the cost to Multinet of completing one metre of mains replacement.

The AER considers that the scale of mains replacement works should be determined using the historic volumes delivered by Multinet over the 2008–12 access arrangement period. Multinet met its safety and reliability obligations in the 2008–12 period. The AER considers that this level of works reflects a robust benchmark for what a prudent and efficient service provider would undertake.

To allow for changing circumstances, the AER has provided a pass through event that will permit Multinet to apply to the AER to complete additional volumes during the course of the access arrangement period.

The AER has also applied a reduced unit rate, as it considers that Multinet's proposed contractor overhead rate is significantly higher than industry standard levels. Multinet provided internal cost build ups as the basis for forecasting mains replacement, augmentation and other programs. All cost build ups for the revised proposal included a contractor overhead rate of 29 per cent. Overhead rates typically provide an allowance for administrative and other indirect costs that apply across a number of capex projects.

The AER considers that 255 kilometres of mains replacement at a cost of $47.1 million ($2012) is consistent with the NGR.

Large diameter cast iron mains replacement

The AER does not accept Multinet's proposed capex for the large diameter cast iron mains replacement program. The AER considers that capex of $3.0 million ($2012) for large diameter cast iron mains replacement is consistent with the NGR.

Specifically, the AER does not accept one of the four replacement projects proposed by Multinet for the 2013–17 period, because Multinet failed to demonstrate why this project is necessary and that the mains cannot continue to be managed through reactive replacement or repair. Further, the AER does not accept the additional provision for ad hoc replacement, as any amounts should be covered from within the approved mains replacement budget.

Further, the AER does not accept the proposed unit rates because the overhead rate is significantly higher than industry standards.

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30 NGR, r. 79(1).

Low pressure designated zones mains replacement

Multinet proposed a program for dealing with low pressure zones that are not expected to be replaced in the next 20 years. Except for one project, the AER does not accept Multinet's proposed capex for the low pressure designated zones mains replacement program.

The AER considers that capex of $0.4 million ($2012) is consistent with the NGR.

The AER considers that for the residual mains projects there is insufficient evidence that the mains cannot continue to be managed through reactive replacement and repair.

4.2.2 Augmentation

The AER considers that the majority of Multinet's proposed augmentation projects are justifiable on the basis that they are necessary in light of forecast connections growth, and to address a decline in gas pressure within constrained network areas. The AER does not, however, accept augmentation capex for eight of the 29 proposed projects. Multinet did not demonstrate that the modelled pressure in the relevant network areas for those eight projects is forecast to fall below the regulated minimum, or has not provided evidence that its cost estimates are efficient.

Further, as with Multinet's unit cost estimates for LP to HP mains replacement, for the projects which the AER considers prudent, the AER has applied a reduced unit rate, as it considers that Multinet's proposed overhead rate is significantly higher than industry standard levels.

The AER considers that augmentation capex of $23.7 million ($2012) is consistent with the NGR.

5 Rate of return

Providing a return on capital allows a business to service the interest on its loans and to give a return on equity to investors. The return on capital building block is calculated by multiplying the rate of return with the value of the capital base (see chapter 3 for a discussion of the capital base). The rate of return is considered in this chapter.

The return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services.[31]

Consistent with Multinet's revised proposal and previous AER decisions, the rate of return adopted by the AER is the nominal vanilla WACC formulation.

The AER's detailed reasons for its decision on the rate of return are provided in attachment 5, with additional reasons on some matters set out in appendix B.

5.1 Final decision

The AER does not approve Multinet's proposed rate of return of 7.78 per cent (nominal vanilla).[32] The AER considers 7.03 per cent is a preferable alternative that is commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services. The AER's rate of return for Multinet combines a cost of equity of 7.92 per cent and a cost of debt of 6.44 per cent.

Consistent with the draft decision, the AER agrees with a number of aspects of Multinet's proposed rate of return in its revised access arrangement proposal. Specifically, the AER agrees with:

- adopting a weighted average of the cost of equity and the cost of debt (known as the weighted average cost of capital (WACC)) to determine the rate of return
- adopting a 60 per cent gearing ratio
- adopting the capital asset pricing model (CAPM) to determine the cost of equity
- adopting the yield on 10 year Commonwealth Government Securities (CGS) as the proxy for the risk free rate
- adopting a 0.8 equity beta
- adopting a 6 per cent market risk premium (MRP)
- specifying the cost of debt as the debt risk premium (DRP) over the risk free rate
- determining the DRP by defining the benchmark bond as a 10 year corporate bond with a BBB+ credit rating and measuring the benchmark bond rate using the extrapolated Bloomberg BBB rated 7 year fair value curve (FVC)

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31 NGR, r.87(1).

32 Multinet, *Revised Access Arrangement Proposal,* 9 November 2012, p. 174. Multinet's revised proposal document stated a nominal vanilla WACC of 7.96 per cent. This was based on an indicative estimate for Multinet's proposed cost of debt, because Multinet's proposed averaging period for the cost of debt had not yet expired. The AER has updated this estimate, based on Multinet's proposed averaging period, which produces a nominal vanilla WACC of 7.78 per cent.

- extrapolating the Bloomberg BBB rated 7 year FVC to a 10 year maturity (consistent with the definition of the benchmark bond) using 'paired bond' analysis
- adopting a recent and short term averaging period for determining the risk free rate and DRP components of the cost of debt (specifically, the 20 business day period from 24 October 2012 to 20 November 2012)
- determining forecast inflation based on the Reserve Bank of Australia's (RBA's) short term forecasts and the mid-point of the RBA's inflation targeting band.

The AER does not agree with Multinet's proposed historical averaging period for determining the risk free rate component of the cost of equity. [33] Rather, the AER adopts a recent and short term averaging period. The AER has used the risk free rate averaging period Multinet proposed and that the AER agreed for the cost of debt. The AER's position on the averaging period in this final decision is consistent with its position in the draft decision.

The individual WACC parameters and consequent overall rate of return are set out in Table 5.1.

Table 5.1 AER's final decision on Multinet's rate of return (nominal)

Parameter	AER draft decision[(a)]	Multinet revised proposal[(a)]	AER final decision
Nominal risk free rate (cost of equity)	3.12%	5.00%	3.12%
Nominal risk free rate (cost of debt)	3.12%	3.12%	3.12%
Equity beta	0.80	0.80	0.80
Market risk premium	6.00%	6.00%	6.00%
Debt risk premium	3.32%	3.32%	3.32%
Gearing ratio	60.00%	60.00%	60.00%
Inflation forecast	2.50%	2.50%	2.50%
Nominal post-tax cost of equity	7.92%	9.80%	7.92%
Nominal pre-tax cost of debt	6.44%	6.44%	6.44%
Nominal vanilla WACC	7.03%	7.78%	7.03%

Source: Multinet, *Revised Access Arrangement Proposal,* 9 November 2012, and AER analysis.
(a) The AER draft decision and Multinet revised access arrangement proposal parameters have been updated to reflect the final averaging period, based on the respective methodologies. The parameters published in the draft decision and revised access arrangement proposal were calculated based on indicative averaging periods, and hence differ from those in the above table for some parameters.

Multinet's rate of return in this decision is similar to the rates the AER determined in decisions over the past year.[34] It is lower than rates the AER determined in decisions before then. Nonetheless, the AER considers its decision on the rate of return is commensurate with prevailing conditions in the market for funds and the risk involved with providing reference services.

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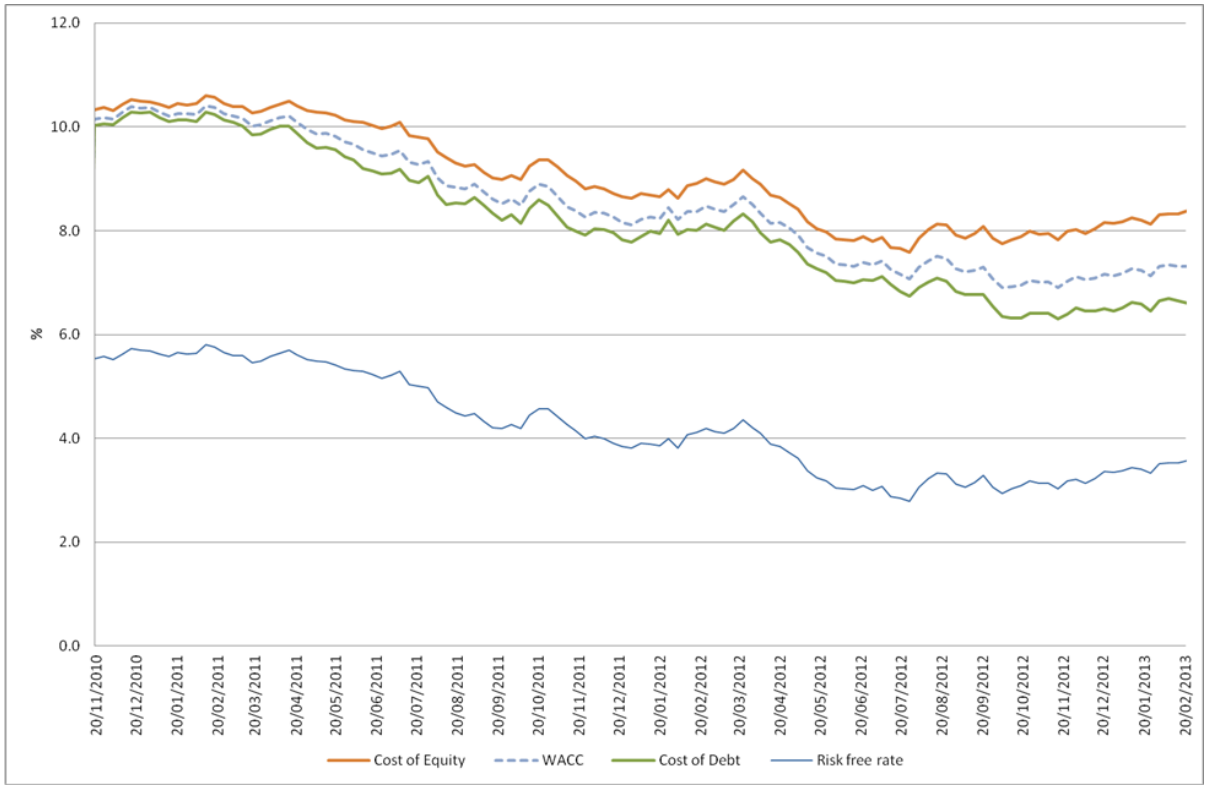
[33] Specifically, Multinet proposed a 10 year average to October 2012 minus actual inflation over the period, plus forecast inflation of 2.5 per cent. This was one of two alternatives proposed by CEG. CEG, *Response to the AER Vic gas draft decisions*, November 2012, p. 16.

[34] AER, *Final decision: APT Petroleum Pipeline Pty Ltd, Access arrangement final decision, Roma to Brisbane Pipeline 2012–13 to 2016–17*, August 2012; AER, *Final distribution determination, Aurora Energy Pty Ltd 2012–13 to 2016–17*, April 2012.

The cost of debt has fallen by approximately 1.5 per cent from its level in late 2011 and early 2012. As a result, the AER and Multinet agree that the lower cost of debt that currently prevails has reduced the overall rate of return from the levels that prevailed around a year ago (all things equal). The cost of debt in this decision accounts for 60 per cent of the overall rate of return. The AER and Multinet agree on the approach to determining the cost of debt. Figure 5.1 illustrates the results from applying the AER's rate of return approach in this decision over time.

Figure 5.1 AER's rate of return approach over time (nominal, per cent)[35]



In this access arrangement review, the cost of equity is the key area of disagreement. Multinet's revised access arrangement proposal maintains its initial proposal position. Multinet's main submission was that the AER mixes a "spot" risk free rate with a "long term" average MRP and this currently produces a cost of equity that is too low.[36] As part of this submission, Multinet suggested the cost of equity is relatively stable over time, and related to this point, that the risk free rate and MRP are strongly negatively correlated.[37]

The AER acknowledges that Multinet was concerned with the impact of the lower risk free rate on its cost of equity and this was a driving factor in its proposing a historical average risk free rate for use in calculating the cost of equity.[38]

As illustrated in Figure 5.1, the risk free rate has been continuously less than 4 per cent since early 2012.[39] Combined with a 0.8 equity beta and 6 per cent MRP, this has resulted in a cost of equity in

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35 This chart illustrates the AER's current approach extrapolated backwards (assuming a 6 per cent MRP over that period). The starting date is chosen as this is when paired bond data was first available (the paired bond approach is applied in this decision when determining the debt risk premium - see attachment 5.3.5 below for further discussion).

36 This is an incorrect characterisation of the AER's approach. The AER estimates a 10 year forward looking risk free rate and a 10 year forward looking MRP. See below and appendix B for more detail.

37 Multinet, *Revised Access Arrangement Proposal,* 9 November 2012, p. 132.

38 Multinet, *Revised Access Arrangement Proposal,* 9 November 2012, p. 136.

39 The 10 year CGS yield fell below 3 per cent for a brief period in June and July 2012.

AER decisions since this time that is lower than earlier decisions. The AER has made determinations for Aurora, the Roma-to-Brisbane (RBP) pipeline, and now the Victorian gas businesses, over this time period[40]. In each decision, the cost of equity arising from the low risk free rate has been a contentious issue, and the AER has considered the matter carefully.

The material in the next few pages provides a high level overview of the process the AER has employed to assess the proposals and subsequent material submitted by the Victorian gas businesses on the cost of equity. A brief summary of the AER's key reasons for its decision then follows. A more detailed explanation of the AER's reasons is then set out later in this attachment. Further detailed consideration of some specific issues is then set out in a separate appendix.

5.1.1 AER process

In view of the substantial material Multinet submitted, the AER has carefully reconsidered the issues raised and has also reassessed its analysis and reasons for the draft and this decision. It has also obtained additional expert advice on the material submitted Multinet. The AER has also extended and expanded its analysis in areas questioned by Multinet. In particular, in the areas of:

- the relationship between the risk free rate and the MRP, and the related issue of the extent of stability in the cost of equity over time
- the relationship between the cost of debt and the cost of equity, and the extent to which changes in the cost of debt over time can be used to inform the estimation of the cost of equity.

The AER has sought a substantial amount of expert advice on the cost of equity over the past 12 months. The advice has come from:

- the Reserve Bank of Australia (RBA)
- the Commonwealth Treasury and Australian Office of Financial Management (AOFM)
- finance academics (Professor McKenzie and Associate Professor Partington from the University of Sydney; Associate Professor Lally from the Victoria University of Wellington), and
- an economic consultancy firm (Cambridge Economic Policy Associates (CEPA))

The AER has sought advice on a wide range of issues associated with the cost of equity. This has included seeking follow up advice from certain experts to consider comments raised by Multinet and its consultants. This process has included:

- In a submission as part of the Aurora determination process, CEG suggested CGS yields might not be an appropriate proxy for the risk free rate in current market circumstances.[41] The AER sought advice from the RBA, Commonwealth Treasury and AOFM. They each advised that the CGS market remains liquid and well functioning. The RBA also advised that CGS bonds remained the best proxy for the risk free rate in Australia.[42]

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40 Note over this period, the AER also made determinations for Powerlink and is in the process of making determinations for Murraylink and ElectraNet. However these transmission determinations are not comparable to other AER decisions over this time as the WACC approach and parameters were largely prescribed by the NER and the 2009 WACC review.

41 CEG, *A report on the cost of equity in Aurora's revised proposal: Prepared for Citipower, Jemena, Powercor, SP AusNet, and United Energy*, February 2012, p. 12.

42 See section 5.3.2 below for further discussion.

- In 2011, the AER commissioned a report on the MRP from Professor McKenzie and Associate Professor Partington that comprehensively reviewed each major class of evidence on the MRP. McKenzie and Partington recommended the AER adopt 6 per cent. A regulated business questioned the relevance of the report because it did not directly consider the MRP in the context of a historically low risk free rate.[43] The AER sought further advice from McKenzie and Partington. The experts concluded there are good reasons for the AER to adopt a 6 per cent MRP and they saw no reason to switch from using the current 10 year CGS yield as the proxy for the risk free rate.[44]

- In the draft decision, the AER set out its reasons for adopting a prevailing risk free rate and 6 per cent MRP and published consultants' reports it had commissioned and accepted in forming this position. This provided an opportunity for the Victorian gas businesses, including Multinet, to respond to this position. The businesses did respond to this position and provided substantial additional material. The AER subsequently sought further advice from experts to critically review their original advice in light of the new material submitted by the businesses.

- For this final decision, the AER sought advice from three separate experts on the reasonableness of adopting prevailing risk free rate and 6 per cent MRP.

    - In a third report, McKenzie and Partington concluded the AER's approach was reasonable. This report contains an extensive review of the theoretical and empirical evidence on the relationship between the risk free rate and MRP. McKenzie and Partington's conclusion is based on a more comprehensive analysis of the academic literature on this issue than that contained in the consultant reports submitted by the Victorian gas businesses.

    - Associate Professor Lally also concluded it is reasonable for the AER to adopt a prevailing risk free rate and 6 per cent MRP.

    - CEPA indentified some concerns with the AER's approach. However, the current market evidence suggests the AER's current estimate is in line with market expectations. It concluded that, based on various criteria it identified, the AER should not change its estimation approach.

5.1.2 Overview of reasons

Compared with the cost of debt, the cost of equity is more challenging to estimate. This is because the cost of debt is observable while the cost of equity is not.[45] Accordingly, a model must be used to estimate the cost of equity. The NGR require that the AER use a well accepted financial model to estimate the cost of equity. The AER and Multinet agree that it is appropriate to use the Sharpe-Lintner capital asset pricing model (Sharpe CAPM) for this purpose.

This model requires the estimation of three parameters:

- The risk free rate—this compensates investors for the time value of money. This is compensation for an investor having committed funds to an investment for a period of time and therefore forgoing the opportunity to spend that money and consume goods now.

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43 Aurora, *AER's draft distribution determination—Return on capital*, Submission, 20 February 2012, p.2.

44 M. McKenzie, and G. Partington, *Report to Corrs Chambers Westgarth: Equity market risk premium*, December 2011, p. 37. (McKenzie and Partington, *Equity market risk premium*, December 2011)

45 See, for example, RBA, *Latter to the AER*, July 2012, p. 1. The cost of debt can be observed by looking at yields on market traded bonds that match the benchmark characteristics, or fair value curves published by financial data service providers that match the benchmark characteristics.

- The market risk premium (MRP)—this compensates an investor for the systematic risk of investing in the market portfolio or the "average firm" in the market. Systematic risk is risk that effects all firms in the market (such as macroeconomic conditions and interest rate risk) and cannot be eliminated or diversified away through investing in a wide pool of firms.
- The equity beta—this reflects the systematic risk exposure of a particular firm, relative to the average firm in the market.

While the equity beta is difficult to estimate with precision, the AER and Multinet agree that 0.8 is a reasonable estimate for this parameter in this determination.

In determining the two remaining parameters within the Sharpe-Linter CAPM, the AER estimates:

- a 10 year forward looking risk free rate based on prevailing conditions in the market for funds, and
- a 10 year forward looking MRP based on prevailing conditions in the market for funds.

Conceptually, the adoption of a 10 year forward looking risk free rate and a 10 year forward looking MRP, based on prevailing conditions in the market for funds at the commencement of the access arrangement period:

- is consistent with the present value principle—this principle states that the present value of a regulated business's revenue stream should match the present value of its expenditure stream (plus or minus any efficiency rewards or penalties). As Lally explains, this is a fundamental principle of economic regulation. Satisfying this principle both promotes efficient investment and avoids the excess profits that regulation seeks to prevent.[46]
- is consistent with the building block model
- is consistent with the Sharpe-Lintner CAPM
- is internally consistent, and
- promotes regulatory certainty and consistency.

Practically, in estimating a 10 year forward looking risk free rate, the AER adopts the prevailing yield on 10 year CGS averaged over a period which is short and as close as practicably possible to the commencement of the access arrangement period.[47] The AER adopts this method because:

- An observable market proxy for the risk free rate is available.
- The yield on CGS is the best proxy for the risk free rate in Australia, as supported by RBA advice.
- The RBA, Commonwealth Treasury and AOFM advised that the CGS market is liquid and functioning well.[48]

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[46] M. Lally, *The risk free rate and the present value principle*, 22 August 2012, p. 8, (Lally, *Risk free rate and present value*, August 2012)

[47] The exact dates of the averaging period are proposed by the regulated business and are accepted by this AER so long as the proposed period: (1) is short (10-40 business days); (2) is as close as practicably possible to the commencement of the access arrangement period; (3) is nominated in advance.

[48] Reserve Bank of Australia, *Letter to the ACCC: The Commonwealth Government Securities Market*, 16 July 2012, (RBA, *Letter regarding the CGS market*, July 2012); Australian Treasury and Australian Office of Financial Management, *Letter to the ACCC: The Commonwealth Government Securities Market*, 18 July 2012, p. 2 (Treasury and AOFM, *Letter regarding the CGS Market*, July 2012).

- CGS yields are an observable market determined parameter.
- The prevailing rate at any point in time is the benchmark that returns on risky investments must better
- Prevailing 10 year CGS yields reflect expectations of the risk free rate over the appropriate forward looking investment horizon (which is 10 years).
- Selecting an averaging period in advance ensures the method is unbiased.
- There is no clear evidence that CGS yields are abnormally low. McKenzie and Partington suggest that the current rates may be consistent with a longer term trend.

In estimating a 10 year forward looking MRP, the AER adopts 6 per cent. After carefully assessing the information submitted by the Victorian gas businesses, the AER remains of the view that the available evidence supports a MRP of 6.0 per cent as commensurate with prevailing conditions in the market for funds. This is because:

- historical excess returns—these estimates provide a range of 4.9–6.1 per cent if calculated using an arithmetic mean and a range of 3.0–4.7 per cent if calculated using a geometric mean.
- academic research on excess return predictability—over the past decade, there is an increased scepticism about the ability for particular variables to predict returns. New empirical evidence has cast doubt on previous empirical evidence that suggested particular variables were good predictors of returns. Some studies indicate there is no better forecast of excess returns than the historical average.
- survey evidence—surveys of market practitioners consistently support 6 per cent as the most commonly adopted value for the MRP. These surveys also indicate that the average MRP adopted by market practitioners was approximately 6 per cent.
- forward looking MRP measures—these give mixed results, and are each subject to various limitations. On the one hand, dividend growth model (DGM) estimates suggest the MRP is in the range of 5.9–8.4 per cent. These estimates were provided by Associate Professor Lally who used CEG's DGM method, after adjusting for certain deficiencies in CEG's method. On the other hand, implied volatility based MRP estimates suggest the MRP is currently below its historical average level.
- recent Tribunal decisions—the Tribunal held the view that it was open for regulators to adopt a 6 per cent MRP in all of the recent decisions where regulated businesses sought Tribunal review.
- consultant advice—Associate Professor Lally, Professor McKenzie and Associate Professor Partington all advised the AER that a 6 per cent MRP is reasonable in the prevailing market conditions in their most recent reports and CEPA found the valuation reports do support an MRP that is equal to about 6 per cent..
- recent decisions among Australian regulators—the AER notes both the ERA and the QCA consistently adopted an MRP estimate of 6 per cent under the same CAPM framework. The AER also notes while the IPART consistently adopted an MRP range of 5.5–6.5 per cent, it has made an upward adjustment to the overall WACC in its recent decisions due to the current low risk free rate.

The AER is aware that there are some academic papers that present a plausible argument for an inverse relationship between the risk free rate and MRP. Accordingly, the AER has given careful

consideration to this issue in estimating the MRP. The advice from McKenzie and Partington provides a comprehensive review of the academic literature on the theoretical and empirical evidence on the relationship between these two parameters. Among other findings, McKenzie and Partington note:

> Ang and Bekaert (2007) find a negative relationship between short term risk free rates and the equity risk premium. The general message of Ang and Bekaert's work, however, is that "… predictability is mainly a short-horizon, not a long-horizon phenomenon" (p.696). Their implication is that predictive regressions might help forecast market returns at say a one year horizon, but are little use at say a ten year horizon.[49]

This is relevant to the present matter as the AER is estimating a 10 year forward looking MRP, not a short term MRP.

Overall, McKenzie and Partington find that there is evidence to support both a positive and negative relationship between the risk free rate and MRP. They conclude:

> An examination of the relevant evidence leads us to conclude that the relation between the MRP and the level of interest rates is an open question and that the relation, if any, is not sufficiently well established to form the basis for a regulatory adjustment to the MRP.[50]

The AER also considers reasonableness checks on the overall rate of return. These reasonableness checks suggest that the overall rate of return broadly accords with market expectations. For example, recent regulated assets have generally been sold at a premium to the RAB. In addition, recent RAB trading multiplies are consistently greater than one (averaging around 1.2). This evidence provides the AER with a degree of confidence that its approach to determining the rate of return is reasonable.

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[49] M. McKenzie, and G. Partington, *Review of the AER's overall approach to the risk free rate and market risk premium,* February 2013,, p.26 (McKenzie and Partington, *Review of the AER's overall approach*, February 2013).

[50] McKenzie and Partington, *Review of the AER's overall approach*, February 2013, p. 6.

6 Regulatory depreciation

When determining the total revenue for Multinet, the AER must assess the depreciation for the projected capital base, referred to as the return of capital.[51] Regulatory depreciation represents the allowance that Multinet can collect for depreciation of its capital base. It is one of the building blocks used to determine total revenue.

The AER uses regulatory depreciation as a component for forecasting the nominal value of Multinet's assets over the 2013–17 access arrangement period. The regulatory depreciation allowance is calculated as the net total of the straight-line depreciation (negative) and the annual inflation indexation (positive) on the projected capital base.

Multinet is required to provide a forecast of depreciation for the 2013–17 access arrangement period. Multinet must set out a depreciation method and demonstrate how it applied the method. The resulting depreciation schedule sets out the basis on which the capital base is to be depreciated for the purpose of determining a reference tariff.

The AER assesses whether the proposed depreciation schedule complies with the depreciation criteria set out within the NGR.[52]

The full final decision and the AER's detailed reasons and analysis on regulatory depreciation are in attachment 6.

6.1 Final decision

The AER does not approve Multinet's proposed regulatory depreciation allowance of $150.6 million ($nominal) for the 2013–17 access arrangement period.

The AER's final decision on Multinet's total regulatory depreciation allowance over the 2013–17 access arrangement period is $121.2 million ($nominal) as shown in Table 6.1. This represents a reduction of $29.4 million ($nominal) or 19.5 per cent of Multinet's proposed total regulatory depreciation allowance.

Table 6.1 AER's final decision on Mulitnet's depreciation allowance ($million, nominal)

	2013	2014	2015	2016	2017	Total
Straight-line depreciation	40.3	49.5	52.9	56.1	60.0	258.8
Less: indexation on opening capital base	25.6	27.1	27.6	28.2	29.1	137.6
Regulatory depreciation	14.7	22.3	25.3	28.0	30.9	121.2

Source: AER analysis.

[51] NGR, r. 76(b).
[52] NGR, r. 89(1).

6.2 Summary of analysis and reasons

The AER's adjustments to other building block components have had a consequential effect on the forecast regulatory depreciation allowance. These are discussed in other attachments and include the roll forward of the opening capital base (attachment 3) and forecast capex (attachment 4).

Although the AER does not approve the proposed regulatory depreciation allowance, it accepts Multinet's approach to calculating depreciation, including the treatment of redundant assets. The AER also accepts Multinet's approach to measuring the life of its assets, an important factor in forecasting depreciation.

7 Opex

Operating expenditure (opex) refers to the operating, maintenance and other non-capital costs incurred in the provision of reference services.[53] Opex incorporates labour costs associated with providing reference services. Opex is one of the building blocks used to determine Multinet's total revenue requirement.

The AER is required to assess Multinet's forecast opex to decide whether it is satisfied that its opex complies with applicable criteria prescribed by the NGL and NGR. In particular, the AER must assess whether the proposed opex would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.[54] In addition, opex forecasts must be arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances.[55]

The full draft decision and the AER's detailed reasons and analysis on operating expenditure can be found in attachment 7 and appendix D.

7.1 Final decision

The AER does not approve Multinet's proposed forecast opex of $346.1 million ($2012). The AER's final decision is to approve an opex forecast of $316.5 million ($2012).

Table 7.1 Comparison of Multinet's initial and revised proposals, and AER draft and final decisions ($m, $2012)

	2013	2014	2015	2016	2017	Total
Multinet initial proposal	69.4	72.2	72.7	74.1	74.1	362.7
AER draft decision	52.4	53.1	53.7	55.3	55.7	270.3
Multinet revised proposal	65.0	69.7	71.1	70.4	69.8	346.1
AER final decision	57.5	63.0	65.3	64.9	65.8	316.5

Source: AER analysis

Table 7.1 shows how the AER's final decision for opex compares to Multinet's revised proposal, its initial proposal and the AER's draft decision.

7.2 Summary of analysis and reasons

Multinet proposed a bottom-up forecasting approach. That is, rather than using actual historic costs as the basis of its forecast, Multinet determined its forecast by estimating the opex that would be incurred to deliver each individual item of opex.

The AER does not approve Multinet's bottom-up forecast. The AER is not satisfied that several components of Multinet's bottom-up forecast reflect opex that would be incurred by a prudent service

53 NGR, r. 69.
54 NGR, r. 91(1).
55 NGR, r. 74.

provider acting efficiently in accordance with good industry practice to achieve the lowest sustainable costs of delivering pipeline services. The AER concluded:

- Multinet did not establish that there is a reasonable expectation that customers will obtain a net benefit from its proposed network development expenditure of $10 million ($2012).
- Part of the fee Multinet forecasts to pay to recover the costs of overheads incurred by its owner, the DUET Group, included costs that will not be incurred in the 2013–17 access arrangement period.
- Multinet's forecasts for several cost categories were unsubstantiated.
- Multlinet did not demonstrate its forecast labour costs met the relevant NGR requirements. For instance:
    - Its forecast employee numbers were based on benchmarking. The AER was not confident that the benchmark firms were directly comparable to Multinet's circumstances.
    - Its forecast salaries were based on a remuneration structure with wide salary bands. The AER was not confident that Multinet's forecast salary for each position was preferable to any other forecast salary within the band.
    - Forecast employee bonuses appear to relate to individual productivity gains not reflected in Multinet's opex forecast. The AER does not expect a prudent service provider would forecast to pay bonuses unless there were cost savings that outweighed the cost of the bonuses.

As part of its assessment, the AER also compared Multinet's bottom-up forecast against a forecast based on historic costs. By forecasting opex based on historic costs, the AER has another measure to assess whether Multinet's bottom-up forecasts are arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances.

The AER determined that an estimate based on historic costs is $29.6 million ($2012) lower than Multinet's bottom-up estimate.

The AER's base year estimate been used as the basis for the AER's proposed forecast opex. The AER's construction of the AER's base year approach to forecast opex is discussed below.

Base year costs

The AER typically uses actual costs from a 'base year' in the current access arrangement period (typically the fourth year) as the starting point for forecasting opex in the next period. Given the service providers have incentives to deliver reference services at the lowest sustainable cost, actual opex can be used to reveal the efficient level of opex required in providing reference services. This means that rather than assess all aspects of opex the AER can instead focus on what changes need to be made to this base level of opex.

Typically, the AER uses the actual costs incurred by a service provider in the base year to forecast opex, regardless of whether the costs are incurred to engage an external provider or whether services are provided in-house. This was the approach adopted by the AER in its draft decision.

In 2011, Multinet's opex was largely comprised of a fee it paid to its main outsourced provider, Jemena Asset Management (JAM). JAM reported a loss in delivering these services in each year of the current access arrangement period.

The AER is of the view that a base year estimate that is predominantly based on the costs incurred by JAM—rather than the fee paid to JAM—provides a better forecast of Multinet's opex. This is because additional information provided to the AER for the final decision demonstrates Multinet's efficient costs will be higher in the 2013–17 access arrangement period than the fee it paid to JAM in 2011.

The AER has not adopted Multinet's proposal to add a hypothetical margin to the costs incurred by JAM in 2011. The AER considers that adding a hypothetical margin to the costs incurred by JAM in 2011 would not represent the best estimate possible of Multinet's efficient costs in the 2013–17 access arrangement period for the following reasons:

- The margin is based on the margin bid by one of the successful bidders in Multinet's recent network operations tender. This margin was partly for overheads yet JAM's costs in 2011 already include overheads. There is no basis to provide Multinet with an additional allowance for overheads.
- The inclusion of an incremental increase in opex above JAM's opex in 2011 is not supported by Multinet's justification for its new business structure, a purpose of which is to attain efficiency improvements. Accepting that Multinet's new model is likely to result in efficiencies, the AER notes that forecast efficiencies are not included in a forecast based on JAM's 2011 costs. Therefore, adding a margin to JAM's costs would lead to an upwardly biased opex forecast.

Once the base year is set, the AER assesses the following adjustments:

- step changes, to provide an additional opex allowance where a certain circumstance, requirement or project will require the business to undertake expenditure that is not already incorporated in the base year
- annual cost trends, to account for forecast labour and material cost changes, output growth and productivity growth.

The AER generally only approves a step change above base year opex to implement new regulatory obligations, or for other forecast cost increases that are beyond the control of the regulated business. The most significant step changes included in the AER's forecast of opex is an allowance for increased metering costs, and an increased Energy Safe Victoria (ESV) levy. The AER did not accept Multinet's proposal for a step change in network development expenditure as it was not satisfied that Multinet has established there is a reasonable expectation that customers will obtain a net benefit from the expenditure.

Real cost escalation is a method of accounting for expected changes in the cost of inputs such as labour and materials from those present in the base year. Due to market forces, these costs may not increase at the same rate as inflation, in which case a more suitable forecast will be adopted.

The AER does not approve Multinet's proposed forecast real labour cost escalators. Multinet did not take into account labour productivity, which is a material component of labour costs. The AER considers labour cost escalations to be made up of changes in labour price and labour productivity.

The AER considers Deloitte Access Economics' (DAE's) forecast of the labour price index (LPI) represents the best possible estimate of labour cost escalations in the circumstances.[56] Although DAE's forecast LPI historically has been lower than actual LPI, the AER considers this forecast to be

[56] NGR, r. 74(2).

appropriate given the AER has not adjusted for labour productivity which, based on available data, is shown to be positive.

The AER accepts Multinet's proposed methodology on output growth escalation which reflected the AER's methodology in its draft decision. However, the AER has updated its output growth forecast from the draft decision to reflect the updated base year forecast.

8 Incentive mechanisms

Incentive mechanisms operate to incentivise service providers to reduce costs and increase efficiency in the provision of pipeline services. They provide a financial reward (or penalty) for efficiency gains (or losses) achieved relative to opex or capex benchmarks for the access arrangement period. Any rewards (or penalties) for efficiency gains (or losses) are added to the service provider's total revenue allowance—as determined using the building block approach—and carried forward for five years after the year in which the efficiency gain (or loss) is made. This five year period corresponds to the length of the access arrangement period.

The AER is required under transitional arrangements to ensure any rewards or penalties resulting from the operation of the incentive mechanism in Multinet's current access arrangement are properly reflected in its total revenue allowance.[57]

The AER must also consider whether the incentive mechanism proposed by Multinet for the 2013–17 access arrangement will encourage efficiency in the provision of services by the service provider, and is consistent with the revenue and pricing principles.[58] The AER has full discretion when determining the application of an incentive mechanism.[59]

The full final decision and the AER's detailed reasons and analysis on incentive mechanisms can be found in attachment 8.

8.1 Final decision

The AER approves Multinet's proposed carryover of zero from the 2008–12 access arrangement period.

The AER does not approve Multinet's proposed opex incentive mechanism for the 2013–17 access arrangement period and proposes a number of amendments to make the access arrangement acceptable.

The AER approves Multinet's proposal to not include a capex incentive mechanism.

8.2 Summary of analysis and reasons

The AER accepts that the Gas Code, under which Multinet's 2008–12 access arrangement was approved by the ESC, allowed only for positive carryovers, not negative carryovers. As a result, the AER accepts Multinet's revised proposal that a negative carryover from the 2008–12 access arrangement period should not apply and that the carryover amount should be zero.

The AER does not approve the opex incentive mechanism proposed by Multinet because it does not encourage efficiency in the provision of services by Multinet[60] and does not provide effective incentives in order to promote economic efficiency with respect to those services.[61] The AER considers that the opex incentive mechanism should be amended to address the following issues:

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57 NGR, Schedule 1, clause 5(1)(a).
58 NGR, r. 98(1) and (3).
59 NGR, r 40(3)
60 NGR, r. 98(1).
61 NGR, r. 98(3); NGL, s. 24(3).

- the inclusion of forecast opex amounts applicable for the purposes of calculating efficiency carryover from the 2013–17 access arrangement period
- adjustments to forecast opex for the purposes of calculating efficiency carryover from the 2013–17 access arrangement period
- whether and how to account for changes in classification of capex to opex
- the symmetrical nature of the mechanism, that is, that it will reward Multinet for efficiency gains and penalise it for efficiency losses.

9 Corporate income tax

Multinet is required to pay tax on the income that it generates in operating its business. Multinet adopted the post-tax framework to derive its revenue requirement for the 2013–17 access arrangement period. Under the post-tax framework, a separate corporate income tax allowance is calculated as part of the building block assessment.

The AER uses the post-tax revenue model (PTRM) to produce an estimate of the taxable income that would be earned by an efficient company operating Multinet's business. All tax expenses are offset against the service provider's forecast revenue to estimate the taxable income. The statutory income tax rate of 30 per cent is then applied to the estimated taxable income to arrive at a notional amount of tax payable. The AER then applies a discount to this to account for the assumed utilisation of imputation credits. This net amount is the benchmark corporate income tax estimate included as a separate building block in determining Multinet's total revenue.[62]

The full final decision and the AER's detailed reasons and analysis on corporate income tax can be found in attachment 9.

9.1 Final decision and reasons

The AER does not approve Multinet's proposed corporate income tax allowance of $40.5 million ($nominal) for the 2013–17 access arrangement period. This is because the AER's final decision on other building block components, such as forecast capex and forecast opex (see attachments 4 and 7), have had a consequential effect on the forecast corporate income tax allowance.

The AER approves a corporate income tax allowance of $26.3 million ($nominal) as shown in table 9.1. This represents a reduction of $14.2 million ($nominal) or 35.1 per cent of Multinet's proposed corporate income tax allowance. Based on the approach to modelling the cash flows in the PTRM, the AER has derived an effective tax rate of 30.1 per cent for this final decision.

The AER does not approve Multinet's proposed opening tax asset base as at 1 January 2013 and instead approves a value of $343.7 million ($nominal). This is due to the AER's adjustment for 2012 tax additions.

The AER accepts Multinet's proposed tax depreciation approach and standard tax asset lives for group 7 tax assets. These relate to forecast capex for the 2013–17 access arrangement period.

Consistent with the draft decision, the AER accepts Multinet's proposed value for the utilisation of imputation credits (gamma) of 0.25.

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62 NGR, r. 76(c).

Table 9.1 AER's final decision on corporate income tax allowance for Multinet ($million, nominal)

	2013	2014	2015	2016	2017	Total
Tax payable	6.3	5.9	6.4	7.4	9.1	35.0
Less: value of imputation credits	1.6	1.5	1.6	1.9	2.3	8.8
Net corporate income tax allowance	4.7	4.4	4.8	5.6	6.8	26.3

Source: AER analysis.

10 Demand forecasts

Demand forecasts are an estimate of how much each reference service is likely to be used over the upcoming five year access arrangement period. This allows the AER to assess the quantum of each tariff based on Multinet's total revenue allowance (as determined using the building block approach), and the overall efficient allocation of tariffs.

Demand forecasts may also be relevant to the AER's assessment of Multinet's forecast opex and capex, where the increase in expenditure is largely driven by network growth.

The NGR requires an access arrangement to include a forecast of pipeline demand (driven by gas demand) over the access arrangement period and the basis on which the forecast has been derived.

The full final decision and the AER's detailed reasons and analysis on demand forecasts can be found in attachment 10.

10.1 Final decision

Multinet's demand is forecast to remain relatively flat over the 2013–17 access arrangement period. The AER accepts the demand forecasts proposed by Multinet, because it considers they are arrived at on a reasonable basis and represent the best forecasts possible in the circumstances.[63]

[63] NGR, r. 74(2).

11 Tariff setting

A service provider collects its revenue for reference services by charging users to access these services. The tariffs charged for reference services allow a service provider to collect its revenue allowance.

As part of its access arrangement, Multinet is required to set out how it intends to charge for reference services. This must include an explanation of the basis for setting reference tariffs, including the different tariff classes, the method used to allocate costs between these classes, and a demonstration of the relationship between costs and tariffs.[64]

The AER will assess Multinet's proposed reference tariffs against the relevant sections of the NGR,[65] revenue and pricing principles, and NGO. If the AER does not approve Multinet's proposal, the AER must determine the initial reference tariffs.

The final decision and the AER's detailed reasons and analysis on tariff setting can be found in attachment 11.

11.1 Final decision

The AER does not approve the reference tariffs proposed by Multinet in its revised proposal. This is because of the AER's adjustments to total revenue (chapter 2). The AER accepts the proposed structure of Multinet's reference tariffs as set out in the revised proposals, but considers the level of the tariffs must be adjusted to take account of the AER's decision on total revenue.

64 NGR, r. 72(1)(j), 95(1) and 95(3)(a).
65 NGR, rr. 93 and 94.

12 Tariff variation mechanism

The tariff variation mechanism defines how tariffs may be varied during the course of an access arrangement period. Specifically, the tariff variation mechanism:

- permits building block revenues to be recovered smoothly over the access arrangement period
- accounts for actual inflation
- accommodates other tariff adjustments that may be required, such as for an approved cost pass through event
- sets administrative procedures for the approval of any proposed changes to tariffs.

The AER is required to assess Multinet's proposed tariff variation mechanism against the requirements of the NGR.[66] The full final decision and the AER's detailed reasons and analysis on the tariff variation mechanism can be found in attachment 12.

12.1 Final decision

The AER does not approve Multinet's proposed tariff variation mechanism for the 2013–17 access arrangement period. The AER considers that some aspects of Multinet's proposed tariff variation mechanism are inconsistent with the NGR, or that there are alternatives to elements of the proposed tariff variation mechanism that are preferable having regard to the NGR.

12.2 Summary of analysis and reasons

In its revised proposal, Multinet adopted some of the revisions required by the AER in its draft decision. These included a reduction in the rebalancing constraint, the inclusion of or amendment to several pass through events, and an adjustment formula for ancillary reference services.

The AER does not accept a number of aspects of the tariff variation mechanism in Multinet's revised proposal. These include:

- The initial reference tariffs and x factors—the AER considers that these should be amended to reflect the changes to Multinet's forecast total revenue allowance, as identified in the revenue section of this final decision (see chapter 2).
- The carbon tax tariff true up mechanism— the AER does not accept Multinet's proposed two-step true up mechanism, and proposes to substitute a single step true up mechanism that is undertaken in the second regulatory year after the year in which costs are incurred. The AER considers it appropriate, however, to account for the time value of money in the carbon tax tariff true up formula (real WACC adjustment).
- The procedures for oversight and approval of a tariff variation—the AER considers that there should be a 50 business day requirement for Multinet to notify the AER of any reference tariff variations. The AER considers that this will facilitate earlier market notification of approved tariffs, providing greater certainty to retailers and consumers.

[66] NGR, rr. 92, 97.

- The cost pass through mechanism, including definitions of certain nominated pass through events.

The cost pass through mechanism allows Multinet to apply to the AER during the course of an access arrangement period to pass through material cost increases (or savings) to consumers, for a number of specified events. These events are typically unexpected events that are outside the service provider's control. In assessing Multinet's revised cost pass through mechanism, a key consideration of the AER was to ensure consistency in the cost pass through regimes applying to all gas service providers.

The aspects of Multinet's revised cost pass through mechanism that the AER does not approve include:

- The inclusion of a financial failure of a retailer event as this event is already covered by the declared retailer of last resort event.
- The inclusion of a disaster event as it is preferable to include a natural disaster event, which is more narrowly defined and consistent with the AER's decision for other gas distribution businesses.
- The procedure for cost pass through event variations as a number of changes are required to ensure that it aligns with the AER's approach to assessing pass through applications for other gas distributors.

The AER proposes to amend the definition of a mains replacement event. This event allows for changing circumstances that may impact Multinet's mains replacement program. Certain costs may be passed through where Multinet undertakes mains replacement in excess of the volumes approved as part of its capital expenditure in this final decision. For Multinet, the trigger event for the pass through is completion of 207 kilometres of mains replacement. This differs from the AER's draft decision, in that it is calculated by deducting 9 months worth of mains replacement from the historical volumes over the 2008–12 period. The AER considers that this will give Multinet sufficient lead time to apply for and receive approval for additional work and maintain continuity in contracting.