Access arrangement final decision

Envestra Ltd

2013–17

Part 2: Attachments

March 2013

AUSTRALIAN ENERGY REGULATOR

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Shortened forms

Shortened form	Full title
2008-12 access arrangement	Access arrangement for Envestra effective from 1 January 2008 to 31 December 2012
2013-17 access arrangement	Access arrangement for Envestra effective from 1 January 2013 to 31 December 2017
2018-22 access arrangement	Access arrangement for Envestra effective from 1 January 2018 to 31 December 2022
ACCC	Australian Competition and Consumer Commission
AER	Australian Energy Regulator
access arrangement information	Envestra, Access arrangement information, 30 March 2012
revised access arrangement information	Envestra, Revised access arrangement information, 9 November 2012
access arrangement proposal	Envestra, Access arrangement proposal, 30 March 2012
revised access arrangement proposal	Envestra, 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
Envestra	Envestra Limited (ACN 078 551 685)
Envestra Albury	Envestra's distribution network in Albury, NSW and surrounding area
Envestra Victoria	Envestra's distribution network in Victoria
ESC	Essential Services Commission (Victoria)
MRP	market risk premium
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 Review framework

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 Envestra, and the Victorian gas transmission network. 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]

1.1 Overview of the service provider

Envestra Limited is a publicly listed company that owns natural gas distribution networks across Australia. Envestra owns around 23 000 kilometres of natural gas distribution networks serving over 1.1 million customers in Victoria, South Australia, Queensland, New South Wales and the Northern Territory.

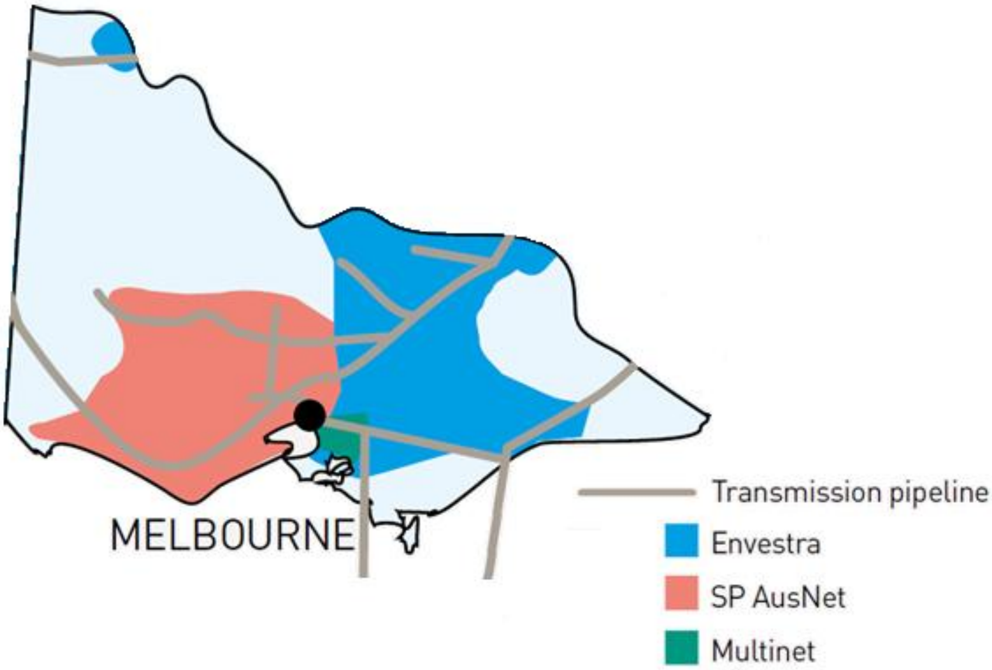
Envestra's Victorian gas network includes the distribution mains, inlets, meters, regulators and ancillary equipment that are used to provide pipeline services in Victoria. It serves the northern, outer eastern and southern areas of Melbourne, Mornington Peninsula, rural communities in northern, eastern and north-eastern Victoria, and south-eastern rural townships in Gippsland. Envestra's Victorian gas network comprises around 9900 kilometres of mains delivering gas to around 575 000 customers.

Envestra's Albury gas network includes the distribution mains, inlets, meters, regulators and ancillary equipment that are used to provide pipeline services. It serves the city of Albury and its environs, extending to Jindera to the north of Albury. Envestra's Albury gas network delivers gas to around 20 000 customers.

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.

Figure 1.1 Map of the Victorian gas distribution and transmission networks



1.1.1 Regulation prior to 1 July 2008

The Essential Services Commission of Victoria (ESCV) made the previous determination on Envestra's access arrangement for the period 1 January 2008 to 31 December 2012. The ESCV made its determination in accordance with the provisions of the National Third Party Access Code for Natural Gas Pipeline Systems (the Code).

Responsibility for the regulation of Victorian gas networks transferred from the ESCV to the AER on 1 July 2008 as part of the move towards the national regulation of the energy market. This current determination process is the first full assessment by the AER of the access arrangements of the Victorian gas distribution businesses under the NGL and the NGR.

1.2 The relevant requirements of the NGL and the NGR

The elements of Envestra's revised access arrangement proposals have been assessed against the relevant NGL and NGR requirements specific to each element. These assessments are set out in separate attachments in this final decision.

Under the NGR, the AER has a certain type of discretion—full, limited or no discretion—when making decisions on particular elements of an access arrangement proposal. These forms of discretion are set out in rule 40 of the NGR as follows:

> No discretion
>
> (1) If the Law states that the AER has no discretion under a particular provision of the Law, then the discretion is entirely excluded in regard to an element of an access arrangement proposal governed by the relevant provision.
>
> Limited discretion

(2) If the Law states that the AER's discretion under a particular provision of the Law is limited, then the AER may not withhold its approval to an element of an access arrangement proposal that is governed by the relevant provision if the AER is satisfied that it:

(a) complies with applicable requirements of the Law; and

(b) is consistent with applicable criteria (if any) prescribed by the Law.

Full discretion

(3) In all other cases, the AER has a discretion to withhold its approval to an element of an access arrangement proposal if, in the AER's opinion, a preferable alternative exists that:

(a) complies with applicable requirements of the Law; and

(b) is consistent with applicable criteria (if any) prescribed by the Law.[3]

Apart from the specific criteria that applies to any one element of an access arrangement proposal, there are two overarching requirements that apply to the assessment of an access arrangement proposal as a whole.

First, the AER must make an access arrangement decision that is in the long term interests of consumers. Specifically, the AER must do so in a manner that will or is likely to contribute to the NGO.[4] The NGO in section 23 of the NGL relevantly provides:

> The objective of this Law 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, quality, safety, reliability and security of supply of natural gas.

Rule 100 of the NGR further provides:

The provisions of an access arrangement must be consistent with:

(a) the national gas objective; and

(b) these rules and the Procedures as in force when the terms and conditions of the access arrangement are determined or revised.

Second, the AER must take into account the revenue and pricing principles (RPP) when exercising its discretion in approving or making those parts of an access arrangement relating to a reference tariff, or otherwise where it considers it appropriate to do so.[5] Section 24 of the NGL relevantly provides:

(1) The revenue and pricing principles are the principles set out in subsections (2) to (7).

(2) A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in-

(a) providing reference services; and

(b) complying with a regulatory obligation or requirement or making a regulatory payment.

(3) A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes-

(a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and

(b) the efficient provision of pipeline services; and

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3 NGR, r. 40.
4 NGL, s. 28(1).
5 NGL, s. 28(2).

(c) the efficient use of the pipeline.

(4) Regard should be had to the capital base with respect to a pipeline adopted-

(a) in any previous-

(i) full access arrangement decision; or

(ii) decision of a relevant Regulator under section 2 of the Gas Code;

(b) in the Rules.

(5) A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.

(6) Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.

(7) Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services.

Interlinkages between different elements of an access arrangement must be taken into account in order to ensure that all of the elements of an access arrangement work together as a whole. This is so that the terms and conditions, including prices, will, among other things, contribute to achieving efficient investment in, and efficient operation and use, of Envestra's gas distribution networks for the long term interests of consumers, in accordance with the NGO. Further, in providing reference services, Envestra should, amongst other factors, be provided with a reasonable opportunity to recover at least its efficient costs and with effective incentives in order to promote economic efficiency.

1.2.1 Access arrangement proposal to be approved in its entirety or not at all

The AER's approval of an access arrangement proposal implies approval of every element of the proposal.[6] It follows that, if the AER withholds its approval to any element of an access arrangement proposal, the proposal cannot be approved.[7]

The AER’s final decision is not to approve Envestra’s revised access arrangement proposal for its Victorian and Albury networks. This is because it does not approve a number of elements of Envestra’s proposals.

1.3 Access arrangement review process

Under the NGL a service provider must submit an access arrangement proposal to the AER for approval under the NGR.[8] An access arrangement proposal contains the terms, including prices, under which the service provider proposes to provide access to the services provided by their networks to users and prospective users.

When submitting an access arrangement proposal, the service provider must submit 'access arrangement information' for the proposal. The term 'access arrangement information' is defined by r. 42(1), which provides:

Access arrangement information for an access arrangement or an *access arrangement proposal* is information that is reasonably necessary for users and prospective users:

[6] NGR, r. 41(1).
[7] NGR, r. 41(2).
[8] NGL, s. 132.

> (a) to understand the background to the access arrangement or the *access arrangement proposal*; and
>
> (b) to understand the basis and derivation or the various elements of the access arrangement or the *access arrangement proposal*.

Rule 42(2) provides that access arrangement information must include the information reasonably required by the NGL and the NGR. Rule 48 sets out general requirements including that the service provider must describe the pipeline services it proposes to offer by means of the pipeline and must specify the reference services and reference tariffs. Rule 72 lists specific information relevant to price and revenue regulation that also must be included in an access arrangement. This includes detailed forecasting information and the service provider's proposed approach to the setting of tariffs.

Following the service provider's submission of an access arrangement proposal, the AER conducts a preliminary assessment of the proposal and access arrangement information against the requirements of the NGR (see section 1.3.4 below). The AER must publish a notice (initiating notice) on its website and in a newspaper notifying receipt of, and describing the access arrangement proposal, giving a website where it can be inspected, and inviting written submissions on the proposal by a specified date.[9] The AER may defer the initiating notice if, on a preliminary inspection, the AER considers that the proposal or related information is deficient in some respect.[10]

After considering the access arrangement proposal, any submissions in response to the service provider's access arrangement proposal, and any other matters the AER considers relevant, the AER must make an access arrangement draft decision.[11] The AER must include a statement of the reasons for the draft decision.[12] An access arrangement draft decision indicates whether the AER is prepared to approve the service provider's access arrangement proposal as submitted and, if not, the nature of the amendments that are required in order to make the proposal acceptable to the AER.[13]

1.3.1 Revision of access arrangement proposal and commencement of public consultation following draft decision

If an access arrangement draft decision indicates that revision of the access arrangement proposal is necessary to make the proposal acceptable to the AER, the decision must fix a period for revision of the proposal.[14] This is known as the revision period. In the revision period, the service provider may submit additions or other amendments to the access arrangement proposal to address matters raised in the access arrangement draft decision.[15] The amendments must be limited to those necessary to address matters raised in the access arrangement draft decision unless the AER approves further amendments.[16]

After the AER makes an access arrangement draft decision, it must notify stakeholders, establish a procedure for stakeholders to make written submissions on the draft decision, and make the draft decision available. It must do this by publishing the decision on its website, and publishing a notice on its website and in a national newspaper.[17] Pursuant to r. 59(5)(c), the notice must invite written

9 NGR, r. 58(1).
10 NGR, r. 58(2).
11 NGR, r. 59(1); r. 71(2).
12 NGR. r. 59(4).
13 NGR, r. 59(2).
14 NGR, r. 59(2).
15 NGR, r. 60(1).
16 NGR, r. 60(2). For example, the AER might approve amendments to the access arrangement proposal to deal with a change in circumstances of the service provider's business since submission of the access arrangement proposal.
17 NGR, r. 59(5)(b) & (c)

submissions. The due date for written submissions must be at least 20 business days after the end of the revision period.

1.3.2 Final decision

After considering the submissions made in response to the access arrangement draft decision within the time allowed, and any other matters the AER considers relevant, the AER must make an access arrangement final decision.[18]

An access arrangement final decision is a decision to approve, or to refuse to approve, an access arrangement proposal.[19] An access arrangement final decision, like an access arrangement draft decision, must include a statement of the reasons for the decision.[20] The final decision must also be published on the AER's website.

If, in an access arrangement final decision, the AER does not approve an access arrangement proposal, the AER must itself propose an access arrangement or revisions to the access arrangement for the relevant pipeline.[21] The AER's proposal for an access arrangement or revisions is to be formulated with regard to:

- the matters that the NGL requires an access arrangement to include
- the service provider's access arrangement proposal
- the AER's reasons for refusing to approve that proposal.[22]

In this final decision, the AER has set out its proposed revisions to make Envestra’s proposal acceptable. These revisions have been identified by assessing each element of Envestra’s revised access arrangement proposal in accordance with the relevant requirements set out in the NGL and NGR.

1.3.3 Further final decision

The AER must make a decision giving effect to its proposed access arrangement or revisions within two months of its final decision not to approve a business’ access arrangement proposal.[23] The AER may, but is not obliged to, consult on its proposal.[24] Once a further final decision is made, the access arrangement takes effect on a date fixed in the determination or, if no date if fixed, 10 business days after the date of the decision.[25]

1.4 Time limits on AER decision making

The AER is required to make an access arrangement final decision to approve or not approve the access arrangement proposal within six months of receipt of the access arrangement proposal.[26] For the purpose of calculating elapsed time in the making of a decision under the NGL and NGR, certain

18 NGR, r. 62(1).
19 NGR, r. 62(2).
20 NGR, r. 62(4).
21 NGR, r. 64(1).
22 NGR, r. 65(2).
23 NGR, r. 64(4).
24 NGR, r. 64(3).
25 NGR, r. 64(6).
26 NGR, r. 62(7).

periods may be disregarded, such as a period allowed for public consultation and a period taken by the service provider to respond to a request for information from the AER.[27]

For instance, when calculating the six month period, the AER may disregard any period allowed for public submissions on the proposal or on a draft decision.[28] The time taken for a service provider to remedy a deficiency in their access arrangement information under r. 43(3) of the NGR can also be disregarded for the purposes of calculating the six month period. However, the access arrangement review must be completed within an absolute overall time limit of 13 months between the date on which the service provider submits its access arrangement proposal and the AER's final decision.[29]

The AER has made its final decision within this timeframe. As noted above, the AER has a further two months from the date of its final decision to make its further final decision.

1.5 Public consultation

The AER under the NGR is required to consult with interested parties at various stages during an access arrangement review. Effective consultation and engagement with stakeholders is essential to the AER's performance of its regulatory functions.

The AER invited interested parties to make submissions on the AER's draft decision and Envestra's revised access arrangement proposal. The AER considered all submissions in making this draft decision.

The AER also hosted a workshop on the proposed terms and conditions. The workshop provided retailers and distributors (including Envestra) with a forum to identify and discuss key issues arising from the proposed amendments to the non-price terms and conditions of the distributors' access arrangements.

Table 1.1 below outlines the various stages of public consultation that the AER has undertaken as part of the review process.

Table 1.1 Key stages in the decision making process

Key stages in the decision making process	Scheduled date
AER received Envestra proposal	30 March 2012
Envestra proposal published	2 May 2012
Industry workshop on terms and conditions	18 May 2012
AER draft decision released	10 September 2012
Envestra revised proposal to be submitted	9 November 2012
Consumer group roundtable	27 November 2012
Closing date for submissions on revised proposal	7 January 2013
AER final decision released	15 March 2013

27 NGR, r. 11.
28 NGR, r. 11(1)(c).
29 NGR, r. 13.

1.5.1 Protected information submitted to the AER

As part of the review process the AER receives protected information from the businesses and other stakeholders. The AER is committed to treating protected information responsibly and in accordance with the law.

Division 1 of Part 2 of Chapter 10 of the NGL deals with disclosure of confidential information held by the AER. The NGL authorises the AER to disclose confidential information in specified circumstances.[30] This includes authorisation to disclose confidential information where it is of the opinion that:

- disclosure would not cause detriment to the person who gave the information, or
- although disclosure would cause detriment, the public benefit in disclosing the information outweighs the detriment to the disclosing person.[31]

If disclosing information under s.329 of the NGL, the AER must undertake the process set out in s. 329(2) of the NGL. It provides that the AER must: give a notice to the person who gave the information of the intended disclosure; give the person an opportunity to address the AER's case for disclosure; and properly consider that person's case for nondisclosure in making its decision.

The AER undertook the appropriate NGL process to disclose information where it was of the opinion that the information would be relevant to stakeholder submissions or would need to be referred to in its decision, and after it had satisfied itself of the matters required under the NGL.

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30 NGL, ss. 324 to 329 (Division 1 of Part 2 of Chapter 10 of the NGR).
31 NGL, s. 329(1).

2 Pipeline services

Envestra's revised access arrangement proposal describes the type and nature of pipeline services to be provided. This includes those services likely to be sought by a significant part of the market (reference services) and non-reference services.

Rule 48(1) of the NGR provides that a full access arrangement must specify certain information for pipeline services, including reference services. Pipeline services include haulage services, interconnection services and ancillary services.[32] Reference services are defined as pipeline services that are likely to be sought by a significant part of the market.[33] An access arrangement must:

- identify the pipeline to which the access arrangement relates and a website at which a description of the pipeline can be inspected[34]
- describe the pipeline services the service provider proposes to offer to provide by means of the pipeline[35]
- specify the reference services, and the reference tariff for each reference service.[36]

Rule 109(1) of the NGR provides that a pipeline service provider must not make it a condition of the provision of a service that the prospective user also accept another non-gratuitous service, unless the bundling of services is reasonably necessary.

2.1 Final decision

The AER considers that Envestra has met its obligations to describe the pipeline services and specify the reference services that it proposes to offer.

The AER accepts Envestra's proposed:

- Volume Haulage Service
- Demand Haulage Service
- Ancillary Reference Services.

2.2 Revised proposal

Envestra's revised proposal in relation to pipeline services has adopted each of the amendments required by the AER in its draft decision.[37] Envestra has not made any further changes to its pipeline services and reference services including the Volume Haulage Service, beyond those required by the AER in its draft decision.[38]

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32 NGL, s. 2.
33 NGR, r. 101(2).
34 NGR, r. 48(1)(a).
35 NGR, r. 48(1)(b).
36 NGR, r. 48(1)(c) and r. 48(1)(d).
37 AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 6.
38 AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 2.

2.3 Assessment approach

The AER's assessment approach is set out in its draft decision. See section 1.3 in attachment A of the AER's draft decision for a detailed explanation of the AER's assessment approach.[39]

A submission was received from AGL on the characterisation of Delivery Points for the purposes of the Volume Haulage Service.[40]

2.4 Reasons for decision

The AER accepts Envestra's Volume Haulage Service with respect to the characterisation of Delivery Points.[41] For the remaining services, the AER received no further information and for the reasons in its draft decision approves those pipeline services and reference services identified in Envestra's revised proposal.[42] In reaching this conclusion the AER has taken into account AGL's submission, which is considered below.

The AER considers Envestra's characterisation of a customer with respect to its volume haulage service is for a separate purpose to the characterisation under AEMO's Retail Market Procedures (Victoria), and therefore is not inconsistent with those procedures.[43]

The AER notes that clause 2.2.3 of Envestra's access arrangement proposal provides a mechanism for Network Users to seek the reclassification of a Delivery Point for the purposes of the Volume Haulage Service.

AGL submitted that existing obligations within the Retail Market Procedures require a retailer to provide Customer Characterisation details, which advise whether the customer is a business or residential customer.[44] AGL also submitted that under NECF, a retailer is required to determine the Customer Characterisation and provide that information to the distributor.[45]

AGL considers that Envestra should not be required to make its own assessment of how gas has been used at premises. AGL submits that Envestra's approach is not consistent with current practices or the NECF. AGL submits that the method for determining whether a volume haulage Delivery Point is a residential Delivery Point, set out in sub-clause 2.2.1, should be deleted.[46]

The AER sent an information request to Envestra for comments on AGL's submission given Envestra did not contemplate this issue in its revised proposal.[47]

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[39] AER Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 1.

[40] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[41] Envestra, Revised Access Arrangement Proposal, 9 November 2012, clause 2.2.3.

[42] AER Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, pp. 2-–5.

[43] Rule 100(b) of the NGR requires the provisions of an access arrangement to be consistent with the Procedures as in force when the terms and conditions of the access arrangement are revised. Part 15B of the NGR provides for AEMO to make Procedures, including Retail Market Procedures (Victoria).

[44] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[45] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[46] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[47] Information request Fd15a, 5 February 2013.

Envestra responded to this information request with a number of reasons why it thought the two characterisations were separate and not inconsistent.[48]

Envestra submitted that the reason why the Retail Market Procedures require a customer characterisation is that customer characterisation is used to determine the approved estimation methodology or approved substitution methodology in the first twelve months after installation. This is done where it is necessary to estimate or substitute a meter read and there is no actual validated meter read or the reading has failed or shown to have been defective (see clause 2.2 of Attachment 4 and clause 2.2.2 of Attachment 5 of the Procedures).[49]

Envestra submitted that the issues which require consideration for tariff purposes under Envestra's proposed access arrangement are different from the issues that are relevant to 'customer characterisation' under the Retail Market Procedures and the issues that are relevant to 'customer classification' under the NECF. These distinctions have been partly recognised by industry in the design of the business to business systems in that the participant build packs distinguish between 'customer characterisation' under the Retail Market Procedures and 'customer classification' under NECF. Industry recognises that these may differ and has allowed separate fields for characterisation and classification.[50]

Envestra submitted that it does not think it is appropriate to give retailers the right to determine which of Envestra's tariffs apply, in the same way that Envestra would not determine which of the retailer's tariffs is applicable.[51]

Envestra submitted that its views are not inconsistent with either the Retail Market Procedures nor the NECF.

> Neither the Retail Market Procedures nor NECF require distribution tariffs to distinguish between residential and business customers nor require Envestra to use customer characterisation under the Retail Market Procedures or customer classification under NECF as a basis for the determination of distribution tariffs. In fact, retailer's practice has been to not provide customer characterisation when they request MFX. Moreover, industry does not contemplate that retailers will provide customer classifications under NECF at the time that NECF is introduced. Rather, industry contemplates that the customer classifications will only be provided to distributors when a customer changes retailer or the retailer lodges an amended site request (and it is not proposed to do that for all customers upon the commencement of NECF).[52]

Retail Market Procedures (Victoria)

Envestra's proposed access arrangement provides for Envestra to determine whether gas delivered through a Delivery Point is used primarily for residential or other purposes, and therefore whether the Delivery Point is a Residential or non-Residential Delivery Point for the purpose of allocating the appropriate reference service.[53]

In contrast, clause 2.8.1(b) of the Retail Market Procedures (Victoria),[54] provides that:

> Where a FRO requests a Distributor to install a meter, the FRO must provide to the Distributor, at the time of that request, a customer characterisation for the distribution supply point to which that meter will relate.

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48 Envestra, Response to information request Fd15a, 12 February 2013.
49 Envestra, Response to information request Fd15a, 12 February 2013.
50 Envestra, Response to information request Fd15a, 12 February 2013.
51 Envestra, Response to information request Fd15a, 12 February 2013.
52 Envestra, Response to information request Fd15a, 12 February 2013.
53 Envestra, Revised Access Arrangement Proposal, 9 November 2012, clause 2.2.1.
54 Version 5.

An FRO is defined as in relation to a supply point, the person identified in the metering register as the Market Participant responsible, at the relevant time, for settling the account relating to that supply point.[55]

Customer characterisation is defined as:

> in relation to a Customer, means whether the Customer is:
>
> (a) metropolitan or non-metropolitan (where 'metropolitan' refers to the Melbourne metropolitan area), as published by the Department of Infrastructure (or its successor); and
>
> (b) residential or business, where residential means the primary use of the consumed energy is for household purposes and business means the primary use of the consumed energy is for commercial type purposes as determined by the retail business for customer billing.

Clause 2.2.2 of Attachment 4 to the Retail Market Procedures (Victoria) provides that:

> A Distributor must use the four categories of customers in accordance with the customer characterisation provided to the Distributor pursuant to clauses 2.8.1(b) of these Procedures as follows:

Clause 2.2.2 of Attachment 5 to the Retail Market Procedures (Victoria) provides that:

> A Distributor must use the four categories of customers in accordance with the customer characterisation provided to the Distributor pursuant to clause 2.8.1(b) as follows:

The purpose of the consideration under Envestra's Volume Haulage Service is for allocating the appropriate reference service and corresponding tariff. On the other hand, the consideration under the Retail Market Procedures (Victoria) relates to determining the approved estimation methodology. The AER considers that these are unrelated purposes that use a similar characterisation process. However, the manner in which the characterisation is used for one purpose has no relevance to the manner in which the characterisation is used for the other purpose. Accordingly, the AER considers there is no inconsistency if the actual characterisation differs.

The AER considers that where the purpose of the characterisation is different and unrelated, there is no inconsistency if a Delivery Point/Supply Point is characterised differently for each of those purposes. This is consistent with Envestra's submission that the 'issues' relevant to each characterisation are different.[56]

Envestra's submissions make it clear that industry understands these different purposes and accepts the different characterisation.[57]

NECF

The AER considers that the characterisation of customers that occurs under NECF relates to the terms and conditions and method of billing between the retailer and the customer.[58] It does not relate to reference services or the manner in which a Network User will allocate tariffs. Accordingly, the AER considers that should it be adopted in Victoria, there will be no inconsistency between NECF and Envestra's proposed method of assigning the Volume Haulage Service.

55 Retail Market Procedures (Victoria) Version 5, s. 1.1.1.
56 Envestra, Response to information request Fd15a, 12 February 2013.
57 Envestra, Response to information request Fd15a, 12 February 2013.
58 National Energy Retail Rules 2012, Parts 1 and 2.

3 Capital base

The capital base roll forward accounts for the value of Envestra's regulated assets over the access arrangement period. 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. The opening value of the capital base is used to determine the return of capital (regulatory depreciation) and return on capital building block allowances.

The AER is required to make a decision on Envestra's opening capital bases as at 1 January 2013 for the 2013–17 access arrangement period. The AER is also required to make a decision on Envestra's projected capital bases for the 2013–17 access arrangement period. This attachment presents the AER's final decision on these matters.

3.1 Final decision

The AER does not approve Envestra's revised proposed opening capital bases as at 1 January 2013 of:

- Envestra Victoria—$1109.7 million ($nominal)
- Envestra Albury—$34.6 million ($nominal).

The AER considers the capital bases should include an additional six months indexation adjustment. Envestra did not propose this adjustment in its revised proposal, but the AER now considers it is necessary to apply such an adjustment to transition from the ESC's assumed timing of the capital base modelling to the AER's timing assumption.

After making this adjustment, the AER has determined opening capital bases as at 1 January 2013 of:

- Envestra Victoria—$1117.4 million ($nominal)
- Envestra Albury—$34.8 million ($nominal).

Tables 3.1 and 3.2 set out the AER's final decisions on the capital base roll forward for Envestra's Victoria and Albury networks during the 2008–12 access arrangement period.

Table 3.1 AER's final decision on the capital base roll forward for Envestra Victoria during the 2008–12 access arrangement period ($million, 2012)

	2008	2009	2010	2011	2012
Opening capital base	992.2	1013.6	1022.1	1037.7	1067.6
Net capex	55.5	46.2	56.8	73.7	95.6
Less: regulatory depreciation	34.1	37.8	41.1	43.8	45.8
Closing capital base	1013.6	1022.1	1037.7	1067.6	1117.4

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

Table 3.2 AER's final decision on the capital base roll forward for Envestra Albury during the 2008–12 access arrangement period ($million, 2012)

	2008	2009	2010	2011	2012
Opening capital base	35.5	35.8	35.9	35.8	35.5
Net capex	1.5	1.3	1.3	1.1	0.8
Less: straight-line depreciation	1.2	1.3	1.3	1.4	1.5
Closing capital base	35.8	35.9	35.8	35.5	34.8

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

Based on the approved opening capital bases and the AER's final decisions on forecast capex, forecast depreciation and the inflation forecast, the AER has determined projected closing capital bases as at 31 December 2017 of:

- Envestra Victoria—$1473.4 million ($nominal)
- Envestra Albury—$38.0 million ($nominal).

Tables 3.3 and 3.4 set out the AER's projected roll forward of Envestra's capital bases during the 2013–17 access arrangement period.

Table 3.3 AER's final decision on projected capital base roll forward for Envestra Victoria during the 2013–17 access arrangement period ($million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	1117.4	1196.8	1277.8	1345.4	1420.0
Net capex	91.5	95.4	85.6	95.3	76.3
Less: straight-line depreciation	40.1	44.3	50.0	54.3	58.4
Indexation	27.9	29.9	31.9	33.6	35.5
Closing capital base	1196.8	1277.8	1345.4	1420.0	1473.4

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

Table 3.4 AER's final decision on projected capital base roll forward for Envestra Albury during the 2013–17 access arrangement period ($million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	34.8	35.4	36.2	36.8	37.1
Net capex	1.2	1.4	1.3	1.2	1.8
Less: straight-line depreciation	1.4	1.5	1.7	1.8	1.9
Indexation	0.9	0.9	0.9	0.9	0.9
Closing capital base	35.4	36.2	36.8	37.1	38.0

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

The AER also does not approve Envestra's proposal to use actual depreciation to establish its opening capital bases as at 1 January 2018. The AER considers that the use of approved forecast depreciation to roll forward the opening capital bases from 2013–17 at the next access arrangement review is appropriate.

3.2 Revised proposal

In its revised proposal, Envestra adopted the AER's draft decision on its opening capital bases as at 1 January 2013.[59]

Envestra's revised proposal projected for its Victorian network a closing capital base at as 31 December 2017 of $1608.8 million ($nominal) as set out in table 3.5.

Table 3.5 Envestra's revised proposed capital base roll forward for Victoria during the 2013–17 access arrangement period ($million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	1109.7	1228.8	1354.5	1468.2	1559.2
Net capex	131.2	140.2	131.9	111.7	72.6
Less: straight-line depreciation	39.8	45.3	52.0	57.3	62.0
Indexation	27.7	30.7	33.9	36.7	39.0
Closing capital base	1228.8	1354.5	1468.2	1559.2	1608.8

Source: Envestra, *Post-tax revenue model—Victoria*, November 2012.
Note: Totals may not add due to rounding.

Envestra's revised proposal projected for its Albury network a closing capital base as at 31 December 2017 of $38.3 million ($nominal) as set out in table 3.6.

[59] Envestra, *Attachment 8.1- Response to draft decision: Capital base*, November 2012, p. 1.

Table 3.6 Envestra's revised proposed capital base roll forward for Albury during the 2013–17 access arrangement period ($million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	34.6	35.3	36.2	36.9	37.3
Net capex	1.3	1.6	1.4	1.3	2.0
Less: straight-line depreciation	1.4	1.5	1.7	1.8	1.9
Indexation	0.9	0.9	0.9	0.9	0.9
Closing capital base	35.3	36.2	36.9	37.3	38.3

Source: Envestra, *Post-tax revenue model—Albury*, November 2012.
Note: Totals may not add due to rounding.

3.3 Assessment approach

The AER's approach to assessing Envestra's revised proposed capital bases is set out in its draft decision. See section 2.3, attachment 2 of the draft decision for a detailed explanation of the assessment approach.

The AER also took into account submissions received on its draft decision in forming its final decision on Envestra's capital bases. However, these submissions related mainly to capex and depreciation, which are inputs to the projected capital base at 31 December 2017. Accordingly, these submissions are addressed in the capex attachment (attachment 4) and the depreciation attachment (attachment 6).

3.4 Reasons for decision

The AER is required to make a decision on Envestra's proposed capital base roll forward. As a part of this, the AER must make decisions on specific inputs to the roll forward process. Specifically, the AER must determine:

- the opening capital base at 1 January 2008—this is the base from which the AER rolls forward the capital base to reflect actual capex and forecast depreciation for the 2008–12 access arrangement period. The AER has increased Envestra's revised proposal on the capital bases at 1 January 2008 due to a transitional indexation adjustment by:
  - Victoria—$7.7 million ($ 2012) or 0.8 per cent
  - Albury—$0.3 million ($2012) or 0.8 per cent.
- the opening capital base at 1 January 2013—this is the capital base at the end of the 2008–12 access arrangement period. This in turn will be used for determining the return on capital and depreciation building blocks over the 2013–17 access arrangement period
- the projected capital base at 31 December 2017— this is the forecast of the closing capital base for the 2013–17 access arrangement period, based on forecast capex and depreciation. The AER has reduced Envestra Victoria's revised proposal on the projected capital base as at 31 December 2017 by $135.4 million ($nominal) or 8.4 per cent, due to the AER's final decisions on forecast capex and forecast depreciation. The AER has also reduced Envestra Albury's projected capital base at 31 December 2017 by $0.3 million ($nominal) or 0.8 per cent.

- the depreciation approach used to roll forward the capital base from 2013–17 at the next access arrangement review.

3.4.1 Opening capital bases at 1 January 2008

The AER does not approve Envestra's revised proposal on the opening capital base at 1 January 2008. In its revised proposal, Envestra proposed to adopt the requirements in the AER's draft decision. However, the AER has considered further information that supports the need to apply an additional 6 months of indexation to Envestra's opening capital bases at 1 January 2008 as part of transitioning to the AER's modelling framework. The result is that the AER has approved higher opening capital bases than those proposed by Envestra. The AER's reasons for this decision are set out below.

Having made this adjustment, the AER has determined Envestra's opening capital bases at 1 January 2008 of:

- Envestra Victoria—$992.2 million ($2012)

- Envestra Albury—$35.5 million ($2012).

Transitional indexation adjustment

The AER has adjusted Envestra's revised proposal on the opening capital base at 1 January 2008 to account for an additional 6 months indexation to determine the opening capital bases as at 1 January 2013. The adjustment is necessary because Envestra's capital bases were valued in 1 July dollars under the ESC's regulatory modelling. The AER's regulatory modelling requires the capital bases to be valued in 31 December dollars when rolling forward the capital base from year to year. Accordingly, for this access arrangement review, the AER has made an additional 6 months of indexation adjustment to Envestra's capital bases to transition from the ESC's regulatory modelling to the AER's regulatory modelling. This adjustment increases Envestra's opening capital bases at 1 January 2008 for its Victorian and Albury businesses by 0.8 per cent each.

In the draft decision, the AER did not accept Envestra's proposal to index its closing capital bases by an additional six months as part of the roll forward for the 2008–12 access arrangement period.[60] Envestra's revised proposal adopted the AER's draft decision.[61] However, SP AusNet provided further information in support of this adjustment in its revised proposal. Having considered this additional information, the AER accepts that the transitional indexation adjustment is necessary. The need for this additional indexation also applies to Envestra's capital bases. The AER has therefore indexed the closing capital bases using the same CPI applying to SP AusNet. This means that the capital bases are indexed forward using six months of inflation from the CPI at 30 June 2006 to the CPI at 31 December 2006. The AER consulted with Envestra on the proposed method to determine the additional 6 months indexation. Envestra confirmed the appropriateness of the proposed method.[62]

3.4.2 Opening capital bases at 1 January 2013

The AER does not accept Envestra's proposed opening capital base at 1 January 2013. In its revised proposal, Envestra adopted the AER's draft decision, including the capex and depreciation for determining the opening capital bases as at 1 January 2013. However, the transitional indexation

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60 AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 21–22.

61 Envestra, *Access arrangement proposal: 8.1 Response to Draft Decision: capital base*, November 2012, p. 2.

62 Envestra, *Response to AER information request FD13*, 14 February 2013.

adjustment to the opening capital bases at 1 January 2008 flows through in the capital base roll forward to determine the opening capital bases at 1 January 2013. As a result of this adjustment, the AER determines Envestra's opening capital bases as at 1 January 2013 of:

- Envestra Victoria—$1117.4 million ($nominal)
- Envestra Albury—$34.8 million ($nominal).

3.4.3 Projected capital bases at 31 December 2017

The AER does not approve Envestra's projected capital base as at 31 December 2017 for its Victoria or Albury networks. The AER's forecasts of Envestra's projected capital bases as at 31 December 2017 are:

- Envestra Victoria—$1473.4 million ($nominal), a reduction of $135.4 million or 8.4 per cent from Envestra's proposal.
- Envestra Albury—$38.0 million ($nominal), a reduction of $0.3 million or 0.8 per cent from Envestra's proposal.

This is because of the AER's final decisions on the inputs to the determination of the projected capital base. In particular, while the AER accepts the closing value for Envestra's Albury Network, the AER does not accept Envestra's proposed inputs to the projected roll forward. For example, the AER determined a higher opening capital base at 1 January 2013 and reduced Envestra's capex allowance. The AER has amended the following inputs:

- Increased Envestra's proposed opening capital bases as at 1 January 2013 to reflect the changes required in this attachment.
- Reduced Envestra's proposed forecast capex allowances by:[63]
  - Envestra Victoria—$131.0 million ($nominal) or 22.3 per cent.
  - Envestra Albury—$0.6 million ($nominal) or 8.3 per cent.
- Reduced Envestra's proposed forecast depreciation allowance by:
  - Envestra Victoria—$0.4 million ($nominal) or 0.4 per cent.
  - Envestra Albury—$0.1 million ($nominal) or 1.5 per cent.[64]

The AER also does not approve Envestra's proposal to use actual depreciation rather than forecast depreciation to establish its opening capital bases as at 1 January 2018 at the next access arrangement review. This issue is discussed further below.

3.4.4 Depreciation approach to capital base roll forward at the next access arrangement review

The AER proposes to roll forward Envestra's capital bases from 2013–17 at the next access arrangement review using *forecast depreciation*.[65] The AER does not approve Envestra's proposal to

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[63] The AER's detailed assessment of the forecast capex allowance is set out in attachment 4.
[64] The AER's assessment of the proposed forecast depreciation allowance is set out in attachment 6.
[65] Based on the forecast depreciation allowed by the AER in this determination, adjusted for CPI.

change to an *actual depreciation* approach from the current approach of using forecast depreciation. This is consistent with the AER's draft decision.

The AER's final decision on the depreciation approach in the capital base roll forward is a full discretion provision in the NGR.[66] The AER may, therefore, withhold approval of Envestra's proposed approach if it considers a preferable alternative satisfies the requirements of the NGL.

The AER considers that the forecast depreciation approach is a preferable alternative to Envestra's proposed *actual depreciation* approach in the circumstances of this decision. Further, the forecast depreciation approach will promote the national gas objective and the revenue and pricing principles better than the actual depreciation approach.[67] The AER is applying the approach that was previously applied to Envestra by the ESC. The forecast depreciation approach is also consistent with access arrangements applying to Envestra's other gas networks, and with other regulated pipelines.

The AER has reached this view because:

- The AER considers that the forecast depreciation approach will allow Envestra to recover at least its efficient costs of investment in its network. This is because the AER will deduct from the capital base exactly the depreciation forecast that Envestra recovers through tariffs. This means that Envestra will recover through depreciation precisely the value it invests in the network over the life of its assets.
- Under an actual depreciation approach, Envestra will achieve greater financial benefits compared to the forecast depreciation approach if it underspends its capex allowance or overstates its capex forecast. This means that Envestra receives a greater financial benefit for the same investment in its network compared to the forecast depreciation approach. Envestra achieves these benefits because the forecast depreciation recovered through tariffs exceeds the depreciation that is subtracted from the capital base. These financial benefits arise whether these underspends are due to efficiency gains or due to inefficient deferrals of expenditure.
- Under the current forecast depreciation approach, Envestra has underspent its forecast capex allowance from 2007–11 by approximately $133 million ($ June 2012), or 26 per cent.
- As Envestra has already demonstrated scope to underspend relative to its forecast capex, the AER considers the additional financial benefit for underspending under the actual depreciation approach is unnecessary. The additional financial benefit may:
  - result in services being provided to Envestra's users at greater than efficient costs—In the capital base, assets depreciate only up to their full value. However, if Envestra systematically underspends it will consistently recover greater depreciation revenue than it will subtract of its capital base. This is because it will recover forecast depreciation through tariffs, but its capital base will only decrease by the lower actual depreciation amount. In turn, this means that it can recover more depreciation through revenue than the value of capex it invests over the life of the assets. This, in turn, suggests users will have to pay greater than efficient costs for services.
  - promote under-investment in Envestra's network by providing a financial benefit for deferring efficient capex.

[66] NGR r. 90.
[67] NGL, s. 23. And NGL s. 24.

- Therefore, in this case, the AER considers that the actual depreciation approach will not promote the long-term interests of natural gas consumers.[68]

The above reasons are discussed in further detail in appendix D. The appendix also addresses:

- consistency between regimes
- the dynamics of the gas sector.

3.5 Revisions

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision 3.1: Make all necessary amendments to reflect the AER's final decision on the roll forward of the opening capital bases for the 2008–12 access arrangement period, as set out in tables 3.1 and 3.2.

Revision 3.2: Make all necessary amendments to reflect the AER's final decision on the projected opening capital bases for the 2013–17 access arrangement period, as set out in tables 3.3 and 3.4.

Revision 3.3: Make all necessary amendments to reflect the AER's final decision on the use of forecast depreciation to roll forward the opening capital bases from 2013–17 at the next access arrangement review, as set out in section 3.4.4.

68 NGL, s. 23. And NGL s. 24.

4 Capital expenditure

This attachment outlines the AER's assessment of Envestra's proposed capital expenditure (capex) for 2007–11 and forecast capex for the 2013–17 access arrangement period.

4.1 Final decision

Victorian Network

The AER approves capex of $277.9 million ($2011) for 2007–11 as conforming capex.[69]

The AER does not approve Envestra's revised capex forecast of $521.8 million ($2011, escalated direct costs, including NMF) for the 2013–17 access arrangement period as it is not satisfied that it is conforming capex[70] or that the forecast was arrived at on a reasonable basis and is the best forecast possible in the circumstances.[71] The AER considers that a capex allowance of $393.6 million ($2011, escalated direct costs, including NMF) complies with the NGR requirements and proposes Multinet's access arrangement is revised accordingly.

Albury Network

The AER approves capex of $6.1 million ($2011) for 2007–11 as conforming capex.[72]

The AER does not approve Envestra's revised capex forecast of $6.7 million ($2011, escalated direct costs, including NMF) for the 2013–17 access arrangement period as it is not satisfied that it is conforming capex[73] or that the forecast was arrived at on a reasonable basis and is the best forecast possible in the circumstances.[74] The AER considers that a capex allowance of $6.1 million ($2011, escalated direct costs, including NMF) complies with the NGR requirements and proposes Multinet's access arrangement is revised accordingly.

4.1.1 Conforming capital expenditure for 2007–11

Victorian Network

The AER's draft decision was to approve Envestra's proposed net capex of $277.9 million ($2011) for the 2007–11 period as conforming capex.[75] Envestra's revised proposal included the same net capex for this period and the AER received no further submission on this issue. As such, for the reasons set out in its draft decision the AER approves Envestra's proposed net capex of $277.9 million ($2011) for the 2007–11 period as conforming capex.[76]

Albury Network

The AER's draft decision was to approve Envestra's proposed net capex of $6.1 million ($2011) for the 2007–11 period as conforming capex.[77] Envestra's revised proposal included the same net capex for this period and the AER received no further submission on this issue. As such, for the reasons set

[69] NGR, r. 77(2).
[70] NGR, r. 79(1).
[71] NGR, r. 74(2).
[72] NGR, r. 77(2).
[73] NGR, r. 79(1).
[74] NGR, r. 74(2).
[75] NGR, r. 77(2).
[76] NGR, r. 77(2).
[77] NGR, r. 77(2).

out in its draft decision the AER approves Envestra's proposed net capex of $6.1 million ($2011) for the 2007–11 period as conforming capex.[78]

4.1.2 Conforming capital expenditure for the 2013–17 access arrangement period

Victorian Network

For the reasons set out below, the AER does not approve Envestra's proposed capex allowance of $521.8 million ($2011, escalated direct costs, including NMF) for the 2013–17 access arrangement period.[79] The AER considers $393.6 million ($2011, escalated direct costs, including NMF) net capex is conforming capex and proposes to revise Envestra's access arrangement accordingly.

The reasons for the AER's reductions are:

- Mains—the volume of low pressure to high pressure mains replacement proposed by Envestra is greater than that which a prudent service operator would require to meet its safety and regulatory obligations. The AER considers that elements of Envestra's method for estimating unit rates are flawed, resulting in unit rates which are upwardly biased and not the best forecast in the circumstances and not prudent and efficient.
- Residential Connections—a longer averaging period than proposed by Envestra is required to calculate the average historical unit rate.
- Commercial Connections—a longer averaging period than proposed by Envestra is required to calculate the average historical unit rate. Further, the AER considers the forecast number of abolishments has not been arrived at on a reasonable basis.
- Residential Meters—The AER does not approve Envestra's amendment to its revised proposed unit rates as the AER accepted Envestra's initial proposal.
- Industrial and Commercial Meters—The AER does not approve Envestra's amendment to its revised proposed unit rates.
- Augmentation—Envestra did not provide evidence that the Dandenong to Crib Point augmentation is required in the 2013–17 access arrangement period.
- IT—the knowledge management program is not justified as Envestra did not provide evidence of a specific change in a safety or regulatory obligation and was unable to quantify the net benefits of the program.
- Other non-demand—two projects are not conforming capex:[80]
    - Technical training—the geographical spread of Envestra's employees is not significant enough for a prudent and efficient service provider to prioritise mobilisation of training facilities
    - Flow correctors—Envestra did not provide evidence to support replacement of all existing flow correctors.

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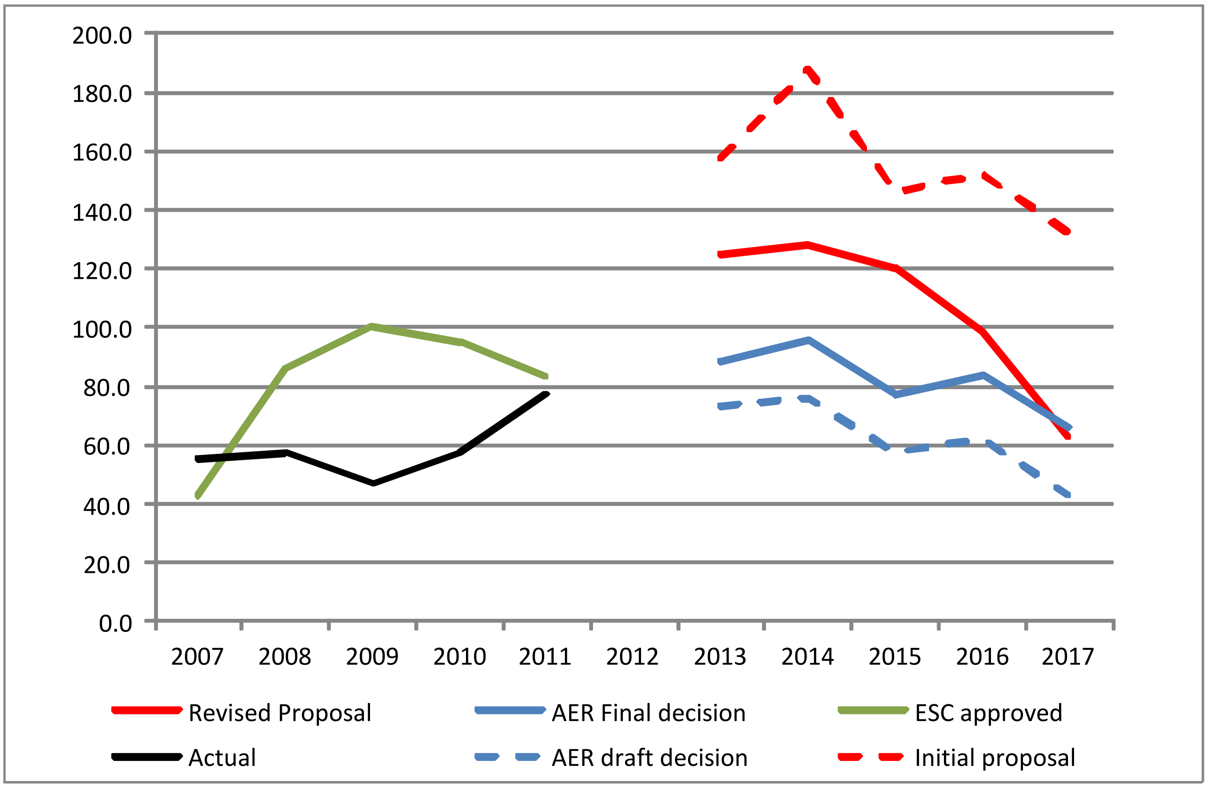
78 NGR, r. 77(2).
79 NGR, rr. 79(1), 74(2).
80 NGR, r. 79(1).

Figure 4.1 **Victorian network - Comparison of Envestra's historical, proposed and approved capex ($million, 2011)**



Source: AER analysis

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

Table 4.1 **Victorian network - Envestra proposed and AER approved capital expenditure for the 2013–17 access arrangement period ($million 2011, escalated direct costs, including NMF)**

Category	Envestra initial proposal	AER draft decision	Envestra revised proposal	AER final decision
Mains replacement	328.6	73.9	183.7	117.0
Residential connections	141.7	95.6	113.6	107.6
Commercial/industrial connections	25.6	14.9	57.1	28.4
Residential meter replacement	28.1	21.6	26.4	21.4
Commercial/industrial meter replacement	7.7	7.1	9.3	7.0
Augmentation	52.0	27.6	39.7	27.5
IT	19.3	15.5	17.3	15.4

SCADA	1.1	1.0	1.0	1.0
Other	53.2	18.5	20.7	19.2
Gas Extensions - Other	9.3	0.0	12.9	12.6
Gas Extensions - Energy for the Regions	10.4	0.0	4.6	5.8
Overheads	97.5	46.2	47.4	47.8
GROSS TOTAL CAPITAL EXPENDITURE	774.4	321.9	533.6	410.6
Customer contributions	9.5	6.5	11.8	9.5
Government contributions	0.0	0.0	0.0	7.5
NET TOTAL CAPITAL EXPENDITURE	764.9	315.4	521.8	393.6

Source: AER analysis.
Note: This table incorporates the effects of the AER's decision on cost escalation and the NMF.

Table 4.2 Victorian network - AER approved capital expenditure by driver category over the 2013–17 access arrangement period ($million, 2011)

Category	2013	2014	2015	2016	2017	Total
Mains replacement	25.5	24.5	25.2	22.6	19.3	117.0
Residential connections	21.6	21.4	21.5	21.2	22.0	107.6
Commercial/industrial connections	3.3	6.4	6.4	5.5	6.8	28.4
Residential meter replacement	2.5	4.9	3.3	8.1	2.6	21.4
Commercial/industrial meter replacement	1.0	1.3	1.8	1.5	1.4	7.0
Augmentation	4.2	7.9	2.1	11.4	1.8	27.5
IT	3.8	7.6	3.1	0.2	0.7	15.4
SCADA	0.2	0.2	0.2	0.2	0.2	1.0
Other	4.2	5.4	4.5	2.7	2.4	19.2
Gas Extensions - Other	12.6	-	-	-	-	12.6

Gas Extensions - Energy for the Regions	-	5.8	-	-	-	5.8
Overheads	9.4	10.0	9.2	10.5	8.7	47.8
GROSS TOTAL CAPITAL EXPENDITURE	88.3	95.4	77.3	83.8	65.8	410.6
Customer contributions	3.3	1.6	1.6	1.6	1.6	9.5
Government contributions	-	7.5	-	-	-	7.5
NET TOTAL CAPITAL EXPENDITURE	85.0	86.3	75.7	82.3	64.2	393.6

Source: AER analysis.
Notes: This table incorporates the effects of the AER's decision on cost escalation and the NMF.

Albury Network

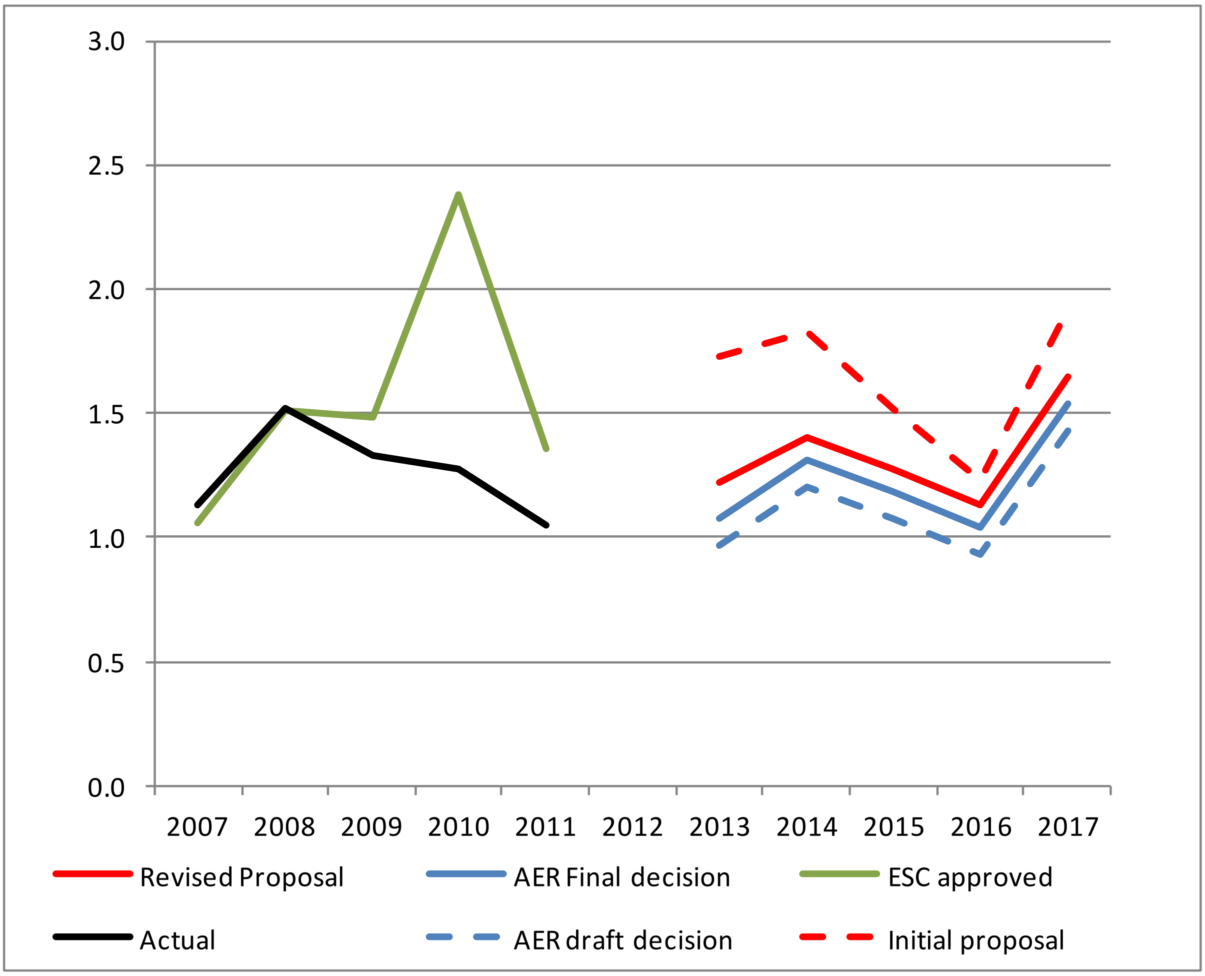
For the reasons set out below, the AER does not approve Envestra's proposed capex allowance of $6.7 million ($2011, escalated direct costs, including NMF) for the 2013–17 access arrangement period.[81] The AER considers $6.1 million ($2011, escalated direct costs, including NMF) net capex is conforming capex and proposes to revise Envestra's access arrangement accordingly.

The reasons for the AER's reductions are:

- Residential Connections—a longer averaging period than proposed by Envestra is required to calculate the average historical unit rate.
- Commercial Connections—a longer averaging period than proposed by Envestra is required to calculate the average historical unit rate. Further, the AER considers the forecast number of abolishments has not been arrived at on a reasonable basis.
- Residential Meters—Envestra is not permitted to revise it proposed unit rates.
- Industrial and Commercial Meters—Envestra is not permitted to revise it proposed unit rates.
- IT—the knowledge management program is not justified as Envestra did not provide evidence of a change in safety or regulatory obligation and was unable to quantify the net benefits of the program.

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

Figure 4.2 Albury network - Comparison of Envestra's historical, proposed and approved capex ($million, 2011)



Source: AER analysis

Table 4.3 compares the AER's final decision against Envestra's proposals and the AER's draft decision by capex category.

Table 4.3 Albury network - Envestra proposed and AER approved capital expenditure for the 2013–17 access arrangement period ($million 2011, escalated direct costs, including NMF)

Category	Envestra initial proposal	AER draft decision	Envestra revised proposal	AER final decision
Mains replacement	0.0	0.0	0.0	0.0
Residential connections	3.9	2.7	3.1	2.8
Commercial/industrial connections	0.2	0.1	0.6	0.6
Residential meter replacement	0.4	0.3	0.3	0.3
Commercial/industrial	0.1	0.1	0.3	0.1

meter replacement				
Augmentation	0.5	0.5	0.5	0.5
IT	0.7	0.6	0.6	0.6
SCADA	0.1	0.1	0.1	0.1
Other	0.8	0.0	0.0	0.0
Gas Extensions - Other	0.0	0.0	0.0	0.0
Gas Extensions - Energy for the Regions	0.0	0.0	0.0	0.0
Overheads	1.4	1.1	1.1	1.1
GROSS TOTAL EXPENDITURE	8.2	5.6	6.7	6.1
Customer contributions	0.0	0.0	0.0	0.0
Government contributions	0.0	0.0	0.0	0.0
NET TOTAL EXPENDITURE	8.2	5.6	6.7	6.1

Source: AER analysis.
Note: This table incorporates the effects of the AER's decision on cost escalation and the NMF.

Table 4.4 Albury network - AER approved capital expenditure by driver category over the 2013–17 access arrangement period ($million, 2011)

Category	2013	2014	2015	2016	2017	Total
Mains replacement	0.01	0.01	0.01	0.01	0.01	0.04
Residential connections	0.48	0.56	0.58	0.60	0.59	2.82
Commercial/industrial connections	0.11	0.11	0.11	0.12	0.11	0.57
Residential meter replacement	0.07	0.06	0.10	0.06	0.05	0.34
Commercial/industrial meter replacement	0.03	0.03	0.03	0.02	0.02	0.13
Augmentation	0.01	-	-	-	0.46	0.47
IT	0.14	0.28	0.11	0.00	0.03	0.56
SCADA	0.02	0.02	0.02	0.02	0.02	0.10
Other						

	0.00	0.00	0.00	0.00	0.00	0.01
Gas Extensions - Other	-	-	-	-	-	-
Gas Extensions - Energy for the Regions	-	-	-	-	-	-
Overheads	0.20	0.23	0.21	0.21	0.25	1.09
GROSS TOTAL EXPENDITURE	1.07	1.31	1.18	1.04	1.54	6.14
Customer contributions	-	-	-	-	-	-
Government contributions	-	-	-	-	-	-
NET TOTAL EXPENDITURE	1.07	1.31	1.18	1.04	1.54	6.14

Source: AER analysis.
Notes: This table incorporates the effects of the AER's decision on cost escalation and the NMF.

4.2 Revised proposal

4.2.1 2013–17 access arrangement period

Victorian Network

Envestra's revised proposal forecast total net capex of $521.8 million ($2011, escalated direct costs, including NMF) for the 2013–17 access arrangement period. This is a reduction of $243.1 million ($2011, escalated direct costs, including NMF) from Envestra's initial proposal of $764.9 million ($2011, escalated direct costs, including NMF). The major differences between Envestra's initial and revised proposal are:

- Mains—Envestra revised its volumes down from an initial volume of 636 kilometres to 475 kilometres subject to the provision of the pass through. Envestra proposed a new unit rate methodology, which resulted in a reduced average unit rate.
- Connections—Envestra proposed revised unit rates based on the weighted average of 2010/11 and 2011/12 historical unit rates. Envestra no longer proposed adjustments to its unit rates for increases driven by changes in the regions where connections are occurring and newer contracts.
- Meters—Envestra proposed a new unit rate forecast methodology based on the weighted average of 2010/11 and 2011/12 historical unit rates. This differed from the bottom-up forecast it provided in its initial proposal.
- Augmentation—Envestra altered the scope of its Dandenong to Crib Point augmentation, revising the expenditure down from $18.3 million ($2011, unescalated direct costs, excluding overheads and NMF) to $10.8 million ($2011, unescalated direct costs, excluding overheads and NMF).
- Other non-demand—Envestra adopted the AER's draft decision on 14 of its other non-demand projects. Envestra re-submitted 4 other non-demand projects, which the AER did not accept in its draft decision.

- Overheads—Envestra adopted the AER's draft decision on overheads, leading to a downwards revision of $49.4 million ($2011).

Table 4.5 Victorian network - Envestra revised proposal of conforming capital expenditure 2013–17 ($million 2011, escalated direct costs, including NMF)

Category	2013	2014	2015	2016	2017	Total
Mains replacement	45.5	53.3	56.0	27.6	1.2	183.7
Residential connections	22.6	22.6	22.7	22.6	23.0	113.6
Commercial/industrial connections	12.5	12.1	12.3	9.6	10.7	57.1
Residential meter replacement	2.8	6.2	3.9	10.4	3.1	26.4
Commercial/industrial meter replacement	1.4	1.8	2.5	1.9	1.7	9.3
Augmentation	4.2	8.0	2.1	13.6	11.9	39.7
IT	5.7	7.6	3.1	0.2	0.7	17.3
SCADA	0.2	0.2	0.2	0.2	0.2	1.0
Other	4.5	5.9	4.7	2.9	2.6	20.7
Gas Extensions - Other	12.9	-	-	-	-	12.9
Gas Extensions - Energy for the Regions	-	-	3.7	0.7	0.2	4.6
Overheads	12.3	10.5	9.1	8.3	7.1	47.4
GROSS TOTAL CAPITAL EXPENDITURE	124.6	128.2	120.4	98.0	62.4	533.6
Customer contributions	3.0	1.3	4.1	1.9	1.5	11.8
Government contributions	-	-	-	-	-	-
NET TOTAL CAPITAL EXPENDITURE	121.6	126.8	116.3	96.1	60.9	521.8

Source: Envestra revised proposal.

Albury Network

Envestra's revised proposal forecast total net capex of $6.7 million ($2011, escalated direct costs, including NMF) for the 2013–17 access arrangement period. This is a reduction of $1.5 million ($2011, escalated direct costs, including NMF) from Envestra's initial proposal of $8.2 million ($2011, escalated direct costs, including NMF). The substantial changes from its initial proposal are the same as for the Victorian network.

Table 4.6 Albury network - Envestra revised proposal of conforming capital expenditure 2013–17 ($million 2011, escalated direct costs, including NMF)

Category	2013	2014	2015	2016	2017	Total
Mains replacement	0.01	0.01	0.01	0.01	0.01	0.04
Residential connections	0.53	0.63	0.65	0.67	0.67	3.14
Commercial/industrial connections	0.11	0.11	0.11	0.11	0.11	0.56
Residential meter replacement	0.07	0.06	0.09	0.05	0.04	0.32
Commercial/industrial meter replacement	0.06	0.06	0.07	0.05	0.05	0.27
Augmentation	0.01	0.00	0.00	0.00	0.47	0.48
IT	0.21	0.28	0.11	0.00	0.03	0.63
SCADA	0.02	0.02	0.02	0.02	0.02	0.10
Other	0.01	0.02	0.01	0.01	0.01	0.04
Gas Extensions - Other	0.00	0.00	0.00	0.00	0.00	0.00
Gas Extensions - Energy for the Regions	0.00	0.00	0.00	0.00	0.00	0.00
Overheads	0.20	0.23	0.21	0.21	0.25	1.10
GROSS TOTAL EXPENDITURE	1.22	1.40	1.27	1.13	1.65	6.68
Customer contributions	0.00	0.00	0.00	0.00	0.00	0.00
Government contributions	0.00	0.00	0.00	0.00	0.00	0.00
NET TOTAL EXPENDITURE	1.22	1.40	1.27	1.13	1.65	6.68

Source: Envestra revised proposal.

4.3 Assessment approach

The AER's approach to assessing Envestra's proposed capex is set out in its draft decision. See Attachment 3 of the AER's draft decision for a detailed explanation of the assessment approach.[82]

The AER also took into account Envestra's responses to information requests, the report from the AER's engineering consultant Zincara and submissions received in relation to its draft decision in forming its final decision on Envestra's proposed capex. The AER received submissions relevant to its capex assessment from:

- Hon. Michael O'Brien MP — Minister for Energy and Resources
- Energy Users Coalition of Victoria
- Origin Energy (Vic) Pty Limited

4.4 Reasons for decision

The numbers in Section 4.4 are escalated by applying Envestra's labour and material escalation and do not include the Network Management Fee (NMF). This is to allow comparison between Envestra's proposal and the AER's methodological changes and other adjustments. As such, these numbers are different to those presented in section 4.1, which applies the AER's decision on labour and material escalation and includes the NMF. For the final AER proposed amounts which include these adjustments see Table 4.2 and Table 4.4. The AER's assessment of labour and material cost escalation is in appendix A.

The AER applied its assessment approach and concluded that for both the Victorian network and the Albury network, Envestra's forecast capex for 2013–17 is not conforming capex[83] and the forecast was not arrived at on a reasonable basis or the best forecast possible.[84] The AER's reasons for reaching this conclusion are set out in detail in the sub sections below. Accordingly, the AER proposes to replace Envestra's Victorian network capex allowance with $384.4 million ($2011, escalated direct costs) net capex for the 2013–17 access arrangement period. The AER proposes to replace Envestra's Albury network capex allowance with $5.6 million ($2011, escalated direct costs) net capex for the 2013–17 access arrangement period.

Table 4.7 shows the AER's final decision on the approved capex for the Victorian network in the 2013–17 access arrangement period.

Table 4.7 Victorian network - AER final approved capital expenditure by category over the 2013–17 access arrangement period ($million 2011, escalated direct costs)

Category	2013	2014	2015	2016	2017	Total
Mains replacement[(a)]	24.9	24.0	24.6	22.3	18.9	114.7
Residential connections	21.0	21.0	21.1	20.9	21.6	105.5
Commercial/industrial	3.3	6.2	6.3	5.4	6.6	27.8

82 AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2 – Attachments*, September 2012, p. 32.
83 NGR, r. 79(1).
84 NGR, r. 74(2).

connections						
Residential meter replacement	2.4	4.8	3.2	7.9	2.5	20.9
Commercial/industrial meter replacement	1.0	1.3	1.7	1.5	1.4	6.8
Augmentation	4.1	7.8	2.1	11.3	1.7	27.0
IT	3.7	7.4	3.0	0.2	0.7	15.0
SCADA	0.2	0.2	0.2	0.2	0.2	1.0
Other	4.1	5.3	4.4	2.6	2.3	18.7
Gas Extensions - Other	12.3	0.0	0.0	0.0	0.0	12.3
Gas Extensions - Energy for the Regions	0.0	5.7	0.0	0.0	0.0	5.7
Overheads	9.1	9.8	8.9	10.2	8.3	46.4
GROSS TOTAL CAPITAL EXPENDITURE	86.2	93.5	75.5	82.5	64.2	401.8
Customer contributions	3.3	1.6	1.6	1.6	1.6	9.5
Government contributions	0.0	7.5	0.0	0.0	0.0	7.5
NET TOTAL CAPITAL EXPENDITURE	82.9	84.4	73.9	80.9	62.6	384.8

Source: AER analysis.
Note: This table includes Envestra's proposed labour and material escalators and does not include the NMF.
(a) Includes incentive fee.

Table 4.8 shows the AER's final decision on its proposed capex for Albury network in the 2013–17 access arrangement period.

Table 4.8 Albury network - AER final approved capital expenditure by category over the 2013–17 access arrangement period ($million 2011, escalated direct costs)

Category	2013	2014	2015	2016	2017	Total
Mains replacement	0.01	0.01	0.01	0.01	0.01	0.04
Residential connections	0.45	0.53	0.54	0.55	0.57	2.64
Commercial/industrial connections	0.11	0.11	0.11	0.11	0.11	0.54
Residential meter replacement	0.07	0.06	0.09	0.05	0.04	0.32
Commercial/industrial	0.03	0.03	0.03	0.02	0.02	0.12

meter replacement						
Augmentation	0.01	0.00	0.00	0.00	0.44	0.45
IT	0.13	0.26	0.10	0.00	0.02	0.53
SCADA	0.02	0.02	0.02	0.02	0.02	0.09
Other	0.00	0.00	0.00	0.00	0.00	0.01
Gas Extensions-NGEP						0.00
Gas Extensions-Other						0.00
Overheads	0.18	0.22	0.20	0.19	0.23	1.02
GROSS TOTAL EXPENDITURE	0.99	1.23	1.10	0.96	1.47	5.77
Customer contributions						
Government contributions						
NET TOTAL EXPENDITURE	0.99	1.23	1.10	0.96	1.47	5.77

Source: AER analysis.
Note: This table includes Envestra's proposed labour and material escalators and does not include the NMF.

The AER's detailed consideration of each capex category is outlined below.

4.4.1 Mains replacement

Victorian network

Summary

Envestra proposed two programs under mains replacement. The AER's final decision for each is summarised below.

The AER's final decision is to not accept Envestra's low pressure pipe replacement expenditure on the basis that:

- the AER considers the estimate of the volumes is not prudent and efficient.[85] The volumes proposed by Envestra exceed those which Envestra has demonstrated are necessary to meet its safety and regulatory obligations over the current period. The AER considers that these obligations will not materially change in the 2013–17 access arrangement period. In addition, mains risk is unlikely to change in the 2013–17 access arrangement period.
- the AER considers the estimate of the unit rates do not represent the best estimate possible in the circumstances.[86] The AER considers there are flaws in Envestra's proposed methodology for

[85] NGR, r. 79(1).
[86] NGR, r. 74(2)(b).

calculating unit rates from unawarded tenders such that the proposed capex does not reflect the efficient and prudent costs of undertaking the proposed mains replacement program.[87]

For the final decision the AER considers that a total expenditure of $100.4 million ($2011, unescalated direct costs, excluding overheads) for low pressure pipe replacement and $3.4 million ($2011, unescalated direct costs, excluding overheads) for medium pressure supply mains which are necessary for carrying out the low pressure pipe replacement program is conforming capex. This consists of 359 kilometres of low pressure to high pressure block rollout mains replacement and 6 kilometres of integral medium pressure supply mains replacement (see).

For ad hoc mains replacement and service renewals capex, the AER received no further information and for the reasons given in the draft decision, approves Envestra's proposed $3.0 million ($2011, unescalated direct costs, excluding overheads) for ad hoc service renewals capex and $1.1 million ($2011, unescalated direct costs, excluding overheads) for reactive mains replacement for the 2013–17 access arrangement period as conforming capex.[88]

Table 4.9 Final decision Victoria network - Mains replacement[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal[(b)]	60.8	64.5	53.3	54.0	53.8	286.4
AER draft decision	25.8	16.3	12.0	7.8	5.4	67.2
Envestra revised proposal	43.3	50.2	52.0	25.0	0.6	171.1
AER final decision	23.9	22.8	23.1	20.7	17.3	107.8

Source: AER analysis
Note: (a) Unescalated direct costs, excluding overheads, excluding incentive fee.
(b) Does not include reactive mains replacement expenditure which was included in opex.

Low pressure pipe replacement - block mains renewal

The AER's final decision is to not approve Envestra's low pressure pipe replacement expenditure on the basis that:

- the forecast volume is not prudent and efficient.[89] The volumes proposed by Envestra exceed those which Envestra has demonstrated are necessary to meet its safety and regulatory obligations[90] over the current period. The AER considers that these obligations will not materially change in the 2013-17 access arrangement period. In addition, mains risk is unlikely to materially change in the 2013-17 access arrangement period. The AER considers $100.4 million ($2011, unescalated direct costs, excluding overheads) for low pressure pipe replacement and $3.4 million ($2011, unescalated direct costs, excluding overheads) for medium pressure supply mains which are necessary for carrying out the low pressure pipe replacement program is conforming

87 NGR, r. 79(1).
88 NGR, r. 79(1).
89 NGR, r.79(1)
90 NGR, r.79(2)(c)(i)-(iii)

capex. This consists of 359 kilometres of low pressure to high pressure block rollout mains replacement and 6 kilometres of integral medium pressure supply mains replacement.[91]

- the estimate of the unit rates do not represent the best estimate possible in the circumstances.[92] The AER considers there are flaws in Envestra's proposed methodology for calculating unit rates from unawarded tenders such that the proposed capex does not reflect the efficient and prudent costs of undertaking the proposed mains replacement program.[93]

Envestra initially proposed a low pressure pipe replacement program worth $282.7 million ($2011, unescalated direct costs, excluding overheads) for a total of 636 km of mains replacement, at an average unit rate of $444/metre ($2011, unescalated direct costs, excluding overheads).[94]

In the draft decision, the AER considered that Envestra could continue to manage its safety and regulatory obligations for the 2013–17 access arrangement period by delivering 265 kilometres (the 2008-11 annual average volume actually completed by Envestra, applied to the five years of the access arrangement period) in combination with other proactive and reactive mains programs.[95] These volumes were below the volumes that the ESC had approved for that regulatory period and which had been factored into the tariffs paid by consumers for that period.[96] While the ESC approved volume was not completed, Envestra met its safety and regulatory obligations for the 2008–12 access arrangement period.[97]

The AER also made provision for a pass through, recognising that circumstances may change. For example, new information or conditions may arise which could lead to a change in the optimal mix of programs employed to address the safety risks associated with mains. The pass through allowed for Envestra, after it had delivered the total historical volume, to apply for additional expenditure for mains replacement.[98]

Further, the AER did not accept Envestra's initial proposed unit rates in its draft decision.[99] This was due to flaws in Envestra's model which was used to estimate the unit rates. These flaws included that the congestion factor[100] captured costs which were already included in the model. In addition, there appeared to be scale anomalies between suburbs and unexplained differences between suburbs. Also, there was a significant disparity between the model output and tender rates provided to verify the integrity of the model.

In deriving an alternative unit rate estimate for the draft decision, the AER used the available data before it, namely a mixture of 2012–13 contract rates and historical rates. The AER assessed that

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

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

93 NGR, r. 79(1).

94 Envestra, *Access arrangement proposal*, 30 March 2012, 120330 Attachment 7.4 Mains Replacement Plan (confidential), pp.25-26; Envestra, *Access arrangement proposal*, 30 March 2012, 120330 Attachment 7.6 Capex Forecast Model (confidential).xls.

95 AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, pp.4,8, AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.58-59.

96 The ESC approved 420 km for 2008-11 (570 km for 2008-12).

97 Envestra, *Response to information request 8*, received 26 June 2012, p.7.

98 AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, p.8; AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.59.

99 AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, pp.9-13; AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.60-63.

100 The congestion factor captures area characteristics which are likely to influence the cost of mains replacement including the relative street width, area of green verge versus paving, shopping strip density, traffic density, housing (service) density.

Envestra had prioritised low cost mains replacement areas in the past and applied this approach in its draft decision. In doing so, the AER set an average unit rate of $238/metre ($2011, unescalated direct costs, excluding overheads), prioritising low to high cost mains up to the historical volume.[101]

Therefore, on the basis of both the volume and the unit rates assessed by the AER, the AER approved a total expenditure of $63.1 million ($2011, unescalated direct costs, excluding overheads).[102]

In its submission to the AER, the Energy Users Coalition of Victoria (EUCV) noted that all the distribution businesses proposed significant mains replacement programs in the 2008–12 access arrangement period yet underspent their allowances. The EUCV stated that it considers the main driver of gas main replacement is the leakage of gas from distribution gas mains and that the cost of unaccounted for gas (UAFG) is primarily borne by consumers. The AER considers that, while UAFG is a driver of mains replacement, it is not a primary driver. The primary drivers are mitigating the safety risk associated with gas leaks and securing reliability of supply. The EUCV stated that it considered the AER's approach of using historical data for setting mains replacement in the 2013–17 access arrangement period to be sensible and supported the approach.[103]

The Honourable Michael O'Brien, in his capacity as Minister for Energy and Resources, stated that he "support[ed] the approach taken by the AER in its draft decision to consider the level of historical expenditure and to include a pass through event for low pressure to high pressure mains replacement".[104] He further noted that "the distributors have undertaken less pipeline replacement than was forecast by the Essential Services Commission. This has manifested itself in cost savings for distributors and improved profitability..."[105]

Origin stated that it "supports the AER's decision to base capital expenditure allowances for low pressure mains replacement on volumes achieved in the current period" and that it "support[s] the cost pass through arrangement". Origin continued that it considers that the "pass through arrangement promotes the interests of the consumer, with an appropriate balance between the need to maintain the network and to limit customers' exposure to inaccurate forecasts".[106]

As noted by Origin, consumers bear the cost of Envestra's proposed and approved mains replacement program which is funded but not carried out.

The approved capex for mains replacement is rolled into the business' capital base for the purpose of calculating its required revenue. There are two elements to the required revenue calculation for capex:

- a depreciation allowance, enabling the business to recover the initial cost of the asset, and

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101 AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, p.14; AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.63.

102 AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, p.14; AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.63.

103 Energy Users Coalition of Victoria, *Submission to the AER: Draft decision and SP AusNet, Envestra and Multinet revised access arrangement proposals*, January 2013, p.17.

104 Minister for Energy and Resources, *Submission to the AER: Draft decision and SP AusNet, Envestra and Multinet revised access arrangement proposals*, 14 January 2013, p.2.

105 Minister for Energy and Resources, *Submission to the AER: Draft decision and SP AusNet, Envestra and Multinet revised access arrangement proposals*, 14 January 2013, p.2.

106 Origin, *Submission to the AER: Draft decision and SP AusNet, Envestra and Multinet revised access arrangement proposals*, 7 January 2013.

- a cost of capital allowance, enabling the business to provide a return to investors for funding the asset.

Regardless of whether the distribution business spends its forecast capex, it retains the full cost of the capital allowance. This includes the cost of capital for the mains replacement that the service provider has not spent. Further, the service provider has the use of the depreciation allowance relating to this forecast mains expenditure during the access arrangement period.[107] Overall, the expenditure on the mains replacement program accounts for a considerable proportion of the total capex allowance. This means that when the service provider does not spend its approved maintenance expenditure, customers pay above the efficient costs for the service they receive.

In its revised proposal, Envestra proposed two alternatives:

- It maintained its initial proposal that it requires 636 km to meet its safety and reliability obligations. To support this position, it submitted a letter from the ESV to Envestra regarding replacement of its LP cast iron and unprotected steel pipes by 2020.
- However, Envestra also proposed an alternative option which included an acceptance to reduce its proposed volume of 636 km to 475 km subject to an amended pass through event being available. Envestra agreed in principle with the AER's pass through mechanism for mains replacement included in the AER's draft decision on the basis that “there is some risk, albeit low, that over a five-year period unexpected circumstances might prevent it from completing the required mains replacement program”[108]. In proposing a volume of 475 kilometres and a pass through, Envestra also stated that this would address the issue of "consumers paying prices that reflect a higher volume of mains replacement than actually delivered over the period". Envestra further stated that "[t]he benefit of [this] option is that it mitigates the risk to consumers that Envestra will be unable to complete the full mains replacement program due to changes in circumstances or due to an unexpected event, as occurred with the GFC over the 2008–2012 Access Arrangement period".[109]

Envestra stated that it did not adopt the 265 km approved in the AER’s draft decision on the basis that it is proposing to award contracts, for a total of 475 km, by October 2013.[110]

In further correspondence with the AER, Envestra subsequently reduced its proposed mains volume to 355 km, subject to an amended pass through event being available.[111]

As to the operation of the pass through, Envestra submitted that the AER's trigger event of the completion of historical volumes would increase contractor uncertainty and was not consistent with Envestra's new contracting regime of awarding contracts three years in advance of contract

107 However, at the end of the access arrangement period, as part of the capital base roll forward, the capital base decreases to remove the total forecast depreciation. This removes the excess depreciation allowance that the service provider recovered over the access arrangement period.

108 Envestra, *Revised Access Arrangement Information: Attachment 7.7 Response to Draft Decision - Capital Expenditure*, 9 November 2012, p.12.

109 Envestra, *Revised Access Arrangement Information: Attachment 7.7 Response to Draft Decision - Capital Expenditure*, 9 November 2012, p.11.

110 Envestra, *Revised Access Arrangement Information: Attachment 7.7 Response to Draft Decision - Capital Expenditure*, 9 November 2012, p.11.

111 Envestra, Email " Vic GAAR - Envestra - AER information request - FD2a", received 17 December 2012, 121217-MR Volumes-Further Response.docx

execution. Instead Envestra proposed that the pass through trigger event should be Envestra's Board approving the letting of contracts for 475 km.[112]

Low pressure volumes

The AER's final decision is to not approve Envestra's proposed mains replacement volume of 636 km or, in so far as it has nominated alternative figures subject to an amended pass through, those alternative volumes of 475 km or 355 km.

The AER's considers that 359 kilometres of low pressure to high pressure block rollout mains replacement and 6 kilometres of medium pressure supply mains which are necessary for carrying out the low pressure pipe replacement program is prudent and efficient[113]. This volume is higher than the approved volume in the draft decision because the AER has taken account of the volume of mains replacement undertaken in 2012.

In arriving at this decision, the AER has taken into account the following matters:

- The inclusion of mains replacement volumes in the Asset Management Plan, Mains Replacement Plan and the Gas Safety Case,
- The safety risk of the low pressure network in the 2013–17 period relative to the 2008–12 period
- The impact of the GFC and Envestra's chosen level of risk on the use of historical volumes for forecasting efficient and prudent volumes in the 2013–17 access arrangement period, and
- 2012 volumes and reprioritisation.

The inclusion of mains replacement volumes in the Asset Management Plan, Mains Replacement Plan and Gas Safety Case

As the AER set out in its draft decision, the AER recognises that the distribution businesses have certain safety and regulatory obligations.[114]

Each distribution business has a general statutory obligation under s.32 of the *Gas Safety Act* to "manage and operate each of its facilities to minimise as far as practicable" the hazards and risks to the safety of the public and customers arising from gas, interruptions to the conveyance or supply of gas and the reinstatement of an interrupted gas supply. The obligation also includes minimising hazards and risks of damage to public property and the property of customers arising from gas.

The *Gas Safety Act* requires a distributor in deciding what is "practicable" to have regard to a number of factors: the severity of the hazard or risk in question; the state of knowledge about the hazard or risk and any ways of removing or mitigating the hazard or risk; the availability and suitability of ways to remove or mitigate the hazard or risk; and the cost of removing or mitigating the hazard or risk.

The distribution businesses must submit a Gas Safety Case (or a revised Gas Safety Case) to the ESV every five years. A Gas Safety Case may be submitted sooner if considered appropriate having

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112 Envestra, *Revised Access Arrangement Information: Attachment 7.7 Response to Draft Decision - Capital Expenditure*, 9 November 2012, p.11.

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

114 AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, p.6; AER, Draft *decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.56-57.

regard to developments in technical knowledge or an assessment of relevant hazards.[115] A Gas Safety Case sets out the systems and processes the distribution business has in place to identify network risk and mitigate the identified risk. The ESV must accept a safety case if it is satisfied that it is appropriate and it complies with the *Gas Safety Act* and regulations.[116] The distribution businesses must comply with the accepted Gas Safety Case[117] and compliance is monitored by the ESV.[118]

In its revised proposal, Envestra submitted that the mains volumes are set out in the Asset Management Plan and Mains Replacement Plan. It asserted that as these are referred to in its Gas Safety Case, then by reason of this reference, the annual volume for each year of a regulatory period, and the total volume for a regulatory period are a mandatory component of the Gas Safety Case. In particular, Envestra submitted a letter which was from the ESV to Envestra dated 4 May 2010. In the letter, the ESV states that in order for it to approve the Gas Safety Case, Envestra must amend its asset management plan to reflect the mains replacement program being achieved completely by 2020, including 570 kilometres of mains replacement in the current (2008-12) access arrangement period[119]. The 570 kilometres of mains replacement accords with the ESC's approved mains replacement capex for 2008-12. The letter also states that Envestra must include in its Asset Management Plan that it will undertake the replacement of cast iron and unprotected steel low pressure mains by 2020.

The AER has assessed Envestra's claim in the context of the material before it and is not satisfied that the mains replacement volumes referred to in the Gas Safety Case are mandatory such that they are necessary[120] or prudent and efficient.[121]

Taking into account the information before it, including the past performance of all distributors and their records of compliance with their Gas Safety Cases, the AER considers that the specification of the mains replacement volumes in the Gas Safety Case does not provide a basis for concluding that volumes in excess of historical volumes are justifiable.[122] While the volumes referred to may constitute a key control measure to mitigate risk depending on the circumstances, they are but one component of the Gas Safety Case. Low pressure to high pressure mains replacement is one of a mix of options available to a gas distributor for managing mains risk, and this mix is open to change.

In reaching this view, the AER has considered the following matters.

In assessing a distribution business' Gas Safety Case, the AER understands from discussions with the ESV that the ESV has regard to whether the risks are appropriately identified and highlighted, and that appropriate controls are in place to deal with the identified risks. The AER considers that the volume of mains replacement in the Asset Management Plan, which forms part of the Gas Safety Case, is indicative of the path towards achieving the end date for removal of cast iron and unprotected steel mains from the low pressure network. The AER also considers that in assessing compliance with the Gas Safety Case the ESV is primarily concerned with whether the distribution business has maintained the network risk to the minimum practicable. The distribution business have available to them a suite of controls to mitigate network risk and it appears that the ESV has regard to

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115 *Gas Safety Act 1997,* ss.45-6.
116 *Gas Safety Act 1997* s.40*.*
117 *Gas Safety Act 1997* s.44(2)
118 *Gas Safety Act 1997* s.10
119 Envestra, *Revised Access Arrangement Information: Attachment 7.7 Response to Draft Decision - Capital Expenditure*, 9 November 2012, p.34; Envestra, *Response to information request 8,* received 26 June 2012, MRP letter from ESV to Envestra 7 May 20120.pdf.
120 NGR, r 79(2).
121 NGR, r. 79(1).
122 NGR, r. 79(2)

a number factors, taken together, in reaching a view on compliance. Whether the annual volume of mains replacement is undertaken for a particular year, in isolation, would not be determinative of compliance. This is illustrated by the fact (discussed further below) that none of the distribution businesses has to date been assessed as non-compliant with their gas safety cases notwithstanding that none has met the mains replacement volumes set in their respective gas safety cases.[123]

Envestra's understanding of the ESV's assessment process appears to accord with the AER's understanding of the ESV's approach. Between its initial proposal and revised proposal Envestra altered the composition of the mains replacement volumes such that there were fewer "easy" area kilometres and more "hard" area volumes. In response to the AER's question of whether the change in volumes had been approved by the ESV, Envestra stated "[t]he ESV was primarily concerned with the process followed by Envestra to prioritise its mains replacement program to address risk rather than approving the outcomes from this process (that is, the ESV did not approve/set the volumes on a suburb by suburb basis)".[124]

As noted above, none of the gas distribution businesses have consistently met its approved and funded volumes as set out in the respective mains replacement plans over the 2008–12 access arrangement period:

- Envestra has not completed the volume specified in its Gas Safety Case in any of the five years of the regulatory period and has not met its total approved and funded volumes for the regulatory period.[125] This includes volumes completed after Envestra received the ESV letter.

- Multinet has not completed the volume specified in its Gas Safety Case in any of the five years of the regulatory period and has not met its total approved and funded total volumes for the regulatory period.[126]

- SP AusNet has not completed the volume specified in its Gas Safety Case in four of the five years of the regulatory period and has not met its total approved and funded total volumes for the regulatory period.[127]

Notwithstanding this, to date, the ESV has not assessed any of the gas distribution businesses as non-compliant with their Gas Safety Cases.

Although Envestra asserts in its revised proposal that volumes in a particular year are mandatory, Envestra has made other comments that indicate otherwise.

- In June 2012 Envestra submitted, with respect to annual volumes, that it:

> does not have regulatory or legal obligations to replace a defined length of mains each year. ... Envestra's legal and regulatory obligations are focussed on providing for the safe and reliable supply of gas, which

[123] AER, VIC gas access arrangement review 2012 - capital expenditure - note for file - - Discussions with ESV re mains replacement, AER13/1094, 7 March 2013.

[124] Envestra, *Response to information request FD11a*, received 17 January 2013, p.2.

[125] For 2008-11 volumes - Envestra, *Access Arrangement Information*, March 2012, Regulatory Information Notice, Template 2(a)-Non-demand capex incl. RPM, Envestra, For 2012 volume - Envestra, Email from Ralph Mignone received 14 January 13, ESC, Review of Gas Access Arrangements 2008-2012 Variations to the Access Arrangements of Envestra (Victoria) and Envestra (Albury): ESC Appeal Panel Decision El AND E2 OF 2008, 25 March 2009, p.13.

[126] For 2008-10 volumes - Multinet, *Access Arrangement Information*, March 2012, Regulatory Information Notice, Template 2(a)-Non-demand capex incl. RPM, For 2012 volume - Multinet, Email from Mark Beech, received 17 January 2013, For 2011volume - Multinet Gas Distribution Partnership, Regulatory Accounting Statements 31 December 2011, p.12, ESC, *Gas Access Arrangement Review 2008-2012 Final Decision – Public Version*, 7 March 2008, p.335.

[127] SP AusNet, *Response to AER draft decision: Chapter 2 – Capex*, 9 November 2012, p.27.

> Envestra has achieved over the current regulatory period. Mains replacement is only one means of maintaining a safe and reliable gas supply.[128]

This response was made by Envestra in the following context: "Envestra is obliged to undertake the volume of mains replacement approved by the ESV and set out in our mains replacement plan (albeit with some limited discretion over timing so long as the safety of the network is not compromised)".[129]

- At that time Envestra also submitted, and the AER acknowledges, that an appropriate level of mains replacement is an important longer term risk mitigation tool.[130]

In practice, the distribution businesses appear to address the Gas Safety Case requirements through a number of other measures, such that mains replacement is not the sole measure to mitigate mains risk. By virtue of adjusting the mix of programs undertaken, the annual volume of mains and the total volume of mains over an access arrangement period may be subject to change.

- Envestra stated that it achieved its safety and reliability obligations through low pressure to high pressure mains replacement plus other risk mitigation measures.[131] The other risk mitigation activities include:
  - comprehensive assessment of gas leaks,
  - undertaking regular leak surveys,
  - undertaking routine syphon pump programs,
  - piecemeal replacement, and
  - monitoring of odorant levels to ensure that leaking gas can be detected and reported by the public.[132]
- Multinet[133] and SP AusNet[134] similarly undertake a mix of proactive and reactive mitigation measures, of which low pressure to high pressure mains replacement is only one.

The distribution businesses align their practices with the longer term objective of removing the cast iron and unprotected steel mains from the network. However, there are many variables which are taken into consideration when arriving at the five year forecast of the volume of mains replacement. These include the condition of the mains and the associated network risk (and the assumptions about conditions which are fed into models to arrive at replacement rates), the current financial environment and competing capex priorities. Given the changeable nature of these variables, it is likely that the annual volumes over the entire planned replacement period will change, as they have done over the 2008-12 period.

- Envestra indicated that it considers the available resources, funding and the financial impact on consumers. It states that its mains replacement plan is the outcome of balancing these factors.[135]

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128 Envestra, *Response to information request 8*, received 8/6/12, Question7, p.7
129 Envestra, Email to AER, 'Information disclosure for mains replacement', 21 February 2013.
130 Envestra, *Response to information request 8*, received 8/6/12, Question7, p.7
131 Envestra, *Response to information request 8*, received 26 June 2012, p. 7.
132 Envestra, *Response to information request 8*, received 26 June 2012, p.7, Attached letter to ESV/Attachment A, p. 4.
133 Multinet, *Access Arrangement Information: Appendix D-1 Asset Management Plan*, 30 March 2012, pp. 64–65.
134 SP AusNet, *Response to information request 8*, received 18 June 2012.
135 Envestra, *Access Arrangement Information: Attachment 7.4 Mains Replacement Plan*, March 2012, pp.17-19.

- Envestra stated that in arriving at its planned 2020-21 replacement end date, it considered other inputs including the availability of workforce, the difficulty of the areas to be replaced, and design, tendering, contract negotiation and mobilisation issues.[136]

- Envestra stated that "[t]he monitoring of trends in maintenance requirements allows the replacement rate to be adjusted as required. Long-life assets such as pipelines deteriorate slowly, allowing time to identify priorities and undertake renewals".[137]

- In its asset management plan, notwithstanding the matters[138] which Envestra stated that the ESV has raised, Envestra stated that it will address these issues where it is "appropriate" and "depending on the availability of funding".[139]

- Similarly, SP AusNet submitted that to formulate its five year mains replacement plan, SP it takes into consideration indicators of network condition, economic and work execution issues.[140,141]

Further, the businesses have indicated that they have only developed firm plans of where and what volume of mains replacement in the year before they expect to carry out the works. This indicates that notwithstanding the volumes written in an Asset Management Plan or an Asset Management Strategy or a Gas Safety Case, the annual volumes of mains replacement in practice is likely to be subject to change over the five year access arrangement period.

- Envestra stated that "the development and review of [its] asset management plan is a year round process".[142] It submitted that the first year forecasts of this plan provide "firm requirements" while the subsequent years are "indicative".[143]

- Envestra stated that it reviews the drivers and strategy for mains replacement annually.[144] Further, Envestra indicated that, in the course of undertaking its mains replacement program, it changes the volumes to be undertaken in particular suburbs in response to new information.

- SP AusNet similarly submitted that it only has a firm plan of volumes for 2013, with the 2014-17 volumes being estimates only.[145]

- This is similar to Multinet, which stated that the Asset Management Plan, which references the mains replacement volumes is not "an approved program for specific work....[and that] inevitably, actual projects and programs will differ from this plan".[146] Further, Multinet stated that:

  > Although the planning process normally covers five years (six years in this plan), experience has shown that the most efficient outcome for capital projects is obtained by an annual planning process at which the five year plan is reviewed in the light of the latest performance information, load forecasts and failure history[147].

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136 Envestra, *Access Arrangement Information: Attachment 7.4 Mains Replacement Plan*, March 2012, p.10.
137 Envestra, *Access Arrangement Information: Attachment 7.2 Asset Management Plan*, March 2012, p.71
138 The issues included leak management practices, progression of the mains replacement program and gas pipes in stormwater drains and sewers.
139 Envestra, *Access Arrangement Information: Attachment 7.2 Asset Management Plan*, March 2012, p.41
140 SP AusNet, *Revised Access Arrangement Proposal*, November 2012, p.29.
141 SP AusNet, *Response to AER draft decision*, 9 November 2012, Appendix 2.C, SP AusNet - ESV Additional Information 31072012, p.3.
142 Envestra, *Access Arrangement Information: Attachment 7.2 Asset Management Plan*, March 2012, p.10
143 Envestra, *Access Arrangement Information: Attachment 7.2 Asset Management Plan*, March 2012, p.24
144 Envestra, *Access Arrangement Information: Attachment 7.4 Mains Replacement Plan*, p.9
145 SP AusNet, *Response to AER draft decision*, 9 November 2012, Appendix 2.C, SP AusNet - ESV Additional Information 31072012, p.3.
146 Multinet, *Access Arrangement Information*, March 2012, AMP, p.14
147 Multinet, *Access Arrangement Information*, March 2012, AMP, p.14

Multinet indicated that "annual safety risk modelling is necessary due to the unpredictability of problem areas arising [and that] [a] rigid long-term plan will result in sub-optimal replacement". Multinet stated that "the safety risk projects within the five year plan are reviewed each year based on the previous year['s] failure history and [the] ranking may change within the plan period".[148]

The businesses have also indicated that mains replacement is a discretionary program. This categorisation necessarily implies that the business is not locked into delivering an annual volume which has been set five years in advance.

- Multinet[149] indicated that the mains replacement program is discretionary, including the mains replacement program under its list of discretionary programs in its Asset Management Plan.
- Similarly, implicit in Envestra's assessment of its mains replacement risk is a level of discretion in replacing the mains.[150]

The end date for removal of low pressure mains from the network is included in the Asset Management Plans of each of the businesses, which are regularly updated. As the Asset Management Plan is referenced in the Gas Safety Case, updating of the Asset Management Plan also requires that the Gas Safety Case is updated and approved by the ESV. The AER notes that SP AusNet has revised its mains replacement volumes in the past both with respect to annual volumes and the end date for completion of mains replacement and Multinet has indicated an intention of doing so in the future:

- In the 2003-2007 access arrangement period SP AusNet proposed replacing all LP mains within 16 years, yielding a completion date of 2023[151]. In the 2008-12 access arrangement period SP AusNet proposed replacing all cast iron LP mains by 2017 and all LP mains by 2026[152]. In the 2013-17 access arrangement period, SP AusNet proposed replacing all LP mains by 2025 and is silent on its commitment to replace all cast iron mains by 2017.[153]
- Multinet stated that at the time of introducing the LP to HP mains replacement program in 2003, a 30-year program was planned. However, Multinet stated that with regard to the reduced volumes undertaken in the current period, it "is not proposing to “catch up” the shortfall in the current period [and that] [a]ny decision to “catch up” the program or simply extend it will be made at a later time”.[154] Furthermore, Multinet stated that "[t]his strategy ... is unlikely to be achieved on schedule".[155]
- The AER notes that SP AusNet's Gas Safety Case is due for renewal in May 2015. Envestra's Gas Safety Case is due for renewal in August 2015 and Multinet's is outstanding from 2009 and yet to be finalised.

For the above reasons the AER is not satisfied that an annual volume of mains replacement is mandatory as the AER is not satisfied that it is necessary and nor, therefore, prudent and efficient.

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148 Multinet, *Access Arrangement Information*, March 2012, AMP, p.124.
149 Multinet, *Access Arrangement Information*, March 2012, AMP, p.138.
150 Envestra, *Access Arrangement Information*, March 2012, 120330 Attachment 7.4 Mains Replacement Plan (confidential), p.31.
151 ESC, *Review of Gas Access Arrangements*, Final Decision, October 2002, p.118.
152 ESC, Gas Access Arrangement Review 2008-2012 Draft Decision 28 August 2007, p.264.
153 SP AusNet, Access Arrangement Information, March 2012, p.107, Appendix 5A Asset Management Strategy, pp.70,73, Appendix 5J.3 Mains and Services Strategy, p.93.
154 Multinet, *Access Arrangement Information*, March 2012, p.104.
155 Multinet, *Access Arrangement Information*, March 2012, D-6 Distribution Mains Strategy, p.12.

With respect to the completion of the mains replacement program by 2020 referred to in the ESV letter, in the event that an end date did not change, it is open to Envestra to meet this target through the use of the pass through.

The safety risk of the low pressure network in the 2013–17 period relative to 2008–12 period.

In assessing safety risk, the AER's engineering consultant, Zincara, considered the indicators generally accepted by industry as the best measures of mains deterioration. The indicators are mains leaks, breaks and water-in-mains.[156]

Zincara assessed that the risk level of the low pressure network is likely to remain around the levels experienced in 2008–12. Zincara's advice is that Envestra should be able to manage the risk associated with the low pressure network through the continuation of the same mains replacement rate as in 2008–12 together with other risk mitigation programs including reactive replacement and repair, leakage survey and syphoning.[157]

The AER accepts Zincara's analysis The AER considers that Envestra should be able to remain compliant with its safety and regulatory obligations in the 2013–17 access arrangement period by undertaking the 2008–12 volume of mains replacement together with other mains risk mitigation programs. The AER has also taken Envestra's record of compliance under the Gas Safety Act into account in reaching this conclusion.

The impact of the GFC and Envestra's chosen level of risk on the use of historical volumes for forecasting efficient and prudent volumes in the 2013–17 access arrangement period

Envestra and the other gas distribution businesses submitted that the GFC was an exceptional event and, as such, the volume of mains replacement undertaken in GFC-affected years does not reflect their normal or desired level of mains replacement[158]. Envestra also submitted that the 2008–12 volume of mains replacement does not reflect a risk level that it would choose to carry forward in the 2013–17 access arrangement period and is not a sustainable level of mains replacement in the longer term.[159]

The AER has assessed the information provided by each of the gas distribution businesses in relation to the impact of the GFC on their respective mains replacement programs. The AER notes that there is no consistency as to the timing of the claimed impact on the businesses. Declines in volumes of mains replacement were experienced by SP AusNet in 2009, Multinet in 2011, while Envestra was impacted in 2009–10.

The businesses put forward a number of reasons which they submit led to significant under delivery of the mains replacement program besides the GFC, including:

- diversion of capex, towards connections, in the case of SP AusNet,[160] and towards IT, in the case of Multinet,[161] and

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156 Zincara, *Review of Envestra's Cpaital Expenditure, Addendum, March 2013*, pp.10-16.
157 Zincara, *Review of Envestra's Cpaital Expenditure, Addendum, March 2013*, p.16.
158 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.7; Multinet, *Revised Access Arrangement Information*, November 2012, p.80; SP AusNet, *Revised access arrangement proposal: Chapter 2 Capex (Confidential)*, November 2012, pp.27-28.
159 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.7.
160 SP AusNet, *Access Arrangement Information*, March 2012, p.49.
161 Multinet, *Access Arrangement Information*, March 2012,p.112.

- the ESC reduction in the equity beta leading to investors being unwilling to fund capex, to the level expected by the business, in the case of Multinet.[162]

While the AER accepts that credit conditions may have impacted on the volume of mains replacement undertaken by the businesses during the 2008-12 period, it also notes that there are other factors, nominated by the businesses, which would equally account for the underspend such as diversion of capex to other projects. This suggests that the type of factors highlighted by the businesses may occur during any economic and regulatory cycle and therefore, the AER considers that there is an insufficient basis on which to normalise for any such conditions.

In undertaking the volume of mains replacement in the current period, Envestra has met its safety and regulatory obligations. This is notwithstanding the occurrence of the GFC or the requirement to divert capex towards other areas or any other circumstances that may have been present during the access arrangement period.

In assessing the prudent and efficient volume of mains replacement that a distribution business requires, the AER is assessing the level of expenditure that would be incurred by a prudent service provider, acting efficiently, to achieve the lowest sustainable cost that allows the distribution business to meet its safety and regulatory obligations.[163] The AER considers that the revealed actual volumes over a five year period, which smooths the impact of both windfall gains and losses resulting from unforecast impacts on expenditure, is the best proxy for estimating the prudent and efficient volumes in these circumstances. Hence, the AER considers that it is not appropriate to give particular weight to the tight credit conditions of the GFC in calculating historical volumes. Similarly, the AER considers the best proxy for the specific risk a business is willing to adopt is the recent revealed volume of mains replacement as this will capture the specific circumstances of the business.

On the basis of the above, the AER considers that it is neither prudent nor efficient nor would it be in the long term interests of consumers for a service provider to incur expenditure in excess of that which is required to satisfy its safety and regulatory requirements.[164]

2012 volumes and reprioritisation

SP AusNet submitted that 2012 data should be included in the calculation of historical volumes.[165]

The AER accepts that the inclusion of 2012 data results in the best possible forecast in the circumstances as it represents the full five years of data. The AER has included 2012 data in the calculation of the average historical volume.

Envestra and the other distribution businesses, submitted that the AER's reprioritisation did not reflect their mains replacement methodology of prioritising areas based on safety and reliability considerations.[166]

At the time of making its draft decision, the AER was awaiting the outcome of the ESV's review of the distribution businesses processes regarding prioritisation of areas of mains replacement. The ESV

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162 Multinet, *Access Arrangement Information*, March 2012, p.112.
163 NGR, r.79(1)(a).
164 NGR, rr. 79 and 100(a)
165 SP AusNet, *Response to AER draft decision*, 9 November 2012, p. 26.
166 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, pp.13-14; SP AusNet, *Response to AER draft decision*, 9 November 2012, Appendix 2.C, SP AusNet - ESV Additional Information 31072012, pp.31-32, Multinet, *Revised Access Arrangement Proposal*, November 2012, pp.82-83.

has advised the AER that it considers the distribution businesses' methodology and approach for identifying areas for replacement to be satisfactory to it. On this basis the AER has applied the prioritisation presented by the businesses for the historical volumes which the AER considers are prudent and efficient.

Medium pressure volumes

The AER's final decision is to not approve Envestra's proposed capex of $15.7 million ($2011, unescalated direct costs, excluding overheads) for 21 km of medium pressure supply mains. The AER proposes to approve $3.4 million ($2011, unescalated direct costs, excluding overheads) for 6 kilometres of medium pressure supply mains.

In the draft decision the AER did not approve the medium pressure allowance included in the low pressure to high pressure program expenditure. This was because Envestra had not provided any description or otherwise provided any substantiation of that expenditure.[167]

In its revised proposal Envestra submitted that the medium pressure supply mains allowance was for medium pressure supply mains which were required in order to be able to carry out the low pressure to higher pressure upgrade.[168] Envestra submitted that "[its proposed] volume is based on Envestra's best estimates from engineering personnel experienced in network design and analysis, which indicates an approximate requirement of 21 km".[169]

In order to determine the basis of this proposed expenditure, and whether it is prudent and efficient, the AER requested that Envestra provide details of the length and specific street location of the medium pressure cast iron mains/supply mains which it was proposing to replace and describe which supply mains are critical for each LP to HP mains replacement project.[170] Envestra responded that

> "it is not possible to provide details and specific locations for the forecast period as the exact location and volume of HP supply mains is subject to detailed design. It was estimated that approximately 21 km of supply mains is required, and this was allocated as a nominal 4-5 km/yr during the forecast period. The estimate of 21 km is based on there being 21 km of medium pressure mains in those areas where the low pressure mains replacement program is to occur. All of those mains will need to be replaced in order to upgrade the network to high pressure.
>
> A detailed design review is currently being undertaken for approximately 6 km of HP trunk supply mains ... to support the block replacement program ...."[171].

Envestra stated in its revised proposal that "there is no correlation between any amount of Supply Main replaced historically and the amount that needs to be replaced in a forecast period, as those amounts are determined by the design of the specific networks in question and the specific mains to be replaced".[172] It also stated "that replacement of Supply Mains is not necessarily on a "one-for-one"

[167] AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, Part 4, pp.12-13; AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017:Part 2*, September 2012, p.60.

[168] Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.21.

[169] Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.22.

[170] AER, *Information request FD11a*, sent 9 January 2013.

[171] Envestra, *Response to information request FD11a*, received 17 January 2013, p.4.

[172] Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.21.

basis, with the new Supply Main likely to be of a different size and possibly in a new (optimised) location, as determined by network analysis".[173]

However, the AER considers that a prudent service provider acting efficiently would be able to provide the expected volume of mains supply required and for which low pressure project it is required. It is not clear why Envestra cannot provide this information given that:

- Envestra's engineer has determined that 21 kilometres needs to be replaced which would seem to require some degree of scoping, and
- Medium pressure mains supply replacement needs to occur before the low pressure rollout can occur. The 2013 low pressure rollout program is already underway and the issuing of tenders for 2013–14 was scheduled to occur in January 2012[174] with the awarding of contracts for 2013–14 expected to be completed in February 2013.[175] Envestra indicated that it expects to issue tenders for 2014–15–16 works in February 2013.[176] In order to produce tender documents scoping of the work first needs to occur.

On the basis of advice from the AER's consultant, Zincara, the AER assessed that it is necessary[177] to replace 6 kilometres of medium pressure supply mains in order to be able to undertake the block replacement scheduled for 2013.[178] The AER considers that this amount is prudent and efficient as the replacement length and pipe volume is assessed to be a prudent and efficient solution.[179]

As discussed below, the AER proposes to include a pass through for those medium pressure mains which are necessary for undertaking the low pressure mains replacement program within the 2013–17 access arrangement period. The AER accepts that conditions may change during the 2013–17 access arrangement period which may lead to a change in the volume of medium pressure mains replacement which is necessary for carrying out the low pressure to high pressure volumes during the 2013–17 access arrangement period.

Low pressure unit rates

The AER's final decision is to not accept Envestra's unit rates for low pressure mains replacement as calculated in the revised proposal on the basis that the AER does not consider that they represent the best estimate possible in the circumstances.[180]

The AER proposes the application of awarded tendered unit rates or, where there are no awarded unit rates, the application of an easy, medium and a hard category unit rate, resulting in an overall average of $280/metre ($2011, unescalated direct costs, excluding overheads). In its revised proposal for the low pressure to high pressure mains replacement, Envestra proposed an easy, medium, and hard area classification for mains replacement unit rates.[181]

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173 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.20.
174 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.36.
175 Envestra, *Response to information request FD11a*, received 17 January 2013, p.3.
176 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.36.
177 NGR, r.79(2)(c)(i)-(iii)
178 Zincara, *Review of Envestra's Cpaital Expenditure, Addendum, March 2013*, p.18.
179 NGR, r.79(1)(a)
180 NGR, rr.74(2)(a), 74(2)(b) and 79(1)
181 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure*, 9 November 2012, p.13.

The AER notes that Envestra has reprioritised its mains replacement program between the draft and revised proposals. At the time of the draft decision Envestra was proposing to replace 94.5 km in easy suburbs, 312 km in medium suburbs and 208.5 km in hard suburbs.[182] In the revised proposal Envestra is proposing to replace 66.5km in easy suburbs, 236.6 km in medium suburbs and 313.5 km in hard suburbs.[183] Envestra's proposed average unit rate across all categories of low pressure mains replacement (not including medium pressure unit rates) is $360/metre ($2011, unescalated direct costs, excluding overheads).[184]

Envestra proposed that for suburbs where there:

- was an awarded contract, the contract rate should apply
- were tender responses, that an average tender rate should apply. The method for calculating this is discussed below.
- was no awarded contract or tender response, that an estimated unit rate should apply based on whether the suburb was classified as easy, medium, or hard.[185]

The estimate of the easy, medium and hard unit rate was calculated by:

- calculating a unit rate for each suburb where tenders had been either awarded or tender responses received. This was done by:
    - applying the awarded contract rate where contracts had been awarded
    - calculating an average tender rate where tenders had been received but not awarded, by:
        - applying the tender response unit rate where there was only one tender response,
        - where more than one tender response was received, the awarded contract value is assumed to be the sum of the lowest dollar tender received plus twenty one percent of the tender range (calculated as the difference between the highest and the lowest tender values). Envestra based this on contracts not generally being awarded to the lowest tenderer. The twenty first percentile point was derived from the 2011–12 tender round, where on average the successful tenderer was located at the twenty first percentile of the tender range.
        - dividing the suburbs, according to the congestion factor, into easy, medium, and hard and calculating a weighted average unit rate, where the weight applied is the volume of mains replacement in the access arrangement proposal (and not the volume of mains in the tender response).[186]

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182 Envestra, *Access arrangement information*, March 2012, 120330 Attachment 7.4 Mains Replacement Plan (confidential), pp.25-26.

183 Envestra, *Revised access arrangement proposal: Attachment 7.8 Response to Draft Decision - MRP Unit Rate Model (confidential).xls*, 9 November 2012.

184 Envestra, *Revised access arrangement proposal: Attachment 7.8 Response to Draft Decision - MRP Unit Rate Model (confidential).xls*, 9 November 2012.

185 Envestra, *Revised access arrangement proposal: Attachment 7.8 Response to Draft Decision - MRP Unit Rate Model (confidential).xls*, 9 November 2012.

186 Envestra, *Revised access arrangement proposal: Attachment 7.8 Response to Draft Decision - MRP Unit Rate Model (confidential).xls*, 9 November 2012.

To these base unit rates Envestra added allowances for variations, $5/metre for APA supervision/control and $20/metre for material costs.[187]

Where there was only one tender response Envestra did not include the observation in the calculation of the average percentile at which the awarded tender is located within the tender range. The AER does not agree with excluding these data points as they represent legitimate tender process outcomes. The AER has therefore included these data points in the calculation of the average percentile of the tender range.

The AER requested further historical information in order to verify that on average the awarded rate tends to lie in the 21st percentile range over time. Envestra provided the 2011–12 contract information. It submitted that this was the only relevant contract information as prior to 2011–12 the contracts were not lump sum contracts.[188]

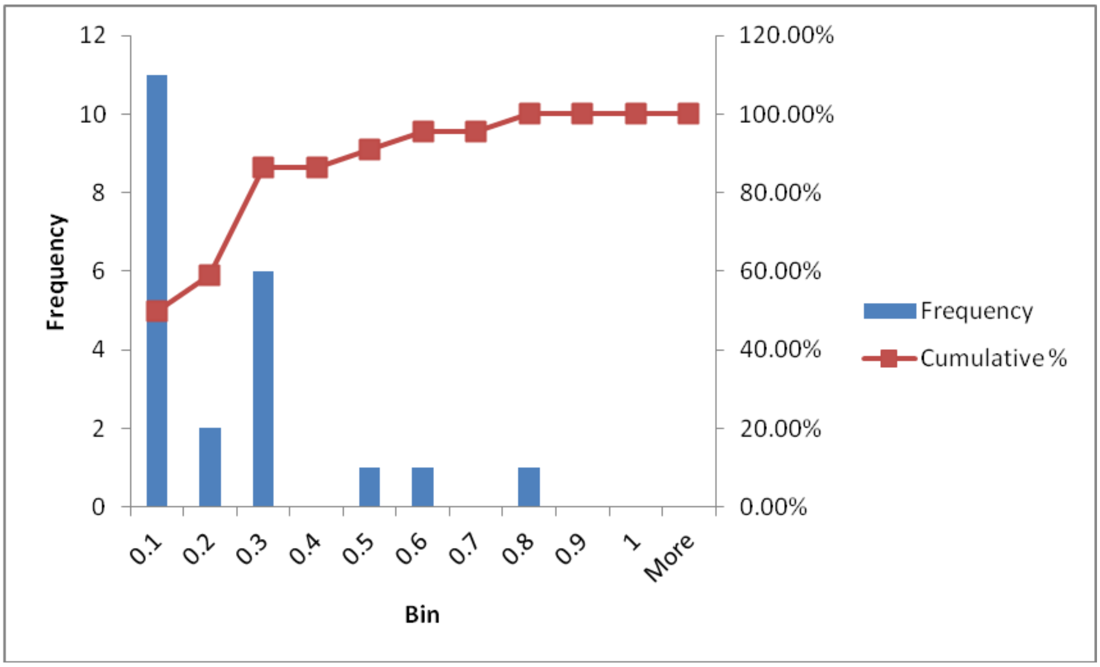
Using both the 2011–12 and the 2012–13 contract information the AER assessed that the distribution is highly skewed. Fifty per cent of the time contracts were awarded to the lowest tenderer (see Figure 4.3). This means that an arithmetic average is not a representative average measure, as the values in the upper tender range (above the 50 percentile mark) will unduly influence the average. By way of illustration, this is the same rationale that the ABS uses in presenting a median measure of house prices rather than the arithmetic average. While the majority of house prices may be clustered around a lower figure and so this is where the average would be expected to lie, a high house price will skew the arithmetic average upwards, so the arithmetic average would no longer be a robust average measure. As the ABS notes " [t]he median price is the value of the middle observation from among an ordered ranking of house prices. Medians are preferred as they are not affected by extreme or outlier values like arithmetic mean or geometric mean calculations, and give the most robust and consistent measure of central tendency".[189] The AER has therefore calculated the median of the observations which results in the average percentile at which the awarded tender was located in the tender response range being 10.6 per cent.

187 Envestra, *Revised access arrangement proposal: Attachment 7.8 Response to Draft Decision - MRP Unit Rate Model (confidential).xls*, 9 November 2012.

188 Envestra, *Response to information request FD2a*, received 6 December 2012, p.5.

189 ABS, *House Prices and Indexes: Concepts, Sources and Methods*, Australia, 2009, cat. no. 6464.0, p.23.

Figure 4.3 Histogram of percentile at which awarded tender was in tender response range for 2011-12 and 2012-13 awarded tenders



Source: Envestra, Response to information request FD2a, 121106 Attachment B MRP 2011-12 tender outcome calculations.xlsx, AER analysis

Envestra applied the proposed program volumes as weights in calculating the weighted average easy, medium and hard unit rates. The AER considers that this is not arrived at on a reasonable basis,[190] and does not represent the best estimate possible in the circumstances,[191] as the tendered rates were provided in response to the volumes specified in the tender. In some instances the proposed program volume is significantly different to the tendered volume. The AER has therefore applied the tendered volumes as the weight in determining the weighted easy, medium, medium hard and hard unit rates.

The AER in the draft decision used the congestion factor to categorise suburbs as easy, medium, or hard.

For its final decision the AER considers that the 'hard' area is too broad and will result in an average unit rate that could significantly over or under compensate Envestra for the mains replacement to be carried out. The easy category groups suburbs with a congestion factor of between 1.0 and 1.5 and the medium category groups suburbs with a congestion factor between 2.0 and 3.5. The AER considers that splitting Envestra's hard category into two:

- A medium hard category with congestion factors between 4.0 and 5.5, and
- Redefining the hard category as having a congestion factor between 6.5 and 8.5,

will lessen the error margin within the category's unit rates.[192]

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190 NGR, r.74(2)(a).
191 NGR, r.74(2)(b),
192 There are no suburbs proposed by Envestra which have a congestion factor greater than 5.5 and less than 6.5.

The AER sought clarification for some of the tendered rates and where they were not representative of typical block replacement works excluded them.

Envestra adds an allowance to the base tendered rate consisting of a variation, $5/metre APA supervision/control and $20/metre material costs.[193]

In assessing the prudency and efficiency of the variation which Envestra applies the AER had regard to Envestra's tendering process and contacting arrangements for its mains replacement. These are commercial in confidence. The discussion related to this is in Confidential Appendix C.

The AER also had regard to Envestra's proposed methodology for calculating unit rates in assessing the prudency and efficiency of the variation. The AER considers that the methodology which Envestra has submitted in its revised proposal relies upon a considerable amount of averaging. It relies upon:

- specific unit rates for suburbs with awarded tenders or tender responses, and
- an average unit rate for easy, medium and hard suburbs where there is no awarded tender or tender response.

With regard to the average unit rate for easy, medium and hard suburbs, the unit rate applied to these suburbs is not related to specifically scoped works. It is a unit rate that is likely to be representative of the type of works that may be carried out in that type of suburb, based predominantly on a level of congestion factor. It is likely that actual unit rates will vary symmetrically around the average. It is therefore spurious to apply an additional variation, as this implies a level of accuracy that is not present. Furthermore, it is an asymmetric adjustment, whereby consumers through increased tariffs, bear the cost of any upwards adjustments but don't reap the benefits of any downwards adjustments.

For these reasons, the AER does not accept the variation as it results in a forecast that is not arrived at on a reasonable basis and which does not represent the best forecast possible in the circumstances.[194] The AER further considers that as a result it is not prudent and efficient to build the variation into the forecast unit rates. The AER considers that a nil variation is prudent and efficient.[195]

Envestra submitted that the $5/metre APA supervision/control cost is based on Envestra's estimate of the expected additional costs associated with increasing the volume of mains replacement to be undertaken in the 2013-17 access arrangement period compared with the 2008-12 access arrangement period. The AER notes that the ESC approved mains volumes of between 90 km and 150 km per year for 2008–12. As a result, Envestra would have been expecting to undertake these volumes of mains replacement in the current access arrangement and would have already put in place the requisite staff and other resources. Furthermore, Envestra has undertaken 100 km in 2011 and 137 km of mains replacement in 2012. Again, if more staff and other resources are required to carry out these volumes of work, they should already be in place. Envestra's forecast mains replacement program peaks at 150 km in 2013 before declining to 105 km in 2017 and further declining to 41 km in 2020–21. Given the volume of replacement in the last two years and the declining mains volume program to 2020–21, the AER considers that there is no justification for additional resources for supervision/control of works for the 2013–17 access arrangement period on the basis of a step up in the volume of works.

193 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision - Capital Expenditure (confidential),* November 2012, pp. 17-18.

194 NGR, r.74(2)

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

In order to provide procedural fairness for Envestra, the AER provided Envestra with the opportunity to comment on the AER's arguments presented above. Notwithstanding its submission above, Envestra commented that the AER had incorrectly assumed that the supervision costs are proportional to the kilometres being replaced and that the costs were due to "the greater complexity of the work that will be undertaken in the 2013-17 period relative to that undertaken previously (and reflected in current tender rates)".[196] It submitted that the increased complexity is attributed to:

- Design - for "overall network configuration and design".
- Planning - for managing the "sequencing of work" and for a higher degree of management/supervision of traffic management and relationship management.
- Quality assurance - for increased auditing and site checks as the number of contractors increase
- Records - for increased volume of recording data related to 'as built' information.

The AER notes that although Envestra states that the cost is due to increasing complexity of the work, it has applied the $5/metre cost across all unit rates, including those applying to easy and medium suburbs. Given that Envestra undertook work in easy and medium suburbs in the 2008-12 access arrangement period the AER considers that it is inconsistent to apply the $5/metre cost to these unit rates, as these areas are not subject to a relative increase in work complexity.

The AER notes that Envestra undertook mains replacement in the easy and medium suburb areas for the 2008-12 access arrangement period. It submitted in its revised proposal that it will undertake approximately 50 per cent of work in these areas during the 2013-17 access arrangement period. For the further 50 per cent of work proposed to be undertaken in medium hard and hard suburbs, the AER considers that costs will not be materially influenced by the factors described as leading to an increase in complexity of work. It is expected that with increased complexity, Envestra would engage the contractors with the appropriate experience in working in such complex environment. This would include other activities such as traffic and relationship management. The extent of supervision should not therefore increase in the same proportion as the complexity of the work. Indeed, the AER has factored this consideration into how unit rates from tenders have been used to forecast Envestra's mains replacement unit rates. The AER has accepted Envestra's contention that the lowest priced tender response will not always be selected as non price factors, such as the need for supervision, will also need to be taken in account in contractor selection.[197]

As the mains work becomes more complex the work takes longer to complete. That is, a lower volume of mains replacement is undertaken in more complex areas within the same time period than for less complex areas. This provides a greater amount of time in which to undertake the quality assurance and recording data. Greater staff hours per metre of mains replacement are able to be devoted to these elements offsetting any additional complexity. Therefore, it is not apparent that an efficient and prudent provider would incur additional costs in this context. As noted above, the AER notes that the mains program is scheduled to decline from a peak of 150 km in 2013 to 41 km in 2020-21.

The AER considers that the design and "sequencing of work" in the planning element would be more appropriately allocated to overhead costs as they are not project specific costs, consistent with Envestra's cost allocation over the 2008-12 access arrangement period. Furthermore, the network configuration and design would be undertaken by engineering staff and not the resources being budgeted for by Envestra under this proposed allowance.

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196 Envestra, *Response to information request FD18a*, received 4 March 2013.
197 Envestra, *Revised access arrangement proposal, attachment 7.7*, 9 November 2013, p.16.

The AER notes that Envestra undertook mains replacement in the easy and medium suburb areas for the 2008-12 access arrangement period. It submitted in its revised proposal that it will undertake approximately 50 per cent of work in these areas during the 2013-17 access arrangement period.

For the further 50 per cent of work proposed to be undertaken in medium hard and hard suburbs, the AER considers that costs will not be materially influenced by the factors described as leading to an increase in complexity of work. It is expected that with increased complexity, Envestra would engage the contractors with the appropriate experience in working in such complex environment. This would include other activities such as traffic and relationship management. The extent of supervision should not therefore increase in the same proportion as the complexity of the work. As the mains work becomes more complex the work takes longer to complete, that is, a lower volume of mains replacement is undertaken in more complex areas within the same time period than for less complex areas. This provides a greater amount of time in which to undertake the quality assurance and recording data. Greater staff hours per metre of mains replacement are able to be devoted to these elements offsetting the additional complexity. As stated previously, the AER notes that the mains program is scheduled to decline from a peak of 150 km in 2013 to 41 km in 2020-21.

The AER therefore does not accept the $5/metre as it is not arrived at on a reasonable basis and does not represent the best estimate possible in the circumstances[198] and it is not prudent and efficient.[199]

The AER sought historical data on the material costs. The AER considers that a material cost of $20/metre is consistent with the historical costs.

Medium pressure unit rates

The AER does not accept the variation and $5/metre supervision/control costs for the medium pressure unit rates as applied by Envestra for the 6 kilometres of medium pressure supply mains which the AER considers is prudent and efficient.[200]

In its revised proposal for the medium pressure mains replacement, Envestra proposed applying a unit rate which was based on the awarded tender rate for the replacement of medium pressure mains in a suburb which was undertaken in 2012 plus allowances for a variation, $5/metre APA supervision/control and $20/metre material costs.[201]

The AER requested that Envestra provide any other supply mains contract rates. Envestra submitted that no other contracts had been awarded.[202]

The AER considers that the 2012 mains replacement project upon which the unit rate was based does not represent a reasonable basis or the best estimate possible[203] of the cost of the proposed 6 kilometres of mains replacement for the proposed medium pressure mains replacement to be undertaken in the 2013-17 access arrangement period. As this relates to commercial in confidence material, further discussion may be found in Confidential Appendix C.

198 NGR, rr.74(2)(a) and 74(2)(b)
199 NGR, r.79(1)(a)
200 NGR, r.79(1)(a).
201 Envestra, *Revised access arrangement proposal: Attachment 7.8 Response to Draft Decision - MRP Unit Rate Model (confidential).xls*, 9 November 2012.
202 Envestra, *Response to information request FD11a*, received 17 January 2013, p.3.
203 NGR, r.74(2)

Pass through mechanism

The AER's final decision is to include a pass through. As in its draft decision, the AER recognises that the timing of low pressure mains replacement is somewhat discretionary and potentially subject to the changing risk profile of the network and resource availability.[204] The AER considers that a pass through mechanism will provide Envestra with sufficient flexibility to respond to changing conditions, which may require Envestra to alter the volume of mains replacement delivered during the 2013–17 access arrangement period.[205] This pass through will apply to all distribution businesses. Should they decide to undertake mains replacement in excess of historical volumes in order to accommodate any change in circumstances, they may submit an application to the AER to recover that expenditure.

On the information available to it the AER assesses that the historical volume is the best estimate in the circumstances of the prudent and efficient volume for the 2013–17 access arrangement period. However, understanding that circumstances may change, the AER considers that a pass through should be made available to the businesses.

The AER has revised the operation of the pass through. The pass through differs to that proposed by the AER in its draft decision. It takes into account information provided by Envestra and the other distribution businesses following the draft decision.

The pass through will apply only to low pressure to high pressure block rollout mains replacement and medium pressure supply mains replacement which is necessary for carrying out the volumes of low pressure to high pressure block rollout proposed in the pass through for the 2013-17 access arrangement period.

Only one pass through application will be accepted during the 2013-17 access arrangement period.

No materiality threshold for the mains pass through will apply. As explained in the AER's draft decision, this takes into account the nature of the costs to be passed through as the replacement of low pressure mains is undertaken for safety and reliability reasons. Further, alterations in the volume of mains replacement delivered may be driven by factors such as new information on safety risks and changes in the relative costs for different methods for mitigating or removing those safety risks. The AER therefore considers it is not appropriate to apply a materiality threshold where it may operate as a disincentive to Envestra to undertake mains replacement work where it may be efficient and prudent having regard to the change in circumstances.[206]

In its revised proposal SP AusNet submitted that there was little scope to respond to new knowledge about risks or costs due to the capping of the pass through.[207] The AER agrees with SP AusNet's reasoning that if circumstances change it is not clear in advance what magnitude of mains volume may be necessary. Hence, in its final decision the AER has not capped the pass through.

The businesses' response to the AER's original trigger event, which was completion of historical volumes, was set out in their revised proposals and in subsequent responses to information requests.

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[204] AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, Part 4, p.11; AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017:Part 2*, September 2012, pp.59-60.

[205] AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p.272.

[206] AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, Part 4, p.272; AER, *Draft decision: Envestra access arrangement proposal for 1 January 2013 – 31 December 2017:Part 2*, September 2012, p.59.

[207] SP AusNet, *Revised Access Arrangement Proposal*, November 2012, p. 40.

The businesses submitted that the pass through would create uncertainty as to whether a pass through application would be approved by the AER. According to the businesses, this may affect or may prevent the awarding of contracts due to the lack of certainty. In their view, this would reduce the cost efficiency of the mains replacement work.[208]

In order to clarify the effect on contracting, the AER sought further information from the distribution businesses regarding their particular contracting practices. The AER received information from all the distributors which indicated that the lead time for the awarding of contracts to work execution ranged from two months to two years. Following its assessment of this information and in order to take account of variable contracting practices, the AER has built in a nine month lead time into the pass through event. This factors in the average lead time for contracting, based on the information received, as well as time for the application approval process which provides for 90 business days (subject to any extension). Envestra has indicated that the 9 month lead time is adequate for accommodating its mains replacement practices.[209]

For Envestra the trigger event for the pass through is completion of 268 kilometres of mains replacement. The 268 kilometres is calculated by deducting 9 months worth of mains replacement from the historical volume over the 2008–12 period. This is calculated using the mains replacement schedule provided by the distribution business in its revised proposal.[210]

The unit rates approved in the AER's final decision are to be applied in calculating the expenditure amount for the pass through.

Where volumes are undertaken in suburbs where unit rates have not been approved in the AER's final decision, the distribution business will be required to submit a proposal to the AER for those unit rates as part of its pass through application.

The evidence that the AER will consider in assessing the efficiency of the proposed unit rates may include but shall not be limited to whether the unit rate is an awarded tender rate and whether the rates were determined through a competitive tender process.

In the instance where the approved volumes of mains replacement for a particular suburb or suburbs have not been carried out, and are resubmitted as part of the pass through application, the expenditure differential only will be approved. This will be calculated by:

- Calculating the difference between the total capex for mains replacement approved by the AER in its final decision, and the total area adjusted approved expenditure[211] undertaken by Envestra to complete the approved volumes.
- Subtracting this difference from the total approved pass through expenditure.

The AER considers that this:

208 SP AusNet, *Response to AER draft decision: Chapter 2 – Capex*, 9 November 2012, p.40; Multinet, *Revised Access Arrangement Proposal*, November 2012, p.81; Envestra, *Revised Access Arrangement Proposal*, November 2012, pp.9-10.

209 Envestra, *Email titled ' RE: Mains replacement program - other business material relied upon'*, received 5 March 2013.

210 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision – Capital Expenditure (confidential)*, 9 November 2012, p.22.

211 This is the sum of the volume multiplied by pre-approved unit rate for suburbs/postcodes where the AER has approved a unit rate plus the volume multiplied by the actual unit rate for suburbs/postcodes where the AER has not approved a unit rate (subject to the AER assessing that the unit rate actually incurred was prudent and efficient).

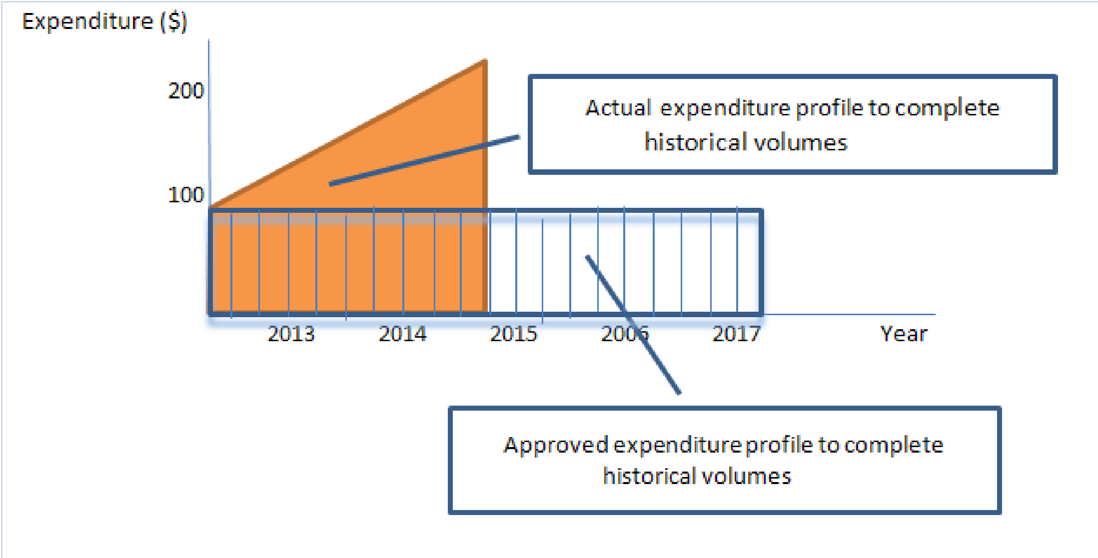
- Is consistent with the cost pass through event mechanism included in Envestra's revised access arrangement proposal which requires the costs of the pass through event to be incremental to costs already allowed for in reference tariffs.
- Allows for the distribution business to reprioritise its mains replacement in order to undertake work in suburbs for which there is not a pre-approved unit rate. Where the unit rate is higher the distribution business will be able to recover the higher unit rates actually incurred, subject to the AER's assessment that the unit rate is prudent and efficient. This therefore means there is no disincentive to undertake works in higher cost areas.
- Similarly, where work is undertaken in a suburb where there is no pre-approved unit rate and the unit rate is lower, the distribution business will be able to recover the lower unit rates actually incurred, subject to the AER's assessment that the unit rate is prudent and efficient. This therefore means that customers are protected from the costs associated with any incentive to nominate works in higher cost areas but to undertake works in lower cost areas.
- Maintains the incentive mechanism for the business to attain lower unit rates than those approved in the final decision.

If approved, the pass through expenditure will consist of:

- The expenditure incurred or to be incurred in order to undertake the approved volumes, less any adjustment amount.
- An adjustment for the difference between:
    - the time value of money allowed for the expenditure approved in the AER's final decision for completion of historical volumes (as per the blue hatched area in Figure 4.4), and
    - the time value of money for the expenditure approved in the AER's final decision but undertaken in the timeframe that the volume was actually completed (as per the orange shaded area).[212] This ensures that from a time value of money perspective the business is neutral as to whether the volume of mains replacement was approved entirely upfront (as per the orange shaded area in Figure 4.4) or via a combination of upfront funding plus the pass through.

[212] Where volumes have been undertaken in suburbs/postcodes where the AER has not pre-approved a unit rate, the AER will apply a residual unit rate to these volumes. The residual unit rate will be calculated as the total approved expenditure for historical volumes less the expenditure incurred for mains replacement actually undertaken in the suburbs/postcodes included in the AER's approved historical expenditure, divided by, the total approved historical volume less the volume undertaken in the suburbs/postcodes included in the AER's approved historical expenditure.

Figure 4.4 AER approved expenditure profile versus actual completion profile



Source: AER analysis

The pass through expenditure does not include a separate allowance for the equity and debt raising costs associated with financing the pass through volume of mains expenditure as adjustments for these are automatically made on re-running the AER model once the approved pass through amount is rolled into the regulatory asset base (see attachment 3).

In assessing the proposed pass through volume and unit rates the AER must consider whether the costs to be passed through meet the relevant NGR criteria for determining the building block for total revenue for reference services (for example, the prudency and efficiency of the capex).

The tariff variation mechanism is specified in attachment 12.

In submitting a pass through application the AER will require that the distribution business provides:

- Evidence of completion of the 268 kilometres of LP to HP block rollout and the medium pressure supply mains replacement necessary for carrying out the LP to HP block rollout which constitutes the trigger event. The AER will require that the distribution business submit independently verifiable information which details the low pressure to high pressure block replacement mains and the integral medium pressure supply mains volume by suburb and the unit rate which applied for that volume.
- Evidence that the proposed pass through capex meets the NGR criteria
- Evidence that the business has and will incur expenditure to complete historical volumes.
- Evidence of planned expenditure to complete the pass through volumes.

As per other tariff variations, the AER will make its decision on the pass through application within 90 business days (subject to any extension) of receiving a pass through application which contains the information required for the AER to make its assessment. The AER encourages the distribution businesses to consult with the AER before submitting their applications in order to ensure that the requisite information is included at the time of lodgement.

Ad hoc mains replacements and service renewal program

Victorian network

In its revised proposal Envestra adopted the AER's draft decision for ad hoc mains replacement and service renewal expenditure.[213] The AER received no further information and for the reasons in its draft decision[214] approves $3.0 million ($2011, unescalated direct costs, excluding overheads) for ad hoc service renewals capex and $1.1 million ($2011, unescalated direct costs, excluding overheads) for reactive mains replacement for the 2013–17 access arrangement period as conforming capex (see Table 4.10).[215]

Table 4.10 Victorian network - Ad hoc mains replacements and service renewal[(a)] ($2011)

	2013	2014	2015	2016	2017	Total
Ad hoc mains replacement ($'000)						1,116
Ad hoc service renewals (number)	418	361	311	269	200	1,559
Ad hoc service renewals ($'000)						2,982

Source: AER analysis
Note: (a) Unescalated direct costs, excluding overheads.

For the Victorian network Envestra initially proposed a capex allowance for ad hoc service renewals of $3.7 million ($2011, unescalated direct costs, excluding overheads)[216] and an opex allowance for reactive mains replacements of $1.9 million per year ($2011, unescalated direct costs, excluding overheads).[217]

In the draft decision, the AER did not approve Envestra's:

- forecast volume of service renewals and approved $3.0 million ($2011, unescalated direct costs, excluding overheads) for ad hoc service renewals capex for the 2013–17 access arrangement period,[218] and
- proposal to treat reactive mains replacement program as opex, instead including it in capex. The AER also did not approve Envestra's forecast expenditure for reactive mains replacement and

213 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential).xls*, 9 November 2012.

214 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp.15-17; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.63-65.

215 NGR, r.79(1)

216 Envestra, *Response to Information Request 17 of 22 June 2012*, received 22 July 2012, p. 4.

217 Envestra, *Access Arrangement Information: Attachment 6.1 Business Case V98 Reactive Replacement*, 30 March 2012, p. 2.

218 AER, *Draft Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp.24-25; AER, *Draft Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.65.

instead approved an annual average expenditure of $0.223 million ($2011, unescalated direct costs, excluding overheads) for 2013–17 based on the historical average expenditure.[219]

Albury network

In its revised proposal Envestra adopted the AER's draft decision.[220] The AER received no further information and for the reasons in its draft decision[221] approves $0.03 million ($2011, unescalated direct costs, excluding overheads) for unplanned mains replacements and service renewals as conforming capex (see Table 4.11).[222]

Table 4.11 Final decision Albury network - Unplanned mains replacement and service renewals[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.007	0.007	0.007	0.007	0.007	0.035
AER draft decision	0.007	0.007	0.007	0.007	0.007	0.035
Envestra revised proposal	0.007	0.007	0.007	0.007	0.007	0.035
AER final decision	0.007	0.007	0.007	0.007	0.007	0.035

Source: AER analysis
Note: (a) Unescalated direct costs, excluding overheads.

For the Albury network, Envestra initially proposed a total capital allowance of $0.03 million ($2011, unescalated direct costs, excluding overheads)[223] for unplanned mains replacements and service renewals for the 2013-17 access arrangement period. Envestra did not propose a planned mains renewal program for its Albury network.

In the draft decision the AER accepted Envestra's proposed amount as conforming capex.[224]

4.4.2 Connections

The AER's final decision is not to approve Envestra's revised capex proposal of $159.7 million and $3.4 million ($2012, unescalated direct cost, excluding overheads) for the 2013–17 access arrangement period, for Victoria and Albury respectively. The AER proposes to replace Envestra's proposed capex allowance with $128.2 million and $3.1 million ($2012, unescalated direct cost, excluding overheads) capex for the 2013–17 access arrangement period, for Victoria and Albury respectively. The AER considers these amounts are consistent with the NGR requirements.

In particular, the AER does not accept:

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219 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012*, Part 4*, pp.15-17; AER, *Draft Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.64.

220 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Albury Capex Forecast Model (confidential)*, 9 November 2012.

221 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012*, Part 4*, p.25; AER, *Draft Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.65.

222 NGR, r.79(1)

223 Envestra, *Albury Access Arrangement Information*, March 2012, p.120.

224 NGR, r.79(1); AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012., p.25.

- The revised proposal abolishment forecast for industrial and commercial extensions. The AER considers the modified forecast provided by Envestra subsequent to the revised proposal was arrived at on a reasonable basis and represents the best forecast possible in the circumstances.[225]

- The revised average unit rates proposed by Envestra. This is because for many of the unit rates an averaging period longer than 2 years is required to ensure the forecasts capture all relevant historical information and so Envestra's forecast was not arrived at on a reasonable basis and does not represent the best forecast possible in the circumstances.[226] However, in some cases, the AER accepts that a 5 year averaging period is a reasonable basis for the unit rates and is the best forecast possible in the circumstance.

The AER accepts Envestra's revised abolishment forecast for residential connections. Further, in section 4.4.8 'Extensions' of the AER's final decision the AER accepted the Merrifield and another two extension projects. As such, the AER accepts the incorporation of these additional connections into the connections capex forecast.

Table 4.12 Final decision Victoria network - Residential connections(a) ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	25.2	24.8	24.6	24.8	24.8	124.2
AER draft decision	19.2	18.4	17.9	17.2	16.8	89.5
Envestra revised proposal	21.8	21.5	21.3	20.9	20.6	106.0
AER final decision	20.7	20.4	20.2	19.8	20.3	101.4

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.13 Final decision Albury network - Residential connections(a) ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.6	0.6	0.6	0.7	0.7	3.2
AER draft decision	0.4	0.5	0.5	0.5	0.5	2.5
Envestra revised proposal	0.5	0.6	0.6	0.6	0.6	2.9
AER final decision	0.4	0.5	0.5	0.5	0.5	2.6

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.14 Final decision Victoria network - Industrial and commercial connections(a) ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	4.2	4.1	4.1	4.2	4.3	20.8

225 NGR. r. 74(2)
226 NGR. r. 74(2)

AER draft decision	3.6	3.4	3.0	1.9	2.1	14.0
Envestra revised proposal	12.0	11.6	11.6	8.9	9.6	53.7
AER final decision	3.2	6.1	6.1	5.2	6.3	26.8

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.15 Final decision Albury network - Industrial and commercial connections(a) ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.0	0.0	0.0	0.0	0.0	0.2
AER draft decision	0.0	0.0	0.0	0.0	0.0	0.1
Envestra revised proposal	0.1	0.1	0.1	0.1	0.1	0.5
AER final decision	0.1	0.1	0.1	0.1	0.1	0.5

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Volumes - Abolishment forecast

Envestra's connections capex is forecast by multiplying a historical average unit rate by the forecast gross connections. Envestra's gross connections are forecast by adding a forecast number of abolishments to Envestra's net connections forecast.

The forecast residential abolishments in Envestra's initial proposal were 10 per cent and 13 percent of gross residential connections for Victoria and Albury respectively. The forecast commercial/industrial abolishments in Envestra's initial proposal were 50 per cent and 50 per cent of gross commercial/industrial connections for Victoria and Albury respectively. The AER did not accept these forecasts in its draft decision because the AER had concerns regarding the accuracy of the data provided.[227] Further, these abolishment ratios were higher than SP AusNet's abolishment ratios. As such, the AER considered that Envestra's forecast had not been reached on a reasonable basis.[228] Accordingly, the AER considered an abolishment ratio comparable to SP AusNet's network was the best forecast possible in the circumstances.[229]

In its revised proposal, Envestra maintained its initial residential abolishment forecast of 10 per cent and 13 per cent of gross residential connections for Victoria and Albury respectively.[230] Envestra's revised proposal increased its forecast of gross commercial/industrial abolishments to 78 per cent and 83 percent of gross commercial/industrial connections for Victoria and Albury respectively.[231] These forecasts reflect the average percentage of disconnections in Envestra's network. This assumption resulted in a significant increase in the forecast number of commerical/industrial abolishments and an approximately $30m increase in the forecast industrial and commercial capex for Victoria.

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227 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.19.

228 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.19.

229 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.20.

230 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.7 Response to Draft Decision - Capital Expenditure (confidential).doc*, 9 November 2012. pp. 30-31.

231 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.7 Response to Draft Decision - Capital Expenditure (confidential).doc*, 9 November 2012. pp. 30-31.

The AER accepts Envestra's forecast residential abolishments. However, the AER does not accept Envestra's forecast of commercial/industrial abolishments. Instead, the AER considers the forecast of commercial/industrial abolishments provided by Envestra subsequent to its revised proposal meets the NGR requirements.[232] The AER's reasons are set out below.

Data accuracy

In the AER's draft decision, the AER did not accept Envestra's gross connections number on the basis that there were inconsistencies in Envestra's abolishment data.[233] As such the AER did not consider a forecast based on this data could be arrived at on a reasonable basis. The AER applied SP AusNet's abolishment rate as it considered it was the best forecast to apply in the circumstances.[234]

Envestra's revised proposal did not provide additional information to demonstrate the data underlying its calculation was accurate.

The AER requested Envestra explain the apparent discrepancies in the data Envestra had previously provided.[235] Envestra provided additional information and submitted:[236]

> The demand history used by Core Energy is correct as it reflects the actual days and volumes billed to customers (referred to as billable quantities). As such, Core Energy's demand forecast provides the best estimate of billable days (and therefore net connections) and demand as required to be used in the PTRM. The gains and losses data is taken from a different system and reflects the number of work orders for meter fixes/install and meter removals throughout the year.
>
> There are differences between the two data sets as a result of differences between when a meter is installed and when the meter is commissioned (and hence becomes billable). As the net connection forecast is based on billable days, any delays in the conversion of meter fixes to a billable status will cause reconciliation issues. There is not the same delay in the conversion of meter removals because a connected property that has no gas meter will immediately cease to be levied a supply charge

Envestra also provided an explanation of what data it considered most appropriate and why it did not consider it appropriate to use SP AusNet's data in its forecast. Envestra stated:[237]

> Envestra believes the Victorian and Albury residential abolishment ratios calculated above reflect the best available information to estimate the gross connection forecasts for the 2013 to 2017 period. The abolishment ratios are consistent with that projected at the time of the 2008 to 2012 Access Arrangement review and are reasonably similar to that determined for SP AusNet.
>
> ......
>
> Envestra submits that there is no reason to depart from the use of its own data, which data is correct and accurate. Envestra also submits that the data of another distributor is not relevant to preparing forecasts of gross connections that are consistent with National Gas Rules 74 and 79.

The AER considers that there are still some discrepancies in the data provided by Envestra. However, Envestra has combined data from two data sources and this appears to be a reasonable explanation of the differences identified in the data. Particularly, the AER accepts that the best forecast of

232 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. pp.4-5.

233 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.19.

234 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.19.

235 AER, *information request FD5a*, 4 December 2012.

236 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. p.3.

237 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. p.3.

abolishments can be derived from the data set which records the work orders for the historical abolishments performed in Envestra's network. The AER accepts that this is the best source of information available and as such considers this data forms a reasonable basis on which to base its forecast.[238]

Residential abolishment forecast

The AER has examined the data underlying Envestra's residential abolishment forecast and considers it to be the best available in the circumstances. Further, the AER considers that the application of a forecast which applies an average abolishment rate to forecast net connections is arrived at on a reasonable basis and the best possible in the circumstances.[239] As such, the AER now accepts the abolishment forecast proposed by Envestra for residential connections.

Industrial and commercial abolishment forecast

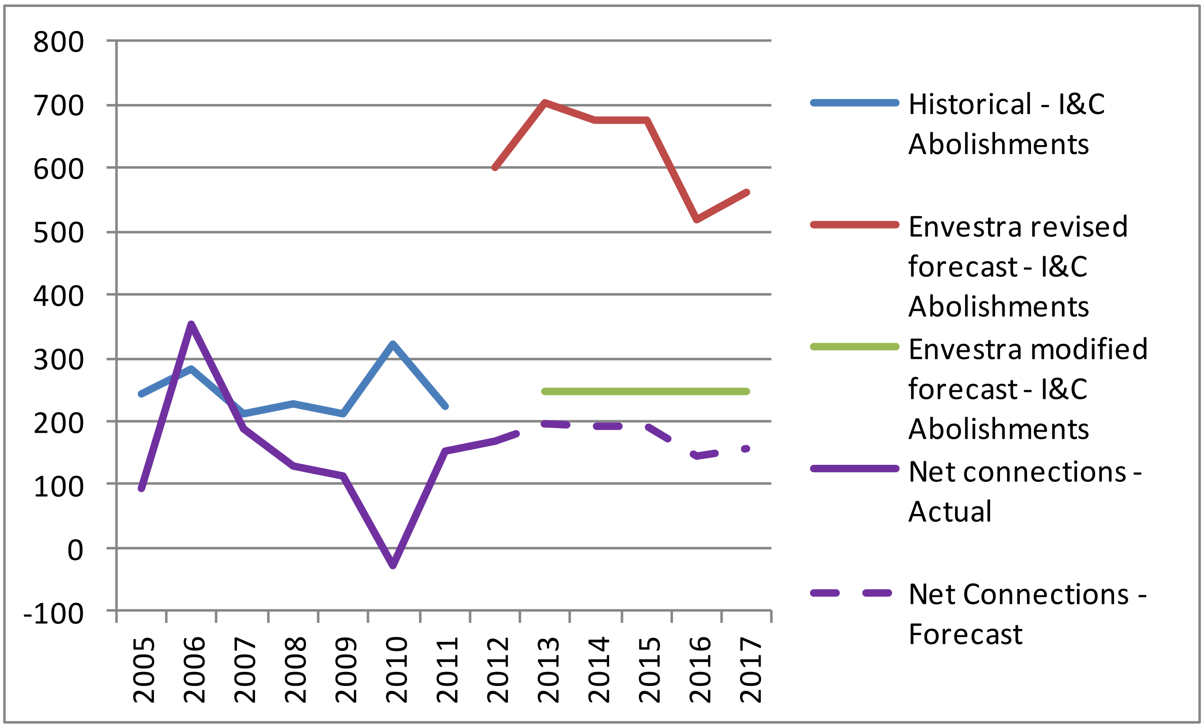
The AER notes that Envestra's revised forecast had a significant increase in both the abolishment rate and the total number of abolishments. In Victoria, Envestra's revised proposal forecast indicated that:

- Net connections in 2017 are forecast to be approximately 3 percent above the number of net connections in 2011.
- Gross connections in 2017 are forecast to be approximately 92 percent above 2011 levels
- Abolishments in 2017 are forecast to be approximately 152 percent above 2011 levels.

Figure 4.5 demonstrates that Envestra forecasts a substantial increase in the number of abolishments in its network.

238 NGR. r. 74(2)
239 NGR. r. 74(2)

Figure 4.5 Comparison of Envestra abolishment forecasts.



The AER considered that such a large increase in gross connections and abolishments did not appear to be justified by any change in Envestra's environment or business practices.[240] The AER requested Envestra justify why this was a reasonable forecast.[241] Envestra submitted:[242]

> The historic abolishment ratios for commercial connections, which although are quite high, again reflect Envestra's actual experience in this segment. While correct, Envestra understands the AER's concerns that the ratios deliver commercial gross connections forecasts which are significantly higher than historic gross connections. Envestra has therefore proposed a modified methodology described in response to questions 4, 5 and 6 below.

The AER does not accept Envestra's revised proposal has been reached on a reasonable basis or is the best forecast possible in the circumstances. Envestra appears to acknowledge this by proposing a subsequent forecast.[243] The AER considers that the reason that Envestra's revised proposal was not reached on a reasonable basis and is not the best forecast possible in the circumstances is that Envestra's methodology is predicated on a relationship existing between the number of abolishments and the number of net connections in Envestra's network. The AER used regression analysis and found that no statistically significant relationship existed. As this relationship could not be found there is no underlying justification for Envestra's abolishment forecast.

In response to the AER's information request, Envestra provided a modified methodology.[244] Envestra's modified methodology differs from its revised proposal where the historical ratio of abolishments to net connections was used. Envestra submitted that:[245]

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240 AER, *information request FD5a*, 4 December 2012.
241 AER, *information request FD5a*, 4 December 2012.
242 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. p.3.
243 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. p.4.
244 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. p.4.

> ... as the use of this methodology produces gross commercial connections significantly higher than history, Envestra is proposing a slightly different approach.
>
> Envestra proposes to forecast commercial gross connections by adding the forecast net growth of commercial customers with the 2005 to 2011 average of abolishments (246 pa for Victoria and 16 pa for Albury).

In considering the best forecast possible in the circumstance, the AER has examined Envestra's modified forecast methodology. The AER considers that an average of Envestra's total historical abolishments is a reasonable basis for forecasting abolishment and leads to a forecast which represents the best forecast possible in the circumstances.[246] This is consistent with the modified methodology provided by Envestra in response to the AER's information request.[247]

Unit Rates

The AER accepts Envestra's revised unit rate forecasts for multi user inlets, existing home inlets and industrial and commercial (I&C) mains in Victoria. However, for the remainder of the unit rates, the AER considers Envestra's revised proposal has not been arrived at on a reasonable basis as the averaging period is not sufficiently long to account for all factors influencing Envestra's historical unit rates. The AER considers that using an average of historical expenditure covering the 2007/08 to 2011/12 financial years is a reasonable basis and results in a forecast that represents the best forecast possible in the circumstances.

Envestra's initial proposal contained connection unit rate forecasts built up from mains, inlets and meters cost estimates for three categories of residential connections — new estate, existing and multi-user type connections. In general, a simple average of the 2009 and 2010 unit rate was used and some adjustments were made for changes in contractor and material costs, based on recent tender outcomes.[248]

In its draft decision the AER considered that:

- A weighted average was a better forecasting methodology than a simple average as it takes into account the influence of volume on unit rates.[249]
- For new estate and existing connections an average across 2008–11 is more appropriate than relying on an average for 2009 and 2010. Envestra stated that unit rates vary across the 13 different tender areas and average unit rates can vary as a result of changes in the mix of regions where work occurs.[250] Given this variation, the AER considered a longer averaging period better captured the drivers of the unit cost.[251]

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245 Envestra, *response to information request FD5a, Vic GAAR - AER information request - Envestra - FD5a (2).docx,* 12 December 2012. p.4.

246 NGR. r. 74(2)

247 Envestra, *Response to information request FD5a*, received 12 December 2012.

248 Envestra, *Access arrangement proposal, 120330 Attachment 7.1 Capital Expenditure- Victoria Unit Rates (confidential).doc*, 30 March 2012,

249 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.22

250 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.22

251 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.22

- For multi user inlets, an average over 2008–10 was more appropriate. The AER considered that a large increase in costs in 2010–11 was not reflective of work to be undertaken over the 2013–17 access arrangement period.[252]

Further, in the draft decision, the AER did not accept:

- The adjustments which Envestra made for changes in contractor and material costs.[253] The AER considered that Envestra had not demonstrated an increase in the tender rates to support these adjustments.

- The costs associated with installing thermal safety devices on 500 new dwellings per year. The AER considered that Envestra had not substantiated that this was either necessary or the most efficient way of dealing with bushfire risk.[254]

Envestra's revised proposal adopted the application of a weighted average approach. However, Envestra's revised proposal used data from 2010/11 and 2011/12 as the basis for its unit rate forecast. In its revised proposal Envestra submitted:[255]

> Envestra now has actual data up to 2011/12, and as such, believes that the use of data for 2010/11 and 2011/12 would provide the best forecast or estimate possible in the circumstances, as required by Rule 74(2). This approach has the strong advantage in that it reflects the costs incurred under Envestra's new Mains and Service laying contracts that were executed in November 2010, which contracts are relevant to costs that will apply over the 2013 to 2017 Access Arrangement period.

Envestra stated that:[256]

> Envestra has revised its approach to forecasting unit rates in response to the Draft Decision. Envestra considers that its revised approach to forecasting unit rates developed in response to the Draft Decision provides for a best estimate arrived at on a reasonable basis. Envestra has sought to apply its revised approach to all unit rates.

The AER has addressed Envestra's point about consistency across all unit rates in section 4.4.3.

Appropriate averaging period to use

The AER considers that for most unit rates, Envestra's revised proposal has not been arrived at on a reasonable basis as the AER considers an average based on two years does not incorporate a sufficient number of years to account for all factors influencing Envestra's historical unit rates.[257] In this circumstance, and without evidence to demonstrate older information is no longer suitable, the AER considers a longer averaging period is the best forecast possible in the circumstances.

In its revised proposal, Envestra stated it now has actual data up to 2011/12, and as such, believes that the use of data for 2010/11 and 2011/12 would provide the best forecast or estimate possible in the circumstances.[258] Envestra considers that data as far back as 2008 also does not capture

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252 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.24.
253 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.23.
254 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.23.
255 Envestra, *Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc,* 9 November 2012. p.3.
256 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.9.
257 NGR. r. 74(2)
258 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.3.

changes in productivity, work methods/practices, market prices, changes in contractor mix and changes in work areas/scope.[259]

The AER considers the appropriate average to use in calculating the unit rate is one which best represents the expected profile of expenditure in the 2013–17 access arrangement period. The AER considers the calculation of an average unit rate should include as much relevant data as practicable. If the calculation of the average does not include all relevant information, then it will fail to capture relevant available information about the drivers of variation in the unit rates. However, the AER accepts that it must also be careful not to include data which is not relevant to the expected conditions in the 2013–17 access arrangement period. The AER has therefore examined whether using a two year averaging period is a reasonable basis for the forecast and whether it reflects the best forecast possible in the circumstances.[260] The AER also examined whether there is additional data available, which is still relevant to the 2013–17 access arrangement period.

The AER considers that there are two factors that influence the historical average unit rates and the unit rates in the 2013–17 access arrangement period:

1. The contract price for undertaking each component of a connection in each contracting region.

2. Any changes in the nature of connections work. This could include:

    a. A change in the mix of regions in which connections work is occurring. For example, from Greenfields connections to urban infill, or vice versa.

    b. Any changes in the complexity of the connection work. For example, Envestra submitted that multi-unit inlet unit rates are expected to increase due to increased complexity of gas meter rooms.[261]

The AER notes that changes in the nature of connections work may not be permanent. For example, a very large development in the Docklands or a large new Greenfields development could skew the calculation of the average unit rate in a given year. However, a high average unit cost driven by a large development does not imply that the average unit rate will remain high in the subsequent year, as there may not be connections similar in scope. As such, using a longer averaging period smooths the effects that these developments have on the average in any given year.

The AER considers that the choice of the appropriate averaging period should be informed by an understanding of the relative importance of the above factors. If one of these factors has a larger influence on average unit rates, then the best available averaging period is one which best captures information about the more important factor.

The AER requested information from Envestra to allow it to examine the importance of these factors over the 2008–12 access arrangement period and the anticipated movement of these factors over the 2013–17 access arrangement period.[262] The AER also requested information which would allow it to examine the types of connections experienced over the 2008–12 access arrangement period and whether they are expected to be reflective of connections in the 2013–17 access arrangement

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259 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.3.

260 NGR, r. 74(2).

261 Envestra, *Response to Information Request 4 of 18 May 2012*, pp. 10–11

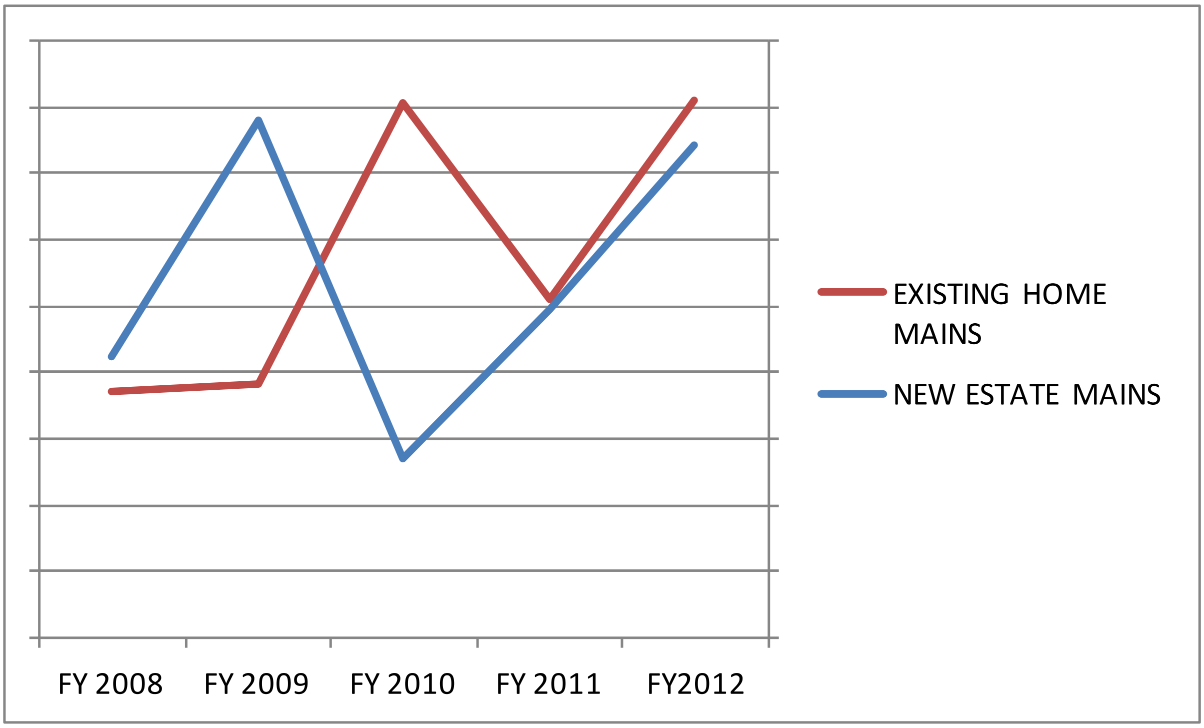
262 AER, *AER information request FD8a, Template for connections info request.xlsx*, 14 December 2012.

period.[263] Envestra did not provide the detailed information requested by the AER. Envestra stated that:[264]

> Envestra considers that it would be unreasonable, impractical and not possible with any reasonable degree of accuracy for Envestra to provide quantitative evidence to demonstrate that current costs or work scope will be the same as forecast costs or work scope. Envestra submits that such a burden of proof is unreasonable and not required to demonstrate that a forecast has been arrived at on a reasonable basis.

As Envestra was unable to provide the detailed information requested, the AER examined the high level trends exhibited by the average unit rates for different connections categories over the 2008–12 access arrangement period. In some instances, the average unit rates exhibited significant upwards and downwards movements from one year to the next. For example the average unit rates for existing home mains decreased by 37 per cent in 2010/11 compared to 2009/10 and then increased by 59 per cent in 2011/12 (see Figure 4.6). The AER considers this variation cannot adequately be explained by changes in Envestra's contracted unit rates. Rather, variations of this magnitude, going in both directions, can be best explained by variations in the nature of connections in that period. Further, the AER considers that the upwards and downwards movements indicate that these changes are not permanent or structural changes. Rather, these are the result of one off variations in the connections projects undertaken by Envestra. Based on the above analysis, the AER considers that the variations in the nature of connections can be a significant, non-recurring driver of changes in the historical unit rates for some of the connections categories.

Figure 4.6 Example of average unit rates with large fluctuations



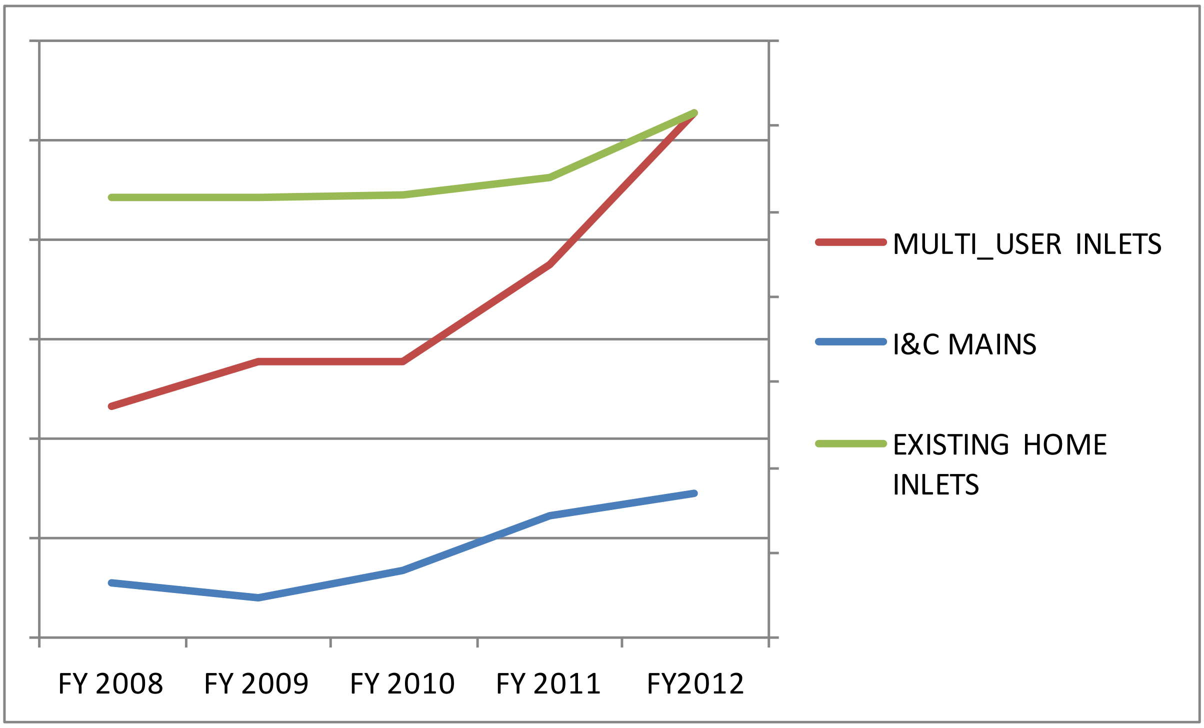
Source: Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc

263 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012.

264 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.5.

However, in some cases, the average unit rate exhibited a clear and consistent upwards trend. For example, the average cost of multi user inlets increases in every year from 2008/9 (See Figure 4.7). While the AER has not been provided with data to allow it to ascertain what is driving this trend, it is clear that a trend exists. These changes could be driven by both changes in the contracts or changes in the mix of regions. Further, the AER has no information to suggest that these are not permanent changes in the nature of connections Envestra will perform. In these cases, the AER considers that data prior to 2010/11 may not capture the relevant changes to these connection categories. It is for this reason that the AER accepts Envestra's method for forecasting the unit rates for multi user inlets, existing home mains and I&C mains in Victoria.

Figure 4.7 Example of average unit rates with an upwards trend



Source: Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc

Envestra indicated that using two years of data would correct for potential errors that could arise from basing forecasts on a single year of information. The AER accepts that using two years of data to inform forecasts would be better than using only one year of data. However, for the reasons discussed above, the AER considers that in this circumstance additional data is required to properly account for variations in the mix of regions. That is, the AER considers that using information from a wider range of years would yield better unit rate estimates than only using two years of data. Further, as demonstrated by the AER's high level analysis, Envestra's historical data appears to indicate that the mix of regions can vary significantly across years. Given this factor, using only two years of data does not appear to be consistent with capturing all relevant information and reflecting the scope of work expected over the 2013–17 access arrangement period.

The AER notes Envestra's argument that it performed approximately 30,000 connections in these two years and this is therefore more than sufficient to mitigate any concerns around the mix or complexity of connections.[265] However, as stated above, the variations in Envestra's historical data appears to indicate that the mix of regions can vary significantly across years. And so regardless of the number of connections performed, this does not appear to be enough to smooth out the observed variations in unit rates.

Finally, Envestra indicated that its forecast represents good industry practice.[266] Envestra has not substantiated this statement. The AER notes that while SP AusNet has also used an average unit rate to calculate its connections capex, it has accepted the AER's draft decision to use data from 2007–11 for this purpose.[267] As such, it does not appear to the AER that Envestra has established that using two years of data is a commonly accepted or universally adopted approach to forecasting connections unit rates. In the absence of the requested information and with no evidence as to why the longer term average is not appropriate, the AER considers the longer term average is likely to be more representative of conditions in 2013–17.

On the basis of the above analysis, the AER considers:

- Where there is no clear trend and particularly where there are both upwards and downwards fluctuations in historical average unit rates, the best forecast possible in the circumstance is arrived at using historical data from 2008 to 2012. This is because it accounts for the historical variations which the AER has observed in the historical average unit rates. Averaging over a shorter time period risks including only years with higher or lower costs and this would not reflect expected conditions going forward.
- Where there is a clear upwards trend, it appears that the earlier information may no longer reflect the expected conditions going forward. For these categories (multi user inlets and I&C mains in Victoria and new home inlets in Albury), the AER accepts Envestra's revised proposal to use the average of 2010/11 and 2011/2012 historical average costs.

Is data prior to 2010/11 still relevant to the 2013–17 access arrangement period

As discussed above, the AER considers that in some circumstances a longer averaging period can provide additional relevant information in forecasting unit rates. However, the AER has also considered Envestra's submission that data collected prior to 2010/11 is not relevant in forecasting costs for the 2013–17 access arrangement period. For the reasons set out below, the AER has concluded that this earlier information is relevant in forecasting the 2013–17 access arrangement period.

Envestra proposed a shorter averaging period as it considers data prior to 2010/11 is not relevant to cost forecasting for a period that extends to 2017.[268] Envestra considered that this information will be up to nine years old by the end of the 2013 to 2017 period and so does not reflect the expected profile of expenditure going forward.[269] Envestra stated that this is because this information reflects the cost of work incurred under obsolete contracts and that Envestra’s current contract information reflects current labour and materials costs along with the costs of undertaking work in the current

[265] Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.7.

[266] Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.5.

[267] AER, *Draft decision, SP AusNet access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 – Confidential appendixes* , September 2012, p. 24.

[268] Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.3.

[269] Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.4.

environment.[270] Envestra submitted that unit rates based on a weighted average over the past two financial years will lead to forecasts that are arrived at on a reasonable basis and represent the best forecast possible.[271] This is because the resultant unit rates:[272]

- reflect revealed efficient cost outcomes under the new/current contracts entered into by Envestra in November 2010 (and provided to the AER), which contracts (and costs) will apply over the 2013 to 2017 Access Arrangement period;
- reflect the scope of work to be undertaken over the 2013 to 2017 Access Arrangement period;
- have taken into account two years of relevant information to avoid potential errors from basing forecasts on a single year of information; and
- reflects good industry practice in forecasting unit rates for business planning purposes.

The AER understands the contracts Envestra entered into in November 2010 generally have a term of three years or less.[273] Given this, these contracts will expire early in the 2013–17 access arrangement period. While the AER accepts that these contracts reflect the most recent information available, it is incorrect to imply that these contracts will continue to apply over the entire 2013–17 access arrangement period. As such, the AER considers that the currency of these contracts does not of itself make them any more relevant to the 2013–17 access arrangement period than the earlier contracts. Without information as to the nature of the previous and current contracts to allow a meaningful comparison, it is not possible to simply conclude that currency alone makes these contracts a more reasonable basis on which to forecast unit rates.

The AER does not agree with Envestra's argument that information by virtue of being nine years old by the end of the forecast period is not relevant to forecasting costs in 2013–17. The AER notes that Envestra's methodology, which uses information from the 2010/11 and 2011/12 financial years, relies upon data that will be seven years old by the end of the 2013–17 period. The AER does not consider this to be materially different to information which is nine years old. The AER considers it is not possible to conclude there is a definitive age at which information becomes unsuitable for forecasting. Instead the AER has examined the data at a high level to ensure that it remains relevant and is a reasonable basis for forming a forecast. As discussed above, the AER considers that the large variations in unit rates is an important observed aspect of Envestra's data and using additional data captures these details.

Further, the AER considers Envestra has not provided a compelling justification for why this information is no longer relevant. The AER requested information demonstrating that the earlier contracts have materially different unit rates from the November 2010 contracts.[274] If these contracts were materially different, this would indicate that the earlier information may no longer be relevant to forecasting costs for the 2013–17 access arrangement period. Envestra did not provide the information requested and was unable to substantiate a material difference between the two groups of contracts. Envestra stated that:[275]

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270 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.4.

271 NGR, r. 74(2).

272 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.5.

273 Based on a sample of Envestra's contracts including, APT219/02, APT219/06, APT219/07, APT219/08, APT219/09 and APT219/10.

274 AER, *information request FD8a, 14* December 2012

275 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.8.

> Envestra's submission is not that the revealed cost outcomes under the current contracts are higher than that incurred under the obsolete contracts in 2008/09 and 2009/10. Our primary argument is that the current contracts reflect revealed cost information that will apply over the 2013 to 2017 period (and hence reflects current labour and material costs and better reflects the scope of works going forward).

The AER considers that Envestra has failed to demonstrate a material difference between the November 2010 contracts and the contracts in place in 2008–10. As such, the AER does not have any evidence from which to conclude that the earlier contracts are no longer relevant and/or unsuitable for inclusion in an average.

The AER considers that in the absence of information to demonstrate the earlier data is no longer relevant, using a historical average over a longer period is more likely to reflect the scope of works undertaken in 2013–17.

Additional connections arising from extension programs

The AER's draft decision did not accept any of Envestra's five proposed extensions.[276] The AER did not consider Envestra had received agreement from the government or private developers and there was not sufficient certainty that these projects would proceed.[277] Envestra adopted the AER's position on three of the extensions. However, Envestra resubmitted the following projects:[278]

- Victorian Regional Towns; and
- Merrifield.

As discussed in section 4.4.8 the AER has accepted these two extensions.

Further the AER accepted another extension project, which Envestra provided subsequent to the revised proposal.[279]

As such, the AER considers it appropriate to include forecast expenditure on connecting customers to these extensions in the forecast connections capex.

4.4.3 Meter replacement

The AER does not accept Envestra's revised forecasts. The AER proposes to replace Envestra's proposed capex allowance with $27.06 million and $0.44 million ($2012, unescalated direct cost, excluding overheads) capex for the 2013–17 access arrangement period, for Victoria and Albury respectively. The AER considers these amounts are consistent with the NGR requirements.

Primarily, the AER considers the amendments in Envestra's revised proposal are not necessary to address matters raised in the AER's draft decision nor are the amendments approved by the AER.[280] Nonetheless, the AER in making its final decision has considered the relevance of the information submitted by Envestra on its revised methodology. The AER has used this information to reassess the methodology adopted by Envestra in its initial proposal.

276 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.65.
277 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. pp.65-69.
278 Envestra, *Envestra, Revised access arrangement proposal,* Attachment 7.7 Response to Draft Decision - Capital Expenditure (public).doc, 9 November 2012. p.24.
279 Envestra, *Response to AER information request FD3b*, 17 January 2013.
280 NGR, r. 60 (2)

Envestra initially proposed total meter replacement capex of $31.10 million ($2011, unescalated direct costs, excluding overheads) for the Victorian network and $0.44 million ($2011, unescalated direct costs, excluding overheads) for the Albury network for the 2013–17 access arrangement period.[281]

The AER in its draft decision considered there was an error in the manner Envestra incorporated the forecast unit rates into its capex forecast model and a small discrepancy in the volume forecasts.[282] Envestra acknowledged the error in the unit rates incorporated into its capex forecast model.[283] Apart from this error, the AER accepted Envestra's unit rate forecasts including the methodology proposed by Envestra for determining those forecasts and considered Envestra's meter replacement program to be prudent and efficient.[284]

In Envestra's revised proposal, Envestra proposed an alternative methodology for forecasting the unit cost of meter replacements.[285] Envestra's revised proposal is to use unit rates based on a weighted average over the 2010/11 and 2011/12 financial years. Envestra stated that its revised its approach to forecasting unit rates developed in response to the draft decision provides for the best estimate arrived at on a reasonable basis and sought to apply its revised approach to all unit rates.[286] Envestra's revised proposal was for total meter replacement capex of $33.75 million ($2011, unescalated direct costs, excluding overheads) for the Victorian network and $0.54 million ($2011, unescalated direct costs, excluding overheads) for the Albury network for the 2013–17 access arrangement period.[287]

Table 4.16 Final decision Victoria network - Residential meter replacement[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	2.7	5.8	3.7	9.6	2.7	24.5
AER draft decision	2.4	4.8	3.1	7.7	2.4	20.4
Envestra revised proposal	2.7	5.9	3.7	9.8	2.8	25.0
AER final decision	2.4	4.8	3.1	7.7	2.4	20.4

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.17 Final decision Albury network - Residential meter replacement[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.07	0.06	0.09	0.05	0.04	0.32
AER draft decision	0.07	0.06	0.09	0.05	0.04	0.32

281 Envestra, *Access Arrangement Information: Attachment 7.6 Forecast capex model*, 30 March 2012.
282 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.30.
283 Envestra *Response to AER information request 8 – follow up – 26 June 2012*
284 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.30.
285 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.5.
286 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.9.
287 Envestra, *Envestra, Revised access arrangement proposal,* Attachment 7.7 Response to Draft Decision - Capital Expenditure (public).doc, 9 November 2012. p.24.

Envestra revised proposal	0.06	0.05	0.09	0.05	0.04	0.29
AER final decision	0.07	0.06	0.09	0.05	0.04	0.32

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.18 Final decision Victoria network - Industrial and commercial meter replacement[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	1.0	1.3	1.8	1.4	1.2	6.6
AER draft decision	1.0	1.2	1.7	1.4	1.3	6.7
Envestra revised proposal	1.4	1.7	2.4	1.8	1.5	8.8
AER final decision	1.0	1.2	1.7	1.4	1.3	6.7

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.19 Final decision Albury network - Industrial and commercial meter replacement [(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.03	0.02	0.03	0.02	0.02	0.12
AER draft decision	0.03	0.02	0.03	0.02	0.02	0.12
Envestra revised proposal	0.05	0.05	0.06	0.04	0.05	0.25
AER final decision	0.03	0.02	0.03	0.02	0.02	0.12

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Envestra's revised methodology

Rule 60 of the NGR provides in part:

> (1) The service provider may, within the revision period, submit additions or other amendments to the access arrangement proposal to address matters raised in the access arrangement draft decision.
>
> (2) The amendments must be limited to those necessary to address matters raised in the access arrangement draft decision unless the AER approves further amendments.
>
> Example:
>
> *The AER might approve amendments to the access arrangement proposal to deal with a change in circumstances of the service provider's business since submission of the access arrangement proposal.*

Under r 60(2) of the NGR, unless the addition or amendment is necessary to address a matter raised in the draft decision, it cannot be included in Envestra's revised proposal unless the AER approves the amendment. This allows the service provider to address the concerns the AER has raised in its draft decision before the AER makes its final decision. In making its final decision on the proposal as revised, under r 62(1) of the NGR the AER must also consider submissions made in response to the access arrangement draft decision and any other matters the AER considers relevant.

In its draft decision, the AER accepted Envestra's bottom-up forecast methodology for meter replacement capex. The AER did not raise any concerns in relation to that methodology or require any amendment to that methodology. The AER does note that its draft decision corrected two small errors in Envestra's forecast.[288] Those errors were transposition errors, where an incorrect forecast was entered into the capex model, and were not a change to the nature of the methodology Envestra used to forecast meter replacement capex.

Envestra's revised forecasting methodology is based on historical average unit rates, which is different from the bottom-up forecasting methodology the AER accepted in its draft decision. As the AER did not raise issues with the forecast methodology in its draft decision, this new methodology cannot be characterised as addressing matters raised in the AER's draft decision.

The AER notes that this is distinguishable from the AER's draft decision on connection unit rates. For connection unit rates, the AER's draft decision did not accept the methodology proposed by Envestra in its initial proposal and instead applied a weighted average approach.[289] Thus, a matter was raised and Envestra addressed this in its revised proposal. Envestra's submission that there should be consistency between the determination of unit rates for connection and meter replacement is not supported by any reasoning and the AER considers this point does not address an issue raised in the draft decision.

As noted above, r. 60 (2) of the NGR does allow the AER to approve further amendments to Envestra's proposal. This may occur, for example, where there is a change in circumstances of the service provider's business, since submission of the access arrangement proposal. The AER notes that Envestra has not identified any material change in the way it undertakes its meter replacement program since it submitted its revised proposal that may affect its proposed meter replacement capex. The AER understands that:

- Envestra is still sampling gas meters and allocating useful life and a forecast replacement date to meters.
- Envestra is still removing meters at the forecast replacement date and refurbishing these meters where possible.
- Envestra is still removing faulty meters as needed.
- Envestra is still undertaking field life extension testing.
- The AER is not aware of Envestra entering into new contracts after it submitted its initial proposal.

The AER considers that there is no other basis or justification for Envestra to revise its methodology and Envestra has not expressly identified any basis for doing so. As such, the AER does not approve this amendment under r. 60 (2) of the NGR.

As provided for in r. 62 (1) of the NGR, the AER has considered whether the information provided by Envestra in its revised proposal is relevant to its examination of the methodology proposed by Envestra in its initial proposal (and accepted by the AER in its draft decision).

288 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.30.

289 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.20.

Envestra's initial proposal provided the AER with a bottom-up build of its costs, which were based on a tendered rate for meter purchase and a number of assumptions regarding contractor costs.[290] Envestra's initial proposal specifically disregarded the use of average actual costs as Envestra did not consider it accounted for all relevant factors. Envestra stated:[291]

> With variable cost depending upon the volume of meter changes, the overall cost of PMCs fluctuates depending on the volume of meter changes from year to year, number of new meters versus recycled meters, whether meter families pass or fail test results, etc. Therefore while current costs provide some indication of the cost for this activity, it cannot be relied upon to provide best estimates of future costs. Best estimates in relation to this activity are obtained by a bottom-up approach (as set out in the spreadsheet contained in AAI Attachment 7.5A)

The AER examined Envestra's initial proposal and accepted it in its draft decision. In making its draft decision, the AER stated:[292]

> Envestra supplied a model demonstrating the component costs of its meter replacement program. This allowed the AER to examine:
>
> - Costs of new and refurbished meters (for both residential and commercial meters)
>
> - Labour costs (including both internal and external labour)
>
> - Other costs—including transport costs and warehousing of refurbished meters
>
> In response to an AER information request, Envestra provided some additional information on the components of its estimate of meter unit costs. Further, Envestra provided contracts demonstrating the costs of new and refurbished meters. The AER also compared the total cost per meter (including purchase costs, refurbishment and installation costs) against other gas distributors and found that Envestra's proposed rates compared favourable against these other gas distributors. Having considered the available information and the overall level of costs proposed by Envestra, the AER considers the corrected unit rates provided by Envestra are prudent, efficient and comply with r. 79(1)(a) of the NGR.

In its revised proposal Envestra provided a revised forecast methodology, which was based on average historical costs. Envestra submitted this was the appropriate methodology because the resultant unit rates:[293]

> (a) reflect revealed efficient cost outcomes under the new/current contracts entered into by Envestra in November 2010 (and provided to the AER), which contracts (and costs) will apply over the 2013 to 2017 access arrangement period;
>
> (b) reflect the scope of work to be undertaken over the 2013 to 2017 access arrangement period;
>
> (c) have taken into account two years of relevant information to avoid potential errors from basing forecasts on a single year of information; and
>
> (d) reflects good industry practice in forecasting unit rates for business planning purposes.

The AER asked Envestra to explain why the unit rate forecast in its initial proposal was not robust. Envestra stated:[294]

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290 Envestra, *Envestra, Revised access arrangement proposal, 120330 Attachment 7.5A Unit Rates Victoria Spreadsheet (confidential).xls*, 9 November 2012.

291 Envestra, *Access Arrangement Information: 120330 Attachment 7.1 Capital Expenditure- Victoria Unit Rates (confidential).doc*, 30 March 2012. p.6.

292 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012. p.36.

293 Envestra, *Envestra, Revised access arrangement proposal, Attachment 7.1A Response to Draft Decision - Capital Expenditure - Vic Unit Rates (confidential).doc*, 9 November 2012. p.5.

> As explained earlier, Envestra has revised its approach to forecasting unit rates in response to the Draft Decision. Envestra considers that its revised approach to forecasting unit rates developed in response to the Draft Decision provides for a best estimate arrived at on a reasonable basis. Envestra has sought to apply its revised approach to all unit rates.
>
> In regards to PMC, the bottom-up model originally used contained various assumptions concerning labour and materials costs. In some cases, the assumptions used are different to the information revealed by historic costs, which led Envestra management to further test the original proposal.
>
> Envestra could not provide any robust reason for the difference and could not substantiate all of the assumptions. Consequently Envestra could not support that forecasting approach as being compliant with rule 74(2). Envestra also similarly stepped away from other forecasts of unit rates that incorporated variances from historical cost performance. For example, in response to the Draft Decision Envestra no longer sought to increase unit rates for the expected increase in contractor costs (see response to question 6).

The AER accepts that a bottom-up model necessarily contains a number of assumptions and that there is always some uncertainty regarding the best assumption to use. However, the AER considers that a properly constructed bottom-up forecasting approach is the best forecasting approach to apply to this capital works program. This is because the bottom-up approach can account for the anticipated changes in the volume of replacements and refurbishments due to fluctuations in the number of meters reaching the end of the useful life or failing test. Further, the AER notes that both SP AusNet and Multinet have used a bottom-up forecast for meter replacement capex and so it appears that a bottom-up forecast would be in accordance with good industry practice.[295]

The evidence that Envestra has presented to indicate its initial forecast is incorrect is limited to the observation that the bottom-up forecast is different from the average historical costs.[296] However, as noted above, there are a number of reasons why this may be the case. Envestra is aware of this and has previously stated that historical costs should be a guide only and the best estimates in relation to this meter replacement program are obtained by a bottom-up approach.[297] Further, Envestra stated that it cannot provide robust reasons for the differences between the two forecasts.[298] Envestra has not pointed to particular assumptions underlying its bottom-up build which it no longer considers correct or demonstrated that any particular aspect of this bottom-up forecast is inappropriate.[299] Therefore, the AER considers that it has not been provided with evidence that Envestra's initial proposal is not conforming capex[300] or that the forecast was not arrived at on a reasonable basis or the best forecast possible.[301]

The AER considers that, on balance, Envestra's initial bottom-up forecast is arrived at on a reasonable basis and represents the best forecast possible in the circumstances.[302] In addition to its reasons set out in its draft decision, the AER has reached this conclusion on the basis of the weaknesses in Envestra's revised forecasting approach. In particular, the revealed costs approach put forward by Envestra does not reflect the best estimate of future costs as it does not account for

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294 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.9.

295 SP AusNet, *Response to AER information request 8, Meter Unit Rates - AER.xlsx*, 22, June 2012. Multinet, *Revised access arrangement proposal, Appendix 3-1 MG Capex Model.xlsx*, 9 November 2012

296 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.9.

297 Envestra, *Access Arrangement Information: 120330 Attachment 7.1 Capital Expenditure- Victoria Unit Rates (confidential).doc*, 30 March 2012. p.7.

298 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.9.

299 Envestra, *Response to AER information request FD8a, Envestra information request unit rates FINAL.DOC,* 21 December 2012. p.9.

300 NGR, r. 79(1).

301 NGR, r. 74(2).

302 NGR. r.74(2)

variations in the volume of meter changes from year to year, number of new meters versus recycled meters, whether meter families pass or fail test results. By failing to take account of the volume of new and refurbished meters expected in 2013–17, Envestra's revised methodology reflects the scope of works undertaken in 2010/11 and 2011/12 and does not reflect the scope of works expected to be undertaken in the 2013–17 access arrangement period.

4.4.4 Augmentation

Victorian network

The AER's final decision is to not approve Envestra's proposed capex of $36.7 million ($2011, unescalated direct costs, excluding overheads). The AER does not approve the $10.8 million ($2011, unescalated direct costs, excluding overheads) of capex proposed for augmentation of the Dandenong to Crib Point transmission pipeline. The proposed capex is not prudent and efficient[303] and is not justifiable[304] for the following reasons:

- modelled pressures in the network area is at or marginally above the minimum system pressure for the duration of the 2013–17 access arrangement period, and
- Envestra's forecasts of customer numbers and demand growth in the network area are overstated compared with the expected growth in the network area.

Envestra adopted the AER's draft decision for the remaining 20 projects and a provision for small augmentations worth $25.9 million ($2011, unescalated direct costs, excluding overheads) of capex.[305] The AER received no further information addressing these particular individual augmentation projects and the allowance for minor projects in Envestra's revised proposal. The AER therefore considers the remaining projects in Envestra's revised proposal are justifiable[306] and prudent and efficient[307] for the following reasons:

- the proposed augmentation projects are necessary to maintain or improve the safety and integrity of services
- the proposed solutions are reasonable in light of forecast connections growth to address a decline in gas pressure along the constrained network areas
- the input costs of the proposed augmentation projects are within industry standard ranges and reflect that of a prudent and efficient service provider.[308]

The AER considers that no capex allowance is required for the Dandenong to Crib Point transmission pipeline. The AER considers that $25.9 million ($2011, unescalated direct costs, excluding overheads) of augmentation expenditure for Envestra's Victorian network is conforming capex under the NGR[309] (see Table 4.20).

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303 NGR, r. 79(1)(a).
304 NGR, r. 79(2)(c)(i)-(iii).
305 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential)*, 9 November 2012.
306 NGR, r. 79(2)(c)(i)-(iii).
307 NGR, r. 79(1).
308 Zincara, *Review of Envestra's Capital Expenditure*, 21 September 2012, pp.8-36; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.38-44.
309 NGR, r. 79(1).

Table 4.20 Final decision Victoria network - Augmentation[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	4.1	24.3	2.4	12.5	2.6	45.8
AER draft decision	4.1	7.6	2.0	10.7	1.6	25.9
Envestra revised proposal	4.1	7.6	2.0	12.5	10.6	36.7
AER final decision	4.1	7.6	2.0	10.7	1.6	25.9

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Envestra initially proposed augmentation capex of $45.8 million ($2011, unescalated direct costs, excluding overheads) for the Victorian network for the 2013–17 access arrangement period.[310]

The AER was satisfied that the majority of Envestra's augmentation expenditure was justifiable[311] as it is necessary to maintain or improve the safety and integrity of services or meet regulated minimum pressure requirements. The AER's draft decision:

- accepted $25.9 million (($2011, unescalated direct costs, excluding overheads) of Envestra's proposed augmentation capex for the Victorian network, approving 18 of the 21 projects proposed and the provision for small augmentations
- did not accept capex for three of Envestra's proposed augmentation projects for its Victorian network as it considered the augmentation was not justifiable.[312] This was because the demand forecasts approved by the AER for the relevant areas did not indicate that system pressures were likely to fall below the minimum system pressure. Therefore the AER considered proposed augmentation was not required during the 2013–17 access arrangement period
- did not accept the proposed provision for small augmentations (HP unspecified) as the AER considered the proposed expenditure was not prudent and efficient[313] or justifiable[314]. Envestra forecast an exponential increase in the provision which was not justified.[315]

In its submission to the AER, the EUCV stated that AEMO's 2012 Gas Statement of Opportunities indicated that the amount of gas likely to be used in the 2013–17 access arrangement period is considerably less than was used in the 2008–12 access arrangement period. The EUCV considered this top-down analysis indicated that there is no need to augment the distribution networks to accommodate gas usage growth. Further, the EUCV considered augmentation needs in the 2013–17 access arrangement period would be quite modest and only needed in areas of expansion of the distribution networks to accommodate new gas users.[316]

310 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, p.38-44; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.79.

311 NGR, r. 79(2)(c)(i)–(iii).

312 NGR, r. 79(2)(c)(i)-(iii).

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

314 NGR, r. 79(2)(c)(i)–(iii); AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp.38-44; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.81-82.

315 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, p.41; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.81.

316 Energy Users Coalition of Victoria, *Submission to the AER: AER draft decision and revised applications from Envestra, Multinet and SP AusNet*, January 2013, pp 18–19.

The AER accepts the EUCV's observation that system-wide demand is not forecast to increase in the 2013–17 access arrangement period. However, this does not necessarily mean there is no need to augment the distribution networks because augmentation capex may be required to:

- reinforce sections of distribution networks that are supply constrained
- ensure the distribution networks are capable of continuing to satisfy demand for services, particularly in areas of high growth.

In its revised proposal Envestra adopted the AER's draft decision for the Victorian network, except for one augmentation project (Dandenong to Crib Point Transmission Augmentation)[317]. Envestra resubmitted the Dandenong to Crib Point Transmission Augmentation project (business case V78) with a revised forecast growth of 1.6 per cent per annum for the period 2013–17.

In assessing this reproposed project the AER considered the timing of the proposed works, the capacity benefit which results from the augmentation solution and the input costs of the project. In undertaking this assessment the AER sought input from Zincara, examined the business cases and requested further information from Envestra.

Envestra provided growth forecasts for the suburbs which depend upon the Dandenong to Crib Point Transmission Pipeline and modelled pressure forecasts for the 2013-17 access arrangement period.[318]

Information from the local council and the Victorian Department of Planning and Community Development (DPCD) indicates that the annual growth rate in the area is lower than the growth forecasts used by Envestra to forecast system pressures.[319] For 2011 to 2016 the DPCD project average annual growth of 1.3 per cent for the fastest growing portion of the Mornington Peninsula[320]. Forecast.id project annual growth to decline from 1.3 per cent in 2013 to 0.9 per cent in 2018.[321] On the basis of advice provided by the Zincara the AER considers the proposed augmentation is not required during the 2013–17 access arrangement period for the following reasons:

- the pressures in 2018 at the two regulators are above or only marginally below the regulated minimum pressures
- the forecast growth for 2013–18 is most likely to be less than Envestra's forecast, therefore the pressures in 2018 are likely to be lower than those modelled by Envestra.[322]

Albury network

The AER's final decision is to approve Envestra's proposed capex of $0.4 million ($2011, unescalated direct costs, excluding overheads) (see Table 4.21).

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317 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential)*, 9 November 2012.

318 Envestra, *Response to AER Information Request FD1a*, 29 November 2012, pg. 1; *V78A Response to Draft Decision – Network Augmentation Dandenong to Crib Pt TP*, November 2012, pp. 2; Envestra, *Response to AER Information Request FD1a*, 29 November 2012, pg. 2.

319 Zincara, *Review of Envestra's Capital Expenditure – Addendum*, March 2013, p.9.

320 Victorian Department of Planning and Community Development, Victoria in Future 2012 data tables, VIF2012_Projected_Pop_Hholds_Dwellings_SLA_LGA_SSD_SD_2011_2031_v2.xls, <http://www.dpcd.vic.gov.au/home/publications-and-research/urban-and-regional-research/census-2011/victoria-in-future-2012/vif-2012-data-tables> accessed 19 January 2013. The fastest growing statistical local area is SLA 253341 Mornington Peninsula (s) East. The other two SLA's have annual growth over the 2011-16 period of 0.8 per cent for Mornington Peninsula (s) South and 1.0 per cent for Mornington Peninsula (s) West.

321 Zincara, *Review of Envestra's Capital Expenditure – Addendum*, 1 February 2013, pp. 10–11.

322 Zincara, *Review of Envestra's Capital Expenditure – Addendum*, March 2013, p.9.

Envestra initially proposed augmentation capex of $0.4 ($2011, unescalated direct costs, excluding overheads) for the Albury network for the 2013–17 access arrangement period.[323]

Envestra adopted the AER's draft decision for $0.4 million ($2011, unescalated direct costs, excluding overheads) of augmentation capex.[324] The AER received no further information addressing Envestra's revised proposal. For the reasons in the draft decision,[325] the AER therefore considers Envestra's revised proposal is justifiable[326] and prudent and efficient.[327] The proposed augmentation project is necessary to maintain or improve the safety and integrity of services and the input costs of the proposed augmentation projects are within industry standard ranges.[328]

Table 4.21 Final decision Albury network - Augmentation[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.008	–	–	–	0.413	0.421
AER draft decision	0.008	–	–	–	0.413	0.421
Envestra revised proposal	0.008	–	–	–	0.413	0.421
AER final decision	0.008	–	–	–	0.413	0.421

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

4.4.5 Information Technology (IT)

Victorian network

The AER's final decision is to not approve Envestra's proposed IT capex of $16.4 million ($2011, unescalated direct costs, excluding overheads) for the 2013–17 access arrangement period. This is because the AER considers that the $1.8 million of capex reproposed for Envestra's knowledge management project is not necessary or prudent and efficient expenditure.[329]

Envestra adopted the AER's draft decision for the remaining five IT projects[330] [331] worth $14.6 million ($2011, unescalated direct costs, excluding overheads) of capex. The AER received no further information addressing these particular IT projects. The AER therefore considers these five projects in

323 Envestra, *Access arrangement information: 120330 Attachment 6.1 Albury Opex and Capex Business Cases (confidential), A64 Augmentation Albury*, March 2012.

324 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Albury Capex Forecast Model (confidential)*, 9 November 2012.

325 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp. 38-44; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.79-80.

326 NGR, r. 79(2)(c)(i)-(iii).

327 NGR, r. 79(1).

328 Zincara, *Review of Envestra's Capital Expenditure*, 21 September 2012, pp.8-36; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4,* September 2012, pp.38-44.

329 NGR, r.79(1).

330 These are IT road maps initiatives, applications renewals, IT infrastructure upgrade and renewals, interval meter data management and head office IT.

331 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential)*, 9 November 2012.

Envestra's revised proposal are justifiable[332] and prudent and efficient[333] for the reasons set out in the draft decision.[334]

The AER considers that no allowance is required for the knowledge management project.

The AER considers that IT capex of $14.6 million ($2011, unescalated direct costs, excluding overheads) is conforming capex under the NGR[335] (see Table 4.22).

Table 4.22 Final decision Victoria network - IT[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	6.8	7.2	2.9	0.2	0.7	17.7
AER draft decision	3.7	7.2	2.9	0.2	0.7	14.6
Envestra revised proposal	5.5	7.2	2.9	0.2	0.7	16.4
AER final decision	3.7	7.2	2.9	0.2	0.7	14.6

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

The AER notes the Energy Users Coalition of Victoria's statement that they are concerned at the level of IT and SCADA expenditure that the AER approved in the draft decision, which they stated "appears to be excessive."[336] The AER has applied the capex criteria under the NGR to assess the prudency and efficiency of capex and only approved expenditure which meets this criteria.

Knowledge management

The AER's final decision is to not approve Envestra's proposed expenditure of $1.8 million for the knowledge management project. The AER considers that the knowledge management project is not necessary or prudent and efficient[337] because:

- Envestra has not provided any additional information in its revised proposal that justifies the knowledge management project based on a specific change in its network safety or integrity, or its regulatory obligations[338]
- Envestra has not submitted quantified net benefits which demonstrate that the project delivers an overall positive economic value[339]

332 NGR, r. 79(2)(c)(i)-(iii).
333 NGR, r. 79(1).
334 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, pp. 65-70; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp 84-85.
335 NGR, r.79(1).
336 Energy Users Coalition of Victoria, *Submission to the AER: Draft decision and SP AusNet, Envestra and Multinet revised access arrangement proposals*, January 2013, p. 20.
337 NGR, r.79(1)(a) and r.79(2).
338 NGR, r.79(2)(c)(i)-(iii).
339 NGR, r.79(2)(a).

- Envestra has not demonstrated that its current approach to knowledge management in Victoria is inadequate.

Envestra initially proposed a knowledge management project to supports records management and documentation of business processes.[340]

In its draft decision, the AER concluded that this project was not justified on any specific regulatory or legislative requirement, nor any change in Envestra's operating environment.[341] The AER considered that the expenditure did not comply with the provisions in the NGR.[342]

In its revised proposal, Envestra re-submitted the knowledge management program in the same form as its initial proposal, at a cost of $1.8 million ($2011, unescalated direct costs, excluding overheads) over the 2013–17 access arrangement period. Envestra asserted that the knowledge management program is driven by the general demands of the regulatory environment and the loss of skills and knowledge due its ageing workforce, as opposed to a specific regulatory event.[343] Envestra noted that the AER had previously determined that the knowledge management program was prudent and efficient in both the South Australian and Queensland access arrangement decisions.[344]

Envestra submitted that:

- "it is not possible to provide evidence of a benefit when the project has yet to be undertaken"
- "many of the benefits….would be intangible"
- "the NGR do not require evidence of the benefits".[345]

The AER disagrees with Envestra's statement that the NGRs do not require evidence of the benefits necessary to justify the proposed capex. As Envestra states the AER must consider whether the expenditure "would be incurred" by a prudent service provider.[346] In this case, where there is no new operating or regulatory requirement, the AER considers that a prudent service provider would undertake the project only if there were positive net benefits. This necessarily involves an understanding of the expected quantum of benefits associated with undertaking the project. On the basis that Envestra is not able to demonstrate that there are expected tangible benefits associated with undertaking this project, the AER assesses that a prudent service provider acting efficiently would not undertake this project.

In arriving at its final decision, the AER has had regard to the materials submitted by Envestra for the Victorian, South Australian and Queensland Gas Access Arrangement Reviews. This included consultant reports which reviewed the program for the South Australian[347] and Victorian[348] Gas Access Arrangement Reviews.

340 Envestra, *Access Arrangement Proposal*, March 2012, Business Case VA201 Knowledge Management (capex opex).

341 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp. 67-68; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp 84-85..

342 NGR, r. 79(2)(c)(i)-(ii) and r. 79(1).

343 Envestra, *Revised Access Arrangement Information: Business case VA201A*, November 2012, pp. 4–5.

344 Envestra, *Revised Access Arrangement Information: Business case VA201A*, November 2012, p. 5.

345 Envestra, *Revised access arrangement proposal: Business case VA201A Response to Draft Decision - Knowledge Management*, November 2012, p. 6.

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

347 Wilson Cook & Co, *Review of Expenditure of Queensland & South Australian gas distributors: Envestra Ltd (South Australia)*, December 2010, p. 61.

The AER considers that the information Envestra submitted for the South Australian and Queensland decisions presented the same reasons and did not present a quantification of the benefits associated with the program. The lack of quantified benefits was the basis for the AER's consultant Wilson Cook's view that the opex should not be approved in the South Australian decision.[349] The AER notes that the opex allowance was not approved in the South Australian and Queensland decisions.[350] There was no additional information submitted by Envestra for the South Australian or Queensland decisions which added to or altered the AER's view with respect to the Victorian decision.

The AER's final decision is to not approve Envestra's proposed capex for its knowledge management program as the AER assesses that it does not comply with the provisions of the NGR.[351]

The AER considers that an allowance is not required for this program.

Albury network

The AER's final decision is to not approve Envestra's proposed IT capex of $0.57 million ($2011, unescalated direct costs, excluding overheads) for the 2013–17 access arrangement period. This is because the AER considers that the $0.06 million of capex reproposed for Envestra's knowledge management project is not necessary or prudent and efficient expenditure[352] for the reasons outlined for the same project under the Victorian network above.

Envestra adopted the AER's draft decision for the remaining four projects[353] worth $0.51 million ($2011, unescalated direct costs, excluding overheads) of capex[354]. The AER received no further information addressing these particular IT projects. The AER therefore considers these four projects in Envestra's revised proposal are justifiable[355] and prudent and efficient[356] for the reasons set out in the draft decision[357].

The AER considers that no allowance is required for the knowledge management project. The AER considers that IT capex of $0.51 million ($2011, unescalated direct costs, excluding overheads) is conforming capex under the NGR[358] (see Table 4.23).

Envestra initially proposed $0.064 million ($2011, unescalated direct costs, excluding overheads) for the knowledge management program[359]. In the draft decision, the AER did not approve any capex for the program[360]. Envestra reproposed the program unchanged from its initial proposal[361]. The AER's

348 Nous Group, *Victorian gas distribution access arrangement 2013-17: Review of IT expenditure*, Final Report, 13 August 2012, pp. 21–22.

349 Wilson Cook & Co, *Review of Expenditure of Queensland & South Australian gas distributors: Envestra Ltd (South Australia)*, December 2010, p. 61.

350 AER, *Access arrangement proposal for the Envestra SA gas network draft decision*, February 2011, p. 164; AER, Access arrangement proposal for the Envestra QLD gas network draft decision, February 2011, p. 151.

351 NGR, r. 79(2)(c)(i)-(ii) or r. 79(1).

352 NGR, r.79(1).

353 These are IT road maps initiatives, applications renewals, IT infrastructure upgrade and renewals and interval meter data management.

354 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Albury Capex Forecast Model (confidential)*, 9 November 2012.

355 NGR, r. 79(2)(c)(i)-(iii).

356 NGR, r. 79(1).

357 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp. 65-70; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p 85.

358 NGR, r.79(1).

359 Envestra, *Access Arrangement Information: Business case VA201A*, March 2012, p. 3.

360 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp. 67-68.

361 Envestra, *Revised Access Arrangement Information: Business case VA201A*, November 2012, p. 5.

final decision is to not approve the program for the reasons set out above under the Victorian network section.

Table 4.23 Final decision Albury network - IT[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.238	0.255	0.100	0.004	0.023	0.620
AER draft decision	0.128	0.255	0.100	0.004	0.023	0.510
Envestra revised proposal	0.192	0.255	0.100	0.004	0.023	0.574
AER final decision	0.128	0.255	0.100	0.004	0.023	0.510

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

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4.4.6 SCADA

The AER's final decision is to approve Envestra's proposed SCADA capex of $1.0 million ($2011, unescalated direct costs, excluding overheads) for the Victorian network and $0.09 million ($2011, unescalated direct costs, excluding overheads) for the Albury network for the 2013-17 access arrangement period (see Table 4.24 and Table 4.25).

Envestra adopted the AER's draft decision in its revised proposal[362]. The AER received no further information in relation to the proposed SCADA and for the reasons in its draft decision[363], approves the only proposed project, SCADA in regional towns (business case VA02).[364]

Envestra initially proposed $1.0 million ($2011, unescalated direct costs, excluding overheads) for the Victorian network and $0.09 million ($2011, unescalated direct costs, excluding overheads)[365] for the Albury network over the 2013–17 access arrangement period.

In the draft decision, the AER accepted the total amount of expenditure proposed by Envestra for SCADA as conforming capex.[366]

Table 4.24 Final decision Victoria network - SCADA[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total

362 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential)*, 9 November 2012; Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Albury Capex Forecast Model (confidential)*, 9 November 2012.

363 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp. 71-72; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.85.

364 NGR, r. 79(1).

365 Envestra, *Access Arrangement Information: Business case VA02A (SCADA in Regional Towns)*, March 2012, p. 2.

366 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4*, September 2012, pp. 71-72; NGR, rr. 79(1) and 79(2)(ii).

Envestra initial proposal	0.2	0.2	0.2	0.2	0.2	1.0
AER draft decision	0.2	0.2	0.2	0.2	0.2	1.0
Envestra revised proposal	0.2	0.2	0.2	0.2	0.2	1.0
AER final decision	0.2	0.2	0.2	0.2	0.2	1.0

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

Table 4.25 Final decision Albury network - SCADA[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.02	0.02	0.02	0.02	0.02	0.09
AER draft decision	0.02	0.02	0.02	0.02	0.02	0.09
Envestra revised proposal	0.02	0.02	0.02	0.02	0.02	0.09
AER final decision	0.02	0.02	0.02	0.02	0.02	0.09

Source: AER analysis.
Note: (a) Unescalated direct costs, excluding overheads.

4.4.7 Other non-demand

Other non-demand capex is capital expenditure which generally relates to replacing and upgrading individual components of the distribution network or smaller upgrades projects.

The AER's final decision is to not approve Envestra's forecast other non-demand capex of $20.0 million and $37,000 ($2011 unescalated direct costs, excluding overheads). For the Victorian and Albury networks respectively, the AER considers $18.5 million and $10,000 ($2011 unescalated direct costs, excluding overheads) is conforming capex for the 2013-17 access arrangement period in Victoria and Albury respectively. In particular, the AER considers the following projects would not be incurred by a prudent service provider acting efficiently and do not comply with the criteria for conforming capex.

- Technical training—the geographical spread of Envestra's employees is not significant enough for a prudent and efficient service provider to prioritise mobilisation of training facilities.[367]
- Flow correctors—Envestra did not provide evidence to support replacement of all existing flow correctors.[368]

Table 4.26 Victoria Final decision – Other non-demand capex ($million, 2011)[(a)]

	2013	2014	2015	2016	2017	Total

367 NGR. r.79(1)
368 NGR. rr. 79(1), 79(2) and 100(a)

Envestra initial proposal	13.0	13.9	9.1	5.8	5.5	47.3
AER draft decision	3.8	5.1	4.2	2.5	2.2	17.7
Envestra revised proposal	4.3	5.8	4.6	2.8	2.5	20.0
AER final decision	4.1	5.2	4.3	2.6	2.3	18.5

Source: AER Analysis
Note: (a) Direct costs, excluding overheads and escalation

Table 4.27 Albury Final decision – Other non-demand capex ($'000 2011)[(a)]

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	272	267	101	40	40	720
AER draft decision	2	2	2	2	2	10
Envestra revised proposal	5	17	5	5	5	37
AER final decision	2	2	2	2	2	10

Source: AER Analysis
Note: (a) Direct costs, excluding overheads and escalation

Envestra initially proposed 19 projects within other non-demand capex totalling expenditure of $47.3 million and $0.7 million ($2011 unescalated direct costs, excluding overheads) for the 2013–17 access arrangement period, in Victoria and Albury respectively.

The AER in its draft decision considered that two of the projects Envestra proposed are more relevant to the IT category; accordingly the AER considered 17 projects in the other non demand category of capex.[369] The AER in its draft decision concluded that $17.7 million and $10,000 ($2011 unescalated direct costs, excluding overheads) of the proposed amount would be incurred by a prudent service provider acting efficiently.[370]

Envestra adopted the AER's draft decision on 14 of its proposed other non-demand capex projects. The AER did not receive any further submissions on these projects. As such, for the reasons set out in the AER's draft decision, the AER accepts Envestra's revised proposal on these projects.[371]

Envestra did not adopt the AER's draft decision on other non-demand capex for the following four projects[372]:

- Technical Training
- Flow Correctors
- Storm Water Drain Survey

369 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2 Attachments*, p.85
370 NGR. r.79(1)
371 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2 Attachments*, p.85
372 Envestra, *Revised access arrangement proposal: Attachment 7.7 Response to Draft Decision: Capital Expenditure*, November 2012 p.26-29

- City Gate Lightning Protection

The AER's final decision on other non-demand capex is set out in Table 4.28 and Table 4.29

Table 4.28 Victoria Final decision – Other non-demand capex ($million 2011)[(a)]

	2013	2014	2015	2016	2017	Total
Field asset refurbishment	1.320	1.320	1.320	1.320	1.320	6.600
Dandenong to crib point pipeline	1.100	2.000	2.186	0.680	0.375	6.341
Plant and Equipment	0.891	1.331	0.281	0.231	0.231	2.965
TD Williamson	0.200	0.200	0.200	0.000	0.000	0.600
City Gate Lightning	0.129	0.129	0.118	0.107	0.107	0.590
Mains Alteration	0.109	0.109	0.109	0.109	0.109	0.545
City Gate Lagging	0.052	0.052	0.052	0.052	0.052	0.260
Storm water Survey	0.200	0.000	0.000	0.000	0.000	0.200
Anode bed replacement	0.053	0.035	0.035	0.035	0.035	0.193
Waterbath heaters	0.031	0.031	0.031	0.031	0.031	0.155
Refurb transmission valves and Pig traps	0.014	0.014	0.018	0.014	0.013	0.072
Bushfire Preparedness	-	-	-	-	-	-
Network monitoring and control	-	-	-	-	-	-
Interval meter data management	-	-	-	-	-	-
Regional Scada	-	-	-	-	-	-
NECF	-	-	-	-	-	-
Vegetation management	-	-	-	-	-	-
Flow Correctors	-	-	-	-	-	-
Technical Training	-	-	-	-	-	-
Total	4.099	5.221	4.350	2.579	2.273	18.521

Source: AER analysis

Note: (a) Direct costs, excluding escalation and overheads

Table 4.29 Albury Final decision – Other non-demand capex($'000 2011)[(a)]

	2013	2014	2015	2016	2017	Total
City Gate Lagging	2	2	2	2	2	10
Network monitoring and control	-	-	-	-	-	-
Technical Training	-	-	-	-	-	-
Interval meter data management	-	-	-	-	-	-
NECF	-	-	-	-	-	-
Vegetation management	-	-	-	-	-	-
Total	2	2	2	2	2	10

Source: AER Analysis
Note: (a) Direct costs, excluding escalation and overheads

The AER's assessment of each of these projects is set out below.

Flow Correctors

The AER's final decision is not to approve Envestra's proposed expenditure for flow correctors as it would not be undertaken by a prudent and efficient service provider. In particular the AER does not accept that it is prudent and efficient to replace functioning equipment when there is no evidence the fault rate is increasing. The AER considers a prudent and efficient business would replace these assets as they fail.

Envestra initially proposed expenditure of $0.7 million ($2011 unescalated direct costs, excluding overheads) to replace all 153 existing 15–20 year old flow correctors installed at interval metering sites with new flow correctors compatible with current operating systems.[373]

In its draft decision the AER considered that Envestra had not presented sufficient evidence for it to conclude that the proposed capex for replacing these flow meters would be undertaken by a prudent and efficient business.[374] The AER considered a prudent and efficient business would continue Envestra's current practice of inspecting flow meters on a six monthly basis and would replace individual flow meters when a problem is identified.[375]

373 Envestra, *Access Arrangement Information: Attachment 6.1 Business case V24 Flow Correctors*, 30 March 2012, p. 1.
374 NGR, r. 79(1); AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012, p.58.
375 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012, p.58.

Envestra did not adopt the AER's draft decision,[376] Envestra asserted that the forecast expenditure is conforming capex.[377] Envestra submitted that: [378]

> While Envestra does not consider that it is in breach of the Code at the current time, the implication of the AER approach in its Draft Decision is that a service provider should be in breach of a regulatory obligation before taking action to avert that breach.

Envestra submitted that the AER did not:[379]

- recognise the risk to Envestra of breaching its regulatory obligations if, as expected, the occurrence of erroneous data increases;
- recognise that maintaining obsolete assets that have reached the end of their useful life is not sustainable nor is it good industry practice;
- provide any engineering evidence or commentary: that indicated when the assets should be replaced, if not in the 2013-17 period; or concerning the risks associated with not replacing the assets.

The AER considers that a service provider should not be in breach of a regulatory obligation before it takes action to prevent that breach. The AER accepts that timely action on a service provider's behalf is preferable to a breach. However, in its revised proposal Envestra provided no evidence that the current flow correctors are malfunctioning and need replacing or that this is likely to occur over the 2013–17 access arrangement period. Further, Envestra provided no evidence of increased fault rates, therefore there is no indication that a breach of Envestra's regulatory requirements is imminent or likely. As such, Envestra has not demonstrated these assets are at the end of their useful life and so has not demonstrated they need to be replaced.

The AER considers that it is not prudent and efficient to replace functioning equipment when Envestra has provided no evidence that there is, or will be, an increase in erroneous data it collects. For the reasons set out in its draft decision, the AER considers a prudent and efficient business would maintain its inspection program and replace these assets as they fail.[380] Based on the above the AER considers that this proposed expenditure would not be incurred by a prudent service provider acting efficiently.[381]

Technical Training

The AER's final decision is to not approve Envestra's proposed capital expenditure for Technical Training as it would not be undertaken by a prudent and efficient service provider.[382]

In particular the AER does not accept that Envestra has a large enough geographical spread of employees in need of technical training to justify a mobile training facility.

Envestra initially proposed $0.8 million ($2011 unescalated direct costs, excluding overheads) for the development of interactive online computer based training packages and e-courses to enhance

376 Envestra, *Revised access arrangement proposal Attachment V24A Response to Draft Decision – Flow Correctors* November 2012
377 NGR, r. 79(1).
378 Envestra, *Revised access arrangement proposal Attachment V24A Response to Draft Decision – Flow Correctors* November 2012, p.4
379 Envestra, *Revised access arrangement proposal Attachment V24A Response to Draft Decision – Flow Correctors* November 2012, p.5
380 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012, p.58.
381 NGR, rr. 79(1) and 79(2)
382 NGR. r.79(1)

learning and skill development.[383] The project would develop training solutions through interactive online computer based training, and e-courses that use 3D simulations to provide enhanced operator training.[384]

The project has both an opex and capex component. As set out in attachment 7, the AER does not approve the opex component of this project on the basis that Envestra would only undertake this project if it received commensurate productivity improvements. The AER's consideration of the capex component is set out below.

The AER in its draft decision considered Envestra has not demonstrated that expanding its training program would be undertaken by a prudent and efficient service provider acting in accordance with accepted good industry practice.[385] The AER considered that Envestra's current level of training is sufficient to ensure its staff have at least proper industry accreditation and is compliant with relevant safety standards.[386]

Envestra did not adopt the AER's draft decision and considers that improved training is required to offset declining productivity arising from an ageing workforce.[387] Furthermore Envestra submitted that a prudent service provider would make continual improvements in systems and processes, including the delivery of training to personnel.[388] In its revised proposal Envestra reiterated that the expenditure was necessary to overcome a skills shortage associated with a material increase in new employees and contractors over the forecast period.[389]

The AER notes that the project provides mobile training resources to supplement those currently held at a fixed location.[390] Envestra states that such a mobile training facility is required because of the network's geographic footprint, allowing one trainer and equipment to visit multiple operatives at remote locations.[391] In response to the AER's information request, Envestra provided information additional to the age distribution, including the geographical location of these employees.[392] The AER acknowledges Envestra has an ageing workforce (71% is aged 45 or above) and that a prudent and efficient business may address this through improving training methods. However, the AER considers that there is not a significant enough geographical spread of Envestra's employees to consider a mobile technical training facility justified.[393] The AER notes 71.2% of Envestra's employees are situated in Thomastown, with 94.4% of employees within a 200km radius of this location.[394] Furthermore from this information the AER considers that the majority of Envestra's employees in far

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383 Envestra, *Access Arrangement Information*,30 March 2012, *Attachment 6.1 Business case VA23 Technical Training Modules (capex opex)*

384 Envestra Victoria and Albury, *Revised Access Arrangement proposal: Attachment 7.7 Response to Draft Decision Capital Expenditure,* November 2012, p. 26.

385 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 2 Attachments*, September 2012, p.94

386 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 2 Attachments*, September 2012, p.94

387 Envestra, *Revised access arrangement proposal Attachment 7.7 Response to Draft Decision Capital Expenditure November 2012,* p.26

388 Envestra, *Revised access arrangement proposal Attachment 7.7 Response to Draft Decision Capital Expenditure* November 2012, p.27

389 Envestra, *Revised access arrangement proposal Attachment VA23A Response to Draft Decision – Technical Training* November 2012, p.4

390 Envestra, *Revised access arrangement proposal Attachment VA23A Response to Draft Decision – Technical Training* November 2012, p.4

391 Envestra, *Revised access arrangement proposal Attachment VA23A Response to Draft Decision – Technical Training* November 2012, p.5

392 Envestra, *Response to AER Information Request FD9a*, *A 18Jan - AER information request - Envestra - FD9a Training Lightning (2).doc,* 18 January 2013

393 R.79(1) of the NGR

394 Envestra, *Response to AER Information Request FD9a*, *A 18Jan - AER information request - Envestra - FD9a Training Lightning (2).doc,* 18 January 2013

reaching areas are engaged in administrative roles which would not require the technical training to which the proposed expenditure relates.[395]

Envestra stated it also provides training to contractors that are carrying out work on the Envestra network.[396] The employee data provided by Envestra did not substantiate the need for this expenditure as it did not include details regarding the contractors. As such, the AER could not examine the age profile of Envestra contractors and Envestra has provided no evidence that the contractors are of an ageing profile. Regardless, the AER considered that Envestra should not be providing training for its external contractors. The AER considers that it is the responsibility of the external service provider to be adequately competent in providing the service it is being contracted to perform. The AER considers expenditure relating to training these workers would not be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services.[397]

Storm Water Drain Survey

The AER's final decision is to approve Envestra's revised proposal capex for a Storm Water Drain Survey. The AER considers this expenditure would be incurred by a prudent service provider acting efficiently.[398]

In particular the AER accepts that:

- it is prudent for Envestra to undertake the work in response to being requested to do so by both WorkSafe and the ESV
- the estimate of the expenditure is reasonable, based on information provided by a supplier of the equipment

Envestra initially proposed $0.2 million ($2011 unescalated direct costs, excluding overheads) in capex to install CCTV to remotely monitor gas pipelines located in storm water drains. Envestra indicated that it has experienced a number of hazardous incidents arising from damage to gas pipes from drain clearing equipment.[399] The project has both an opex and capex component. As set out in attachment 7, the AER approves the opex component of this project on the basis that Envestra will incur increased costs not accounted for in the base year to conduct these surveys. The AER's consideration of the capex component is set out below.

The AER, in its draft decision, considered the capital expenditure of installing the CCTV is not justifiable.[400] Envestra did not adopt the AER's draft decision and in its revised proposal submitted that:[401]

> Following heavy rains in 2010/11, a number of hazardous incidents occurred during drain clearing operations arising from damage to gas pipes from the drain clearing equipment. Consequently, WorkSafe and ESV requested that the gas distributors undertake an active program to address this hazard.

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[395] Envestra, *Response to AER Information Request FD9a*, *A 18Jan - AER information request - Envestra - FD9a Training Lightning (2).doc,* 18 January 2013

[396] Envestra, *Revised access arrangement proposal Attachment VA23A Response to Draft Decision – Technical Training* November 2012, p.4

[397] NGR, r.79(1)

[398] NGR, rr.79(2)(c)(i) and 79(2)(c)(iiii)

[399] Envestra, *Access Arrangement Information*, 30 March 2012, p. 128.

[400] NGR, rr. 79(2)(i), 79(2)(ii) and 79(2)(iii)

[401] Envestra, *Revised access arrangement proposal Attachment 7.7 Response to Draft Decision Capital Expenditure* November 2012, p. 29

> Accordingly, this project seeks to minimise the risk of further incidents by instigating a training program in conjunction with targeted internal inspections of drains and sewers using closed circuit TV technology.

The AER notes that both WorkSafe and ESV requested that Envestra undertake a program to address this hazard.[402] As such the AER accepts that this project is necessary to maintain or improve the safety of Envestra's services.[403]

Further, Envestra submitted, as part of its initial proposal, an estimate provided by a supplier of the CCTV equipment required for part of the project.[404] The AER considers this estimate is reasonable and is the best possible in the circumstances given the supplier is best positioned to identify the cost of the equipment.[405] On this basis the AER accepts that a prudent service provider acting efficiently would incur the expenditure.[406]

City Gate Lightning Protection

The AER's final decision is to approve Envestra's revised proposal on City Gate Lightning Protection. The AER considers that a prudent service provider acting efficiently would incur the expenditure.[407]

In particular the AER accepts:

- Envestra's has appropriately prioritised this project and the expenditure is justified to comply with a regulatory obligation or requirement.[408]
- The estimate, based on a quote from an electrical contractor, has been arrived at on a reasonable basis and is the best possible in the circumstance.[409]

Envestra initially proposed expenditure of $0.6 million ($2011 unescalated direct costs, excluding overheads) to design and install lightning and electrical surge protection at 55 city gates.[410] Envestra conceded that there is no Australian standards requirement that it retroactively undertake this work.[411] However, Envestra considered this project is required to continue to operate the network prudently.[412] The AER, in its draft decision, considered that Envestra's lack of action over the previous three years indicates that Envestra does not consider a prudent service provider acting efficiently to achieve the lowest sustainable cost of providing services would incur this expenditure. The AER considered that if the risk posed by not having lightning and surge protection equipment was sufficiently serious, a prudent and efficient distributor would have undertaken this work immediately after the first lightning strike occurred. Accordingly, the AER did not consider this capex is justified.[413]

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402 Envestra, *Revised access arrangement proposal Attachment 7.7 Response to Draft Decision Capital Expenditure* November 2012, p. 29
403 NGR, rr.79(2)(c)(i) and 79(2)(c)(iiii)
404 Envestra, *Access Arrangement Information*, *Attachment 6.1 Business case V40 Gas Pipes in Drains (capex opex),* 30 March 2012, p. 7
405 NGR, r.74(2)
406 NGR, rr.79(1) and 79(2)(c)(iii)
407 NGR, rr.79(1) and 79(2)
408 NGR, r.79(2)(c)(iii)
409 NGR, r.74(2)
410 Envestra, *Access Arrangement Information*, *Attachment 6.1 Business case V35 City Gate Lightning Protection,* 30 March 2012, s p. 2
411 Envestra, *Response to information request 8, 120626-AER information request 8-Misc Capex.DOCX,* 26 June 2012, p. 16.
412 Envestra, *Response to information request 8, 120626-AER information request 8-Misc Capex.DOCX,* 26 June 2012, p. 16.
413 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 4 Confidential appendices*, September 2012, p. 59,

Envestra did not adopt the AER's draft decision and considered the AER's assessment is not consistent with the NGR and that it is inconsistent with the revenue and pricing principles.[414, 415] In its revised proposal, Envestra submitted that the AER had not undertaken any risk analysis or presented any professional engineering advice in arriving at its conclusion [416]

> The AER requested additional information from Envestra regarding the methodology it used to prioritise the program.[417] Envestra submitted an evaluation of the risk level in the event the program was not implemented and how Envestra had prioritised necessary expenditure. Envestra provided additional information and stated:[418]
>
> The risk assessment process involves experienced personnel making a reasonable judgement on the likelihood of an event. In this case, the experienced personnel assessed that another lightning strike could occur, and that it was probable that this could occur within the next 10 years, particularly given the many thousands of lightning strikes that occur each year. In this case also, the possible consequences of an event were evident from lightening strikes experienced and the possible damage that a lightning strike could cause. Envestra did not defer this program. As stated in the business case (pg. 2), expert advice was sought and received on this issue in May 2010. Following this report, a review of all sites was then undertaken, followed by discussions with GasNet. This culminated in agreement to undertake the required works in the manner recommended by the expert.
>
> This project was then assessed and prioritised together with a host of other asset management projects in 2011, and scheduled accordingly, taking into account the level of risk and resources. This project will be commencing in 2013.

The AER further examined the risk assessment provided by Envestra. The AER accepts Envestra's prioritisation of the project as a high priority. The AER accepts that in accordance with Envestra's asset management plan this requires Envestra to action this work on a priority basis, to remove the threat or implement appropriate controls.[419] The AER accepts that Envestra was unable to complete this project in the 2008–12 access arrangement period as it was required to agree to terms of the expenditure with APA GasNet.[420]

The AER is now satisfied that the City Gate Lightning Protection project proposed by Envestra is justified.[421]

Envestra submitted, as part of its initial proposal to the AER, a business case containing cost breakdown details, including a quote from an electrical contractor.[422] The AER examined this forecast and considered it has been arrived at on a reasonable basis and is the best estimate possible in the circumstances.[423]

4.4.8 Extensions

The AER's final decision is to not approve Envestra's proposed capex allowance for extensions. The AER considers that the amounts proposed by Envestra would result in double recovery of the

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414 NGL, s. 24.
415 Envestra, *Revised access arrangement proposal Attachment 7.7 Response to Draft Decision Capital Expenditure* November 2012*,* p. 27-28
416 Envestra, *Revised access arrangement proposal Attachment 7.7 Response to Draft Decision Capital Expenditure* November 2012*,* p. 27-28
417 Envestra Victoria and Albury, Revised A*ccess Arrangement proposal: Attachment 7.7 Response to Draft Decision Capital Expenditure,* November 2012, p. 26.
418 Envestra, *Access Arrangement Information*, *Attachment 6.1 Business case V35 City Gate Lightning Protection,* 30 March 2012
419 Envestra, *Revised access arrangement proposal Attachment 7.2 Capital Expenditure* November 2012 p.17
420 Envestra, *Access Arrangement Information*, *Attachment 6.1 Business case V35 City Gate Lightning Protection,* 30 March 2012
421 NGR, rr.79(1) and 79(2)(c)(iii)
422 Envestra, *Access Arrangement Information*, *Attachment 6.1 Business case V35 City Gate Lightning Protection,* 30 March 2012, *Attachment A,* p.5
423 NGR, rr.74(2) and 79(1)

connection costs. This is because a separate allowance for these extensions is made in the connections capex category. As such, the proposed costs are not those that would be incurred by a prudent and efficient service provider and do not reflect the best forecast possible in the circumstances. However, with the exception of the double recovery, the AER accepts the extensions proposed by Envestra are prudent, efficient and the forecasts are the best possible in the circumstances.[424] Envestra indicated that it accepts the costs for the connection of additional customers (arising from theses extensions) be included as connections capex.[425]

The AER considers the non-connections components of Envestra's proposed Merrifield development and two other extension projects is prudent, efficient and the best forecast possible in the circumstances.[426]

Table 4.30 Final decision Victoria network - Extensions[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	9.5	0.0	6.7	1.2	0.2	17.6
AER draft decision	0.0	0.0	0.0	0.0	0.0	0.0
Envestra revised proposal	12.4	0.0	3.5	0.7	0.2	16.7
AER final decision	12.0	5.5	0.0	0.0	0.0	17.5

Source: AER analysis.
Notes: (a) Direct costs, excluding overheads and escalation.

Table 4.31 Final decision Albury network - Extensions[(a)] ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	–	–	–	–	–	–
AER draft decision	–	–	–	–	–	–
Envestra revised proposal	–	–	–	–	–	–
AER final decision	–	–	–	–	–	–

Source: AER analysis.
Notes: (a) Direct costs, excluding overheads and escalation.

Full details of the AER's final decision on Envestra's extension projects are set out in confidential appendix C.

4.4.9 Overheads

In the final decision, the AER has recalculated the forecast overheads using the same methodology as in Envestra's revised proposal, which reflected the AER's draft decision.[427] This recalculation takes into account the AER's final decision on the direct capital expenditure for the Victorian and Albury networks for the 2013–17 access arrangement period (see Table 4.32 and Table 4.33). The

424 NGR. rr. 74(2) and 79(1)
425 Envestra, *Response to AER information request FD3c*, 25 February 2013
426 NGR. rr. 74(2) and 79(1)
427 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, pp. 66–68; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.95-97.

AER's final decision is to approve a total overhead cost of $46.4 ($2011) for Envestra's Victorian network and $1.02 ($2011) for Envestra's Albury network.

Table 4.32 Final decision Victoria network - Overheads ($million, 2011) [(a)]

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	20.1	22.6	18.5	18.4	15.9	95.4
AER draft decision	8.3	9.8	8.2	10.0	8.2	44.5
Envestra revised proposal	12.1	10.3	8.9	8.0	6.7	46.1
AER final decision	9.1	9.8	8.9	10.2	8.3	46.4

Source: AER analysis, Envestra initial and revised capex models.
Note: (a) excluding escalation
The AER notes that there is a discrepancy between the overhead amounts in Envestra's revised proposal and revised capex model.

Table 4.33 Final decision Albury network - Overheads ($million, 2011) [(a)]

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	0.26	0.29	0.24	0.19	0.30	1.28
AER draft decision	0.17	0.22	0.20	0.19	0.24	1.03
Envestra revised proposal	0.19	0.22	0.20	0.19	0.23	1.03
AER final decision	0.18	0.22	0.20	0.19	0.23	1.02

Source: AER analysis, Envestra initial and revised capex models.
Note: (a) excluding escalation
The AER notes that there is a discrepancy between the overhead amounts in Envestra's revised proposal and revised capex model.

Envestra initially proposed using a general overhead rate of 20 per cent for its Victorian network. This was based on the average of the actual overheads incurred over the past four years and a lower overhead rate of 10 per cent for the mains replacement and augmentation program.[428] This amounted to a total overhead cost of $95.4 million ($2011) for the 2013–17 access arrangement period.

For its Albury network, Envestra initially proposed using a general overhead rate of 20 per cent based on the average of the actual overheads incurred over the past four years.[429] This amounted to a total overhead cost of $1.28 million ($2011) for the 2013–17 access arrangement period.

In its draft decision, the AER considered that the proposed overhead costs for both the Victorian and Albury networks were too high and therefore not arrived at on a reasonable basis and not the best forecast possible in the circumstances.[430] The AER considered that a significant proportion of

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428 Envestra, *Access arrangement information*, 30 March 2012, p. 132.
429 Envestra, *Access arrangement information*, 30 March 2012, p. 118.
430 NGR, r. 74(2).

overhead costs are fixed rather than variable, therefore the growth in overhead costs should be declining over time in real terms. The AER's draft decision calculated overheads using the approach it applied in its decision for Envestra SA and Qld.[431] This reduced the total overhead cost for Envestra's Victorian network to $44.5 million ($2011) and for Envestra's Albury network to $1.03 million ($2011).

Envestra's revised proposal adopted the AER's methodology and underlying assumptions to calculate overheads and applied it to derive the forecast overheads from its proposed direct capital expenditure for Victoria and Albury for the 2013–17 access arrangement period. Envestra's revised proposal included:

- $46.1 million ($2011, excluding escalation) total overhead cost for Envestra's Victorian network
- $1.03 million ($2011, excluding escalation) total overhead cost for Envestra's Albury network.[432]

4.4.10 Government and customer contributions

In the final decision, the AER has recalculated the forecast customer contributions using the same scaling methodology for customer contributions for residential connections used in Envestra's revised proposal. This reflected the AER's draft decision.[433] This recalculation takes into account the AER's final decision on the capital expenditure approved for residential connections and extensions on the Victorian network for the 2013–17 access arrangement period.

Envestra did not propose any customer or government contributions for the Albury network.

The AER's final decision is to approve $17.0 million ($2011) in total customer and government contributions for the Victorian network for the 2013-17 access arrangement period. This is on the basis that it is conforming capex.[434]

For the Victorian network, Envestra initially proposed total customer contributions of $9.5 million ($2011) over the 2013–17 access arrangement period for new customer connections.

In the draft decision, the AER reduced the contributions associated with connections in proportion to the reduction in expenditure approved for connections.[435] This resulted in approved total customer contributions of $6.5 million ($2011) over the 2013–17 access arrangement period.

In its revised proposal Envestra proposed customer contributions for:

- new residential connections, and
- the Merrifield extension project.[436]

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431 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, pp. 66–68; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp.96-97.

432 Envestra, *Revised access arrangement proposal: Attachment 7.7 – Capital Expenditure*, 9 November 2012, p. 32.

433 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, p. 68; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.97.

434 NGR, r. 79(1)

435 AER, *Draft Decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 4 Confidential appendices*, September 2012, p.68; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p.97.

436 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential)*, 9 November 2012.

Envestra proposed government contributions for two extension projects[437] [438], as discussed in section 4.4.8.

Envestra did not adjust its proposed customer contributions for residential connections to take account of its downwards revision of residential connections expenditure in its revised proposal relative to its initial proposal. The AER therefore calculated the scaling factor for the customer contributions attributable to residential connections by dividing the residential connections expenditure in the AER's final decision by that in Envestra's initial proposal.

For the final decision, the AER increased the customer contributions associated with the connections in proportion to the increase in expenditure approved for connections from the AER's draft decision.

The AER's final decision is to approve $17 million ($2011) in customer and government contributions for the 2013-17 access arrangement period.

Table 4.34 AER's final decision - customer and government contributions

	2013	2014	2015	2016	2017	Total
Total contributions	3.3	9.1	1.6	1.6	1.6	17.0

Source: AER analysis

4.5 Adjustments to labour and material escalation

The AER has revised down the labour and material escalation that was proposed by Envestra for its Victorian and Albury networks. Internal and external labour escalation has been revised down. Materials escalation has been revised to nil real. This is discussed in Attachment A of the AER's final decision.

Table 4.35 Victorian network - AER approved capital expenditure[(a)] by driver category over the 2013–17 access arrangement period ($million, 2011)

Category	2013	2014	2015	2016	2017	Total
Mains replacement	24.8	23.8	24.4	21.9	18.5	113.4
Residential connections	21.0	20.9	20.8	20.5	21.1	104.3
Commercial/industrial connections	3.3	6.2	6.2	5.3	6.5	27.5
Residential meter replacement	2.4	4.8	3.2	7.8	2.5	20.8
Commercial/industrial meter replacement	1.0	1.2	1.7	1.5	1.4	6.8
Augmentation	4.1	7.7	2.0	11.1	1.7	26.7

437 Envestra, *Revised access arrangement proposal, Attachment 7.6A Response to Draft Decision - Victoria Capex Forecast Model (confidential)*, 9 November 2012.

438 Envestra, *Response to AER information request FD3b*, received 17 January 2013.

IT	3.7	7.4	3.0	0.2	0.7	14.9
SCADA	0.2	0.2	0.2	0.2	0.2	1.0
Other	4.1	5.2	4.4	2.6	2.3	18.6
Gas Extensions - Other	12.2	0.0	0.0	0.0	0.0	12.2
Gas Extensions - Energy for the Regions	0.0	5.7	0.0	0.0	0.0	5.7
Overheads	9.1	9.8	8.9	10.2	8.3	46.3
GROSS TOTAL CAPITAL EXPENDITURE	85.9	92.9	74.8	81.3	63.1	398.0
Customer contributions	3.3	1.6	1.6	1.6	1.6	9.5
Government contributions	0.0	7.5	0.0	0.0	0.0	7.5
NET TOTAL CAPITAL EXPENDITURE	82.6	83.9	73.2	79.7	61.6	381.0

Source: AER analysis.
Notes: (a) Including AER material and labour escalation adjustments, excluding network management fee.

Table 4.36 Albury network - AER approved capital expenditure[(a)] by driver category over the 2013–17 access arrangement period ($million, 2011)

Category	2013	2014	2015	2016	2017	Total 2013-17
Mains replacement	0.01	0.01	0.01	0.01	0.01	0.04
Residential connections	0.45	0.53	0.54	0.55	0.56	2.63
Commercial/industrial connections	0.11	0.11	0.11	0.11	0.11	0.53
Residential meter replacement	0.07	0.06	0.09	0.05	0.04	0.32
Commercial/industrial meter replacement	0.03	0.02	0.03	0.02	0.02	0.12
Augmentation	0.01	-	-	-	0.43	0.44
IT	0.13	0.26	0.10	0.00	0.02	0.52
SCADA	0.02	0.02	0.02	0.02	0.02	0.09
Other	0.00	0.00	0.00	0.00	0.00	0.01
Gas Extensions -	-	-	-	-	-	-

Other						
Gas Extensions - Energy for the Regions	-	-	-	-	-	-
Overheads	0.18	0.22	0.20	0.19	0.23	1.02
GROSS TOTAL EXPENDITURE	0.99	1.23	1.10	0.96	1.45	5.73
Customer contributions	-	-	-	-	-	-
Government contributions	-	-	-	-	-	-
NET TOTAL EXPENDITURE	0.99	1.23	1.10	0.96	1.45	5.73

Source: AER analysis.
Notes: (a) Including AER material and labour escalation adjustments, excluding network management fee.

4.6 Adjustments for Envestra's proposed network management fee

The AER has accepted Envestra's proposed network management fee (NMF) calculation method. This is discussed in Attachment 7 of the AER's draft decision. This leads to the following further revisions to Envestra's proposed capital expenditure (see Table 4.2 and Table 4.4 for year on year splits and Table 4.37 and Table 4.38 for the 2013–17 access arrangement period aggregates).

Table 4.37 Victorian network - comparison of AER approved and Envestra capital expenditure over the 2013–17 access arrangement period ($million, 2011)

Category	Envestra proposed	AER approved including Envestra's labour and material escalation and excluding NMF adjustments	AER approved including AER labour and material escalation adjustments and excluding NMF	AER approved including AER labour and material escalation adjustments and NMF	Variance between Envestra and AER approved including labour and material escalation and NMF adjustments
Mains replacement	183.7	114.7	113.4	117.0	-66.7
Residential connections	113.6	105.5	104.3	107.6	-6.0
Commercial/industrial connections	57.1	27.8	27.5	28.4	-28.7
Residential meter replacement	26.4	20.9	20.8	21.4	-5.0
Commercial/industrial meter replacement	9.3	6.8	6.8	7.0	-2.3
Augmentation	39.7	27.0	26.7	27.5	-12.2
IT	17.3	15.0	14.9	15.4	-1.9

SCADA	1.0	1.0	1.0	1.0	0.0
Other	20.7	18.7	18.6	19.2	-1.5
Gas Extensions - Other	12.9	12.3	12.2	12.6	-0.3
Gas Extensions - Energy for the Regions	4.6	5.7	5.7	5.8	1.2
Overheads	47.4	46.4	46.3	47.8	0.4
GROSS TOTAL EXPENDITURE	533.6	401.8	398.0	410.6	-123.0
Customer contributions	11.8	9.5	9.5	9.5	-2.3
Government contributions	-	7.5	7.5	7.5	7.5
NET TOTAL EXPENDITURE	521.8	384.8	381.0	393.6	-128.3

Source: AER analysis.

Table 4.38 Albury network - comparison of AER approved[(a)] and Envestra capital expenditure over the 2013–17 access arrangement period ($million, 2011)

Category	Envestra proposed	AER approved including Envestra's labour and material escalation and excluding NMF adjustments	AER approved including AER labour and material escalation adjustments and excluding NMF	AER approved including AER labour and material escalation adjustments and NMF	Variance between Envestra and AER approved including labour and material escalation and NMF adjustments
Mains replacement	0.0	0.0	0.0	0.0	(0.0)
Residential connections	3.1	2.6	2.6	2.8	(0.3)
Commercial/industrial connections	0.6	0.5	0.5	0.6	0.0
Residential meter replacement	0.3	0.3	0.3	0.3	0.0
Commercial/industrial meter replacement	0.3	0.1	0.1	0.1	(0.1)
Augmentation	0.5	0.5	0.4	0.5	(0.0)
IT	0.6	0.5	0.5	0.6	(0.1)
SCADA	0.1	0.1	0.1	0.1	(0.0)
Other	0.0	0.0	0.0	0.0	(0.0)
Gas Extensions - Other	-	0.0	-	-	-
Gas Extensions - Energy for the Regions	-	0.0	-	-	-

Overheads	1.1	1.0	1.0	1.1	(0.0)
GROSS TOTAL EXPENDITURE	6.7	5.8	5.7	6.1	(0.5)
Customer contributions	-		-	-	-
Government contributions	-		-	-	-
NET TOTAL EXPENDITURE	6.7	5.8	5.7	6.1	(0.5)

Source: AER analysis.

4.7 Equity raising costs

Service providers incur equity raising costs when they need to raise new equity from outside the business. The AER's equity raising cost benchmark allows for costs in the form of dividend reinvestment plan costs and seasoned equity offerings. A prudent service provider acting efficiently would incur equity raising costs. Accordingly, the AER provides an allowance to recover an efficient amount of equity raising costs where a service provider's capex forecast is large enough to require an external equity injection (to maintain the benchmark 60:40 debt to equity ratio).

Broadly, the AER's method applies the cash flow analysis in the post–tax revenue model (PTRM) to determine the required benchmark equity raising cost associated with forecast capex. This approach adopts the "pecking order" theory of capital structure. This theory predicts that an efficient service provider will seek to raise capital starting from the lowest cost forms and moving to higher cost forms as the lower cost forms are exhausted.[439]

Based on the need for any dividend reinvestment plans and seasoned equity offerings, the AER assigns transaction unit costs for each form of equity funding. They are based on the AER's empirical review in assessing the benchmark costs for raising equity finance: [440]

- Retained earnings – 0 per cent
- Dividend reinvestment plans – 1 per cent of total dividends reinvested
- Seasoned equity offerings – 3 per cent of total external equity required.

The AER considers that these unit costs represent the efficient costs required to raise equity in current market conditions because they have been suitably estimated by the AER[441] and ACG,[442] and subsequently reviewed.[443]

The AER considers that this method represents the approach that a prudent service provider acting efficiently would apply in raising equity, given its particular capital raising requirements. This is because the method:

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439 ACG, Estimation of Powerlink's SEO transaction cost allowance–Memorandum, 5 February 2007

440 Final decision, TransGrid transmission determination 2009–10 to 2013–14, April 2009, pp. 233–244. ACG, Debt and Equity Raising Transaction Costs, Final Report to the Australian Competition and Consumer Commission, December 2004, p xiii, 65. Handley, A note on the cost of raising debt and equity capital, April 2009.

441 Final decision, TransGrid transmission determination 2009–10 to 2013–14, April 2009, pp. 233–244.

442 ACG, Debt and Equity Raising Transaction Costs, Final Report to the Australian Competition and Consumer Commission, December 2004, p xiii, 65.

443 Handley, *A note on the cost of raising debt and equity capital,* April 2009.

- assumes that service providers first use the cheapest sources of equity
- takes account of all the likely sources of equity
- takes account of the requirements of a prudent service provider acting efficiently, by using the inputs and outputs of the PTRM as found by the AER to be efficient.
- The AER's draft decision for Envestra outlines the AER's equity raising cost method more fully.[444]

The AER adopted its preferred equity raising cost method in its draft decision for Envestra. It determined that no equity raising costs were required for Envestra's Victorian network.[445] However, Envestra had an equity requirement of $1.56m (real 2012) resulting in an allowance of $0.02m (real 2012) for its Albury network.[446] Envestra's revised proposal also adopted the AER's preferred method and Envestra did not comment on this method.[447] The AER therefore agrees with Envestra's revised proposal and the AER will adopt its preferred equity raising cost method for this final decision.

The AER has used the updated PTRM inputs and outputs to estimate the costs and total allowance for Envestra. Table 4.39 to Table 4.42 show the cash flow analysis calculated in the PTRM for Envestra's benchmark equity raising cost. Table 4.39 and Table 4.41 set out (in nominal terms) the derivation of the required new equity for the service provider. The second part of the cashflow analysis (in real terms) derives the benchmark allowance for raising this equity and is set out in Table 4.40 and Table 4.42. These tables demonstrate that Envestra does not require an equity raising cost allowance based on the level of forecast capex for its Victorian and Albury networks.

4.7.1 Benchmark equity raising costs

The AER has applied its updated equity raising costs method along with the updated PTRM inputs and outputs to determine that Envestra requires no benchmark equity raising cost allowance for its Victorian and Albury networks.

Table 4.39 AER's final decision cash flow analysis for Envestra Victoria benchmark equity raising cost ($million, nominal)

Cash flow analysis	Total ($million, nominal)	Notes
Dividends	57.49	Set to distribute imputation credits assumed in the PTRM (70 per cent).
Dividends reinvested	17.25	Availability of reinvested dividends, capped at 30% dividends paid.
Capex funding requirement	428.56	Forecast capex funding requirement (including half year WACC adjustment).

444 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, Part 2, pp. 101-103.

445 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, Part 2, pp. 105-106.

446 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, Part 2, pp. 105-106.

447 Envestra Vic, PTRM, ''equity raising cost-capex' tab. Envestra Albury, PTRM, ''equity raising cost-capex' tab

Debt component	213.59	Set to equal 60% of annual change in RAB.
Equity component	214.98	Residual of capex funding requirement and debt component.
Retained cash flow available for reinvestment	230.97	Exclude dividends reinvested.
Equity required	-16.00	Equals equity component less retained cash flows.

Source: AER analysis.

Table 4.40 AER's final decision cash flow analysis for Envestra Victoria benchmark equity raising cost ($million, 2011–12)

Cash flow analysis	Total ($million, 2011–12)	Notes
Equity component	194.75	Residual of capex funding requirement and debt component.
Retained cash flow available for reinvestment	209.62	Exclude dividends reinvested.
Equity required	-14.87	Equals equity component less retained cash flows.
Dividends reinvested	15.49	Availability of reinvested dividends, capped at 30% dividends paid.
Dividend reinvestment plan required	0.00	Required reinvested dividends.
Seasoned equity offerings required	0.00	Required seasoned equity offerings (SEOs).
Cost of dividend reinvestment plan	0.00	Required reinvested dividends multiplied by benchmark cost.
Cost of seasoned equity offerings	0.00	Required SEOs multiplied by the benchmark cost.
Total equity raising costs	0.00	Sum of costs of dividend reinvestment plan and SEOs. To be added to the RAB at the start of the access arrangement period.

Source: AER analysis

Table 4.41 AER's final decision cash flow analysis for Envestra Albury benchmark equity raising cost ($million, nominal)

Cash flow analysis	Total ($million, nominal)	Notes
Dividends	3.57	Set to distribute imputation credits assumed in the PTRM (70 per cent).
Dividends reinvested	1.07	Availability of reinvested dividends, capped at 30%

		dividends paid.
Capex funding requirement	6.71	Forecast capex funding requirement (including half year WACC adjustment).
Debt component	1.89	Set to equal 60% of annual change in RAB.
Equity component	4.82	Residual of capex funding requirement and debt component.
Retained cash flow available for reinvestment	5.63	Exclude dividends reinvested.
Equity required	-0.80	Equals equity component less retained cash flows.

Source: AER analysis.

Table 4.42 AER's final decision cash flow analysis for Envestra Albury benchmark equity raising cost ($million, 2011–12)

Cash flow analysis	Total ($million, 2011–12)	Notes
Equity component	4.35	Residual of capex funding requirement and debt component.
Retained cash flow available for reinvestment	5.12	Exclude dividends reinvested.
Equity required	-0.77	Equals equity component less retained cash flows.
Dividends reinvested	0.96	Availability of reinvested dividends, capped at 30% dividends paid.
Dividend reinvestment plan required	0.00	Required reinvested dividends.
Seasoned equity offerings required	0.00	Required seasoned equity offerings (SEOs).
Cost of dividend reinvestment plan	0.00	Required reinvested dividends multiplied by benchmark cost.
Cost of seasoned equity offerings	0.00	Required SEOs multiplied by the benchmark cost.
Total equity raising costs	0.00	Sum of costs of dividend reinvestment plan and SEOs. To be added to the RAB at the start of the access arrangement period.

Source: AER analysis

4.8 Revisions

Victorian Network

Revision 3.2: Make all necessary amendments to reflect the AER's draft decision on forecast capex by asset class for the access arrangement period, as set out in Table 4.2.

Albury Network

Revision 3.4: Make all necessary amendments to reflect the AER's draft decision on forecast capex by asset class for the access arrangement period, as set out in Table 4.4.

5 Rate of return

The return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services.[448]

The AER calculates Envestra's return on capital building block by multiplying the rate of return with the value of Envestra's capital base. Consistent with Envestra's revised proposal and previous AER decisions, the rate of return adopted by the AER is the nominal 'vanilla' weighted average cost of capital (WACC) specification.[449]

5.1 Final decision

The AER does not approve Envestra's proposed rate of return of 7.98per cent (nominal vanilla).[450] The AER considers 7.39 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 Envestra combines a cost of equity of 8.33 per cent and a cost of debt of 6.76 per cent.

Consistent with the draft decision, the AER agrees with a number of aspects of Envestra'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)
- 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 31 January 2013 to 20 February 2013)

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448 NGR, r. 87(1).

449 A nominal vanilla WACC is the combination of a nominal post-tax cost of equity and a nominal pre-tax cost of debt.

450 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return*, 9 November 2012, section 7. Envestra's revised proposal document stated a nominal vanilla WACC of 7.96 per cent. This was based on an indicative estimate for Envestra's proposed cost of debt, because Envestra's proposed averaging period for the cost of debt had not yet expired. The AER has updated this estimate, based on Envestra's proposed averaging period, which produces a nominal vanilla WACC of 7.98 per cent.

- 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 Envestra's proposed historical averaging period for determining the risk free rate component of the cost of equity. [451] Rather, the AER adopts a recent and short term averaging period. The AER has used the risk free rate averaging period Envestra 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 Envestra's rate of return (nominal)

Parameter	AER draft decision[(a)]	Envestra revised proposal[(a)]	AER final decision
Nominal risk free rate (cost of equity)	3.53%	5.00%	3.53%
Nominal risk free rate (cost of debt)	3.53%	3.53%	3.53%
Equity beta	0.80	0.80	0.80
Market risk premium	6.00%	6.00%	6.00%
Debt risk premium	3.23%	3.23%	3.23%
Gearing ratio	60.00%	60.00%	60.00%
Inflation forecast	2.50%	2.50%	2.50%
Nominal post-tax cost of equity	8.33%	9.80%	8.33%
Nominal pre-tax cost of debt	6.76%	6.76%	6.76%
Nominal vanilla WACC	7.39%	7.98%	7.39%

Source: Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return*, 9 November 2012, and AER analysis.

(a) The AER draft decision and Envestra 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.

Envestra's rate of return in this decision is similar to the rates the AER determined in decisions over the past year.[452] 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.

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 Envestra 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 Envestra

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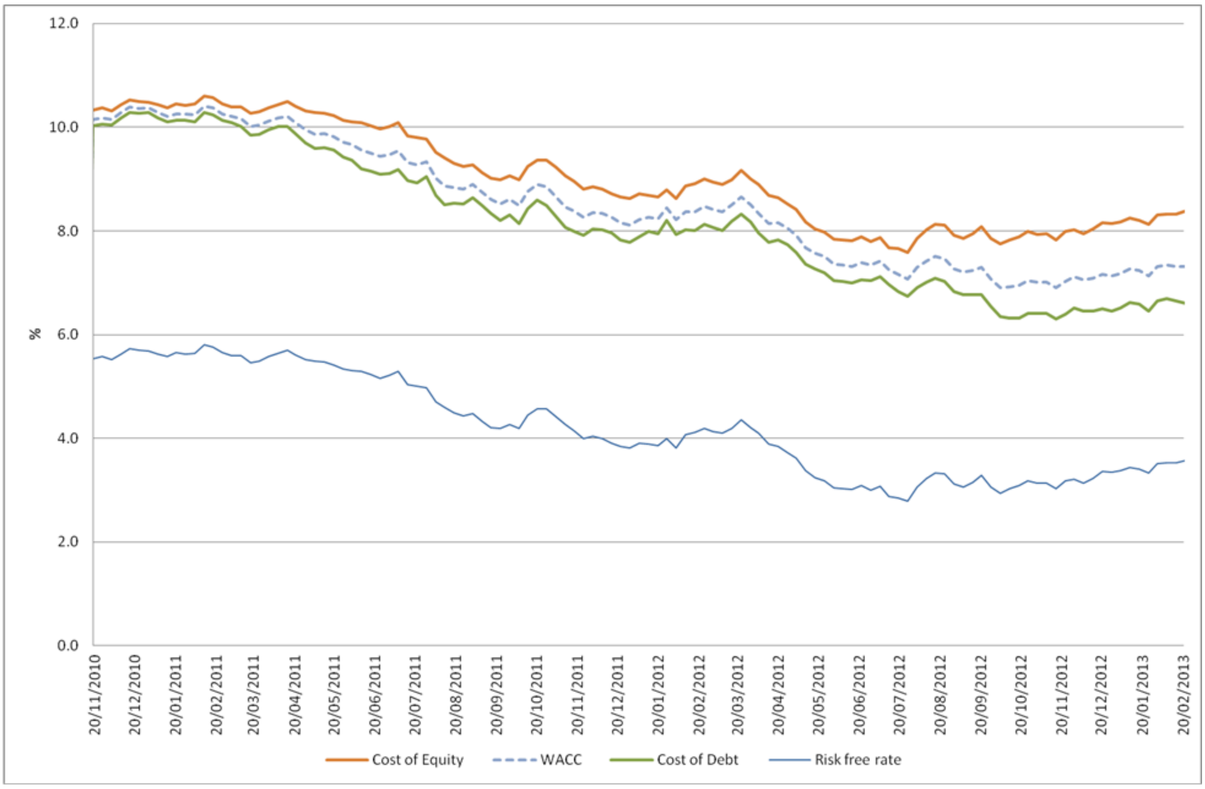
451 Specifically, Envestra proposed a 10 year average to October 2012 minus actual inflation over the period, plus forecast inflation of 2.5 per cent. This was one of two alternatives proposed by CEG. CEG, *Response to the AER Vic gas draft decisions*, November 2012, p. 16.

452 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.

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)[453]



In this access arrangement review, the cost of equity is the key area of disagreement. Envestra's revised access arrangement proposal maintains its initial proposal position. Envestra'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.[454] As part of this submission, Envestra's 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.[455]

The AER acknowledges that Envestra 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.[456]

As illustrated in Figure 5.1, the risk free rate has been continuously less than 4 per cent since early 2012.[457] Combined with a 0.8 equity beta and 6 per cent MRP, this has resulted in a cost of equity in 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

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453 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).

454 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.

455 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return*, 9 November 2012, section 2.

456 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return*, 9 November 2012, section 2.

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

time period[458]. 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 Envestra 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 Envestra. The AER has also extended and expanded its analysis in areas questioned by Envestra. 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 Envestra 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.[459] 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.[460]
- 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

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458 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.

459 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.

460 See section 5.3.2 below for further discussion.

questioned the relevance of the report because it did not directly consider the MRP in the context of a historically low risk free rate.[461] 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.[462]

- 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 Envestra, 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.[463] 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 Envestra 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.

- 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

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

[462] 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)

[463] 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.

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 Envestra 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.[464]
- 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.[465] 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.[466]
- CGS yields are an observable market determined parameter.

464 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)

465 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.

466 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).

- 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.[467]

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.[468]

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 multiples 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.

5.2 Assessment approach

The AER's assessment approach for this final decision is consistent with that adopted in the draft decision. This material is not reprinted here; see section 4.2 of attachment 4 – Rate of Return of the draft decision for this detail.[469] The section below sets out the AER's further observations on its assessment approach, including discussion of material arising subsequent to the draft decision.

5.2.1 Requirements of the national gas law and rules on the rate of return

In this section the AER considers the requirements of the NGR and NEL on the rate of return, including in the interpretation of relevant provisions of the NGR in recent Tribunal decisions.

Rule 87 of the NGR states:

> 1) The rate of return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services.
>
> 2) In determining a rate of return on capital:
>
> a) it will be assumed that the service provider:
>
> i) meets benchmark levels of efficiency; and
>
> ii) uses a financing structure that meets benchmark standards as to gearing and other financial parameters for a going concern and reflects in other respects best practice; and

467 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).

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

469 AER, *Draft decision: Access arrangement draft decision: Envestra Ltd 2013-17*, September 2012, pp. 110-119 (AER, *Draft decision: Envestra*, September 2012)

> b) a well accepted approach that incorporates the cost of equity and debt, such as the Weighted Average Cost of Capital, is to be used; and a well accepted financial model, such as the Capital Asset Pricing Model, is to be used.

The AER understands rule 87 operates as follows:

- Rule 87(1) describes the objective in determining the WACC but not how to achieve the objective.
- Rule 87(2) describes how to achieve the objective, including through a well accepted approach (such as the WACC) and through a well accepted financial model (such as the CAPM).
- Rule 87(1) informs the selection of input parameters for the well accepted approach and well accepted financial model. Through the determination of appropriate parameters, it is expected that the overall rate of return will reflect prevailing conditions in the market for funds and the risk involved in providing reference services.[470]

This is consistent with the Tribunal's construction of rule 87 in the ATCO and WAGN matters.

Rule 87 is a full discretion provision. This means the AER may, but is not bound to, approve Envestra's proposed rate of return if that rate complies with, and is consistent with, the NGL's and NGR's requirements and criteria. The AER has the discretion to withhold its approval it considers a preferable alternative exists that complies with, and is consistent with, those requirements and criteria. Further, if an access arrangement contains a fixed principle on the rate of return then that fixed principle is binding on the AER and the service provider for the period for which the principle is fixed.[471]

If the AER does not approve Envestra's access arrangement, then the AER must formulate an access arrangement that accounts for:

- the matters that the NGL and NGR require an access arrangement to include
- the service provider's access arrangement proposal, and
- the AER's reasons for refusing to approve that proposal.[472]

This list is not exhaustive, and the service provider's proposal is not the only source of information that the AER considers when assessing the proposed rate of return. Other regulatory processes provide relevant information sources, because issues with the cost of capital are generally not specific to a service provider. Further, many issues have evolved across a long history of consideration by the AER and other regulators.

The AER considers information that includes:

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470 In its revised proposal, Envestra submitted that it is the result of applying a well accepted financial model (in this case, the Sharpe-Linter CAPM) that is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services. The AER agrees with this interpretation. Conceptually, the AER's approach to implementing this is to estimate a risk free rate that is commensurate with prevailing conditions in the market for funds (i.e. a forward looking risk free rate) and a MRP that is commensurate with prevailing conditions in the market for funds (i.e. a forward looking MRP). It follows logically that if each parameter within the Sharpe-Lintner CAPM is commensurate with prevailing conditions, then so too will the total cost of equity be. In contrast, the Victorian gas distribution businesses proposed a historical average risk free rate and a historical average MRP. That is, conceptually, they proposed input parameters that are not commensurate with prevailing conditions, yet considered the combination of these input parameters would result in a cost of equity that is commensurate with prevailing conditions. This approach relies on the assumption that the cost of equity is stable over time.

471 NGR r. 99 (3).

472 NGR r. 64(2).

- previous AER decisions, including the AER's 2009 review of WACC parameters for electricity service providers (the WACC review) and resulting Statement of Regulatory Intent (SRI)
- the service provider's proposal
- expert reports commissioned by the AER, the service provider and other stakeholders
- the decisions of the Tribunal
- the decisions of other economic regulators, particularly in Australia
- submissions

In performing or exercising an economic regulatory function or power, the AER must do so in a manner that will (or is likely to) contribute to the national gas objective.[473] Either the AER's approval or withholding of its approval of Envestra's proposed rate of return—and in the case of the latter the AER's determination of a preferable rate of return—is an AER economic regulatory function or power. The national gas objective 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, quality, safety, reliability and security of supply of natural gas.

In addition, the AER must account for the revenue and pricing principles when approving or making the parts of an access arrangement that relate to a reference tariff.[474] The rate of return is such a part, so the AER must account for the following[475]:

- A service provider should have a reasonable opportunity to recover at least the efficient costs that it incurs in providing reference services[476]
- A service provider should have effective incentives to promote economic efficiency in the reference services that it provides. That economic efficiency should include efficient investment in, or connection with, a pipeline that the service provider uses to provide reference services.
- A reference tariff should allow for a return that matches the regulatory and commercial risks from providing the reference services to which that tariff relates.
- A reference tariff should account for the economic costs and risks of potential under or over investment by a service provider in a pipeline that the service provider uses to provide pipeline services.

In the sections that follow, the AER determines Envestra's rate of return in a manner consistent with the NGO, revenue and pricing principles and rule 87 of the NGR.

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473 NGL s. 28(1).
474 NGL s. 28(2)(a)(i)
475 NGL, s. 24.
476 Envestra submitted a report by PriceWaterhouseCoopers. Among other matters, the report discussed the asymmetric consequences of setting the rate of return too high and too low. The AER considers this matter is embodied in the revenue and pricing principle that service providers should have a reasonable opportunity to recover at least efficient costs. Therefore, by applying the revenue and pricing principles, the AER considers it takes into account the matters raised by PWC. Further, Lally noted the equivalence of the principle of providing a reasonable opportunity to recover at least efficient costs and the present value principle. Lally, *The risk free rate and the present value principle*, 2012. The present value principle is considered extensively in relation to the rate of return in this decision.

5.2.2 Selection of well accepted approach and model

On the rate of return, the AER received submissions on its draft decision and the Victorian gas businesses' revised proposals from:

- the Energy Users Coalition of Victoria (EUCV)[477], and
- the Victorian Minister for Energy and Resources[478]

On the relationship between the risk free rate and MRP, the EUCV considers the adoption of a higher MRP when the risk free rate is low is not supported by the facts. It further states:

> The EUCV makes the rhetorical observation whether the massive debate as to the setting of the risk free rate would have been raised if the bond rates were at the levels seen in the 1980s, with an average value of some 13%, rather than the current value of about 3? Would there be a debate that the return on equity has a constant value of about 12% when the AER approach would deliver a value of 19%?

The EUCV also state that, in the interests of regulatory certainty, the AER has advised it will review the cost of debt approach through industry-wide consultation as part of the next rate of return guideline process, rather than as part of the Victorian gas review. This is despite, in the EUCV's opinion, the current approach to the cost of debt imposing costs on consumers that are higher than warranted. The EUCV consider this context should be taken into account when considering changes to the cost of equity approach in this decision.

The Victorian Minister for Energy and Resources supported the AER's draft decision on the rate of return. The Minister also commented on the construction of rule 87 of the NGR.

5.2.3 Selection of a well accepted approach and model

The AER accepts Envestra's proposal to determine the rate of return as the weighted average of the cost of equity and the cost of debt (the WACC approach), weighted 40 per cent to equity and 60 per cent to debt. The AER also accepts Envestra's proposal to determine:

- the cost of equity using the Sharpe Lintner CAPM, and
- the cost of debt as the summation of the risk free rate and DRP.

In the draft decision, the AER agreed with Envestra's approach to determining the rate of return and models to determine the cost of equity and cost of debt. The AER agreed with this approach because the weighted average cost of capital is a well accepted approach to determining the rate of return. The AER agreed with the financial models proposed by Envestra to determine the cost of equity and debt because these are also well accepted.[479]

Envestra also adopted the same WACC approach, use of Sharpe CAPM, and specification of the cost of debt in its revised access arrangement proposal. The AER is not aware of any new information that causes it to depart from its draft decision position. Accordingly, the AER accepts these aspects of Envestra's revised proposal

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477 EUCV, *Victorian gas distribution revenue reset AER draft decision and revised applications*, January 2013

478 Hon. Michael O'Brien MP, Minister for Energy and Resources, *Victorian gas access arrangement review - Victorian government Submission*, 14 January 2013.

479 Australian Competition Tribunal, *Application by WA Gas Network Pty Ltd (No 3) [2012] ACompT*, 8 June 2012, paragraph 64.

5.2.4 Approach to the determination of specific parameters

The AER's assessment approach for each parameter is set out in its draft decision. See section 4.2.4 of the draft decision for a detailed explanation of the assessment approach.

For clarity, and consistent with the draft decision, in this final decision the AER:

- estimates a 10 year forward looking risk free rate
- estimates a 10 year forward looking MRP
- taking into account the economic interdependencies between these two parameters, and
- based on prevailing expectations at the commencement of the access arrangement period.

In doing so, the AER maintains the integrity in estimation of each individual parameter when determining an estimate. The AER does not attempt to address a perceived problem in the estimation of one parameter through the estimation of another parameter. Maintaining the integrity of each parameter promotes rigour and robustness in the estimation of those parameters. Besides, the AER is unaware of any well accepted approach for making adjustments between these parameters without introducing subjectivity and regulatory risk.

The risk free rate and MRP are estimated using differing information. This reflects the differing nature of these two parameters. A proxy for the risk free rate is readily observable.[480] On the other hand, no such proxy is available for the MRP.[481]

Maintaining integrity between these two parameters is important. This including having regard to any economic interdependencies between these parameters.

Further, the AER's approach is internally consistent. This is because for both the risk free rate and MRP the AER is estimating a 10 year forwarding looking rate.

5.2.5 Reasonableness check on overall rate of return

In section 4.2.4 of the draft decision, the AER sets out its approach to the determination of each parameter within the overall rate of return. In addition, the AER has given appropriate consideration to reasonableness checks on the overall rate of return. This approach is consistent with the draft decision. See section 4.2.5 of the draft decision for further discussion of the assessment approach.

Overall, the AER:

- determines reasonable estimates for the input parameters into the CAPM (a well accepted financial model), which in turn feeds into the WACC (a well accepted approach)[482]
- gives limited consideration to the overall WACC estimates, in accordance previous Tribunal decisions[483] and the strengths and weaknesses of this approach.

The AER discusses the use of reasonableness checks further in section 5.3.8 and appendix B.

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480 See section 5.3.2 below for further discussion.
481 See section 5.3.3 below for further discussion.
482 NGR, r. 87.
483 Australian Competition Tribunal, *Application by Envestra Ltd (No 2) [2012] ACompT 3*, 11 January 2012, paragraphs 166-167. See section 5.3.8 below for further discussion.

5.2.6 Promotion of regulatory certainty and consistency

As outlined above, the AER has carefully considered the material presented by the Victorian gas businesses on the cost of equity. The end result of this consideration is that the AER has decided to maintain its approach from the draft decision.

The AER has maintained its approach from the draft decision because it considers this approach is reasonable. And applying that approach to the Victorian gas businesses in this final decision, the AER considers this provides a cost of equity commensurate with prevailing conditions in the market for funds and the risks involved with providing reference services.

- Further, the cost of equity approach in this final decision is consistent with the AER's approach in previous decisions. This consistency:
- promotes certainty of process and predictability in regulatory decision making
- promotes symmetry in regulatory outcomes over time. It avoids a bias or arbitrariness in regulatory outcomes that may result from changing to a method that favours a particular outcome or stakeholder at a particular point in time (and then potentially reverting back to the previous method at a later point in time).[484]

The AER further notes that is has not changed the cost of debt approach in this final decision from that adopted in the draft decision or other recent AER decisions. While the AER has previously raised concerns that the Bloomberg BBB fair value curve may have overcompensated regulated businesses for the true benchmark cost of debt. This reflects the Tribunal's statement that if the AER were to decide that the extrapolated Bloomberg fair value curve was an unreliable indicator for the purposes of deciding that DRP, it would be desirable in the longer term to develop an alternative coherent and consistent methodology, in consultation with the relevant regulated businesses and other interested parties.[485]

5.3 Reasons for final decision

In the previous section, the AER set out its approach to determining the rate of return. This included the AER's interpretation of the relevant criteria from the NGL and NGR.

In this section the AER applies its approach, and explains why the rate it determines for Envestra's access arrangement period is consistent with the NGL and NGR criteria. In this section, the AER:

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484 A source of potential bias in regulatory outcomes over time is when only the economic interdependencies between some but not all relevant parameters are considered. For example, in this review the Victorian gas businesses have argued in favour of a strongly negative relationship between the risk free rate and MRP. They have highlighted that this relationship is particularly important to take into account in this review because of the low risk free rate. However, the Victorian gas businesses have not considered whether there is a relationship between the risk free rate, MRP and equity beta. For example, it might be that the factors driving the low risk free rate also decrease (or increase) the equity beta of regulated utilities. The AER does not express a view on this relationship. It raises it instead to highlight the importance of considering the independencies between all relevant parameters. For the reasons expressed elsewhere in this decision, the AER does not consider the evidence on the risk free rate and MRP relationship is conclusive enough—in terms of the direction, strength or stability in this relationship—to warrant a higher MRP because of the low risk free rate. However, even if the AER had considered this evidence warranted a higher MRP, it would be necessary to consequentially consider whether any adjustment to the equity beta was warranted.

485 Australian Competition Tribunal, *Application by Envestra Ltd (No 2) [2012] ACompT 3*, 11 January 2012, paragraph 95. In relation to change of the cost of debt approach, the Tribunal noted: "In the longer term, as the Tribunal has said, it is open to the AER to adopt a different methodology. Consideration of the proper composition of the comparison sample of bonds, the methodology for deciding on the appropriate sample of bonds and the relevance of these bonds to its task should be undertaken by the AER in consultation with interested parties across the spectrum of entities in the industries it regulates, consumers of their services and other interested parties." See: Australian Competition Tribunal, *Application by Envestra Limited (No 2) [2012] ACompT 3*, 11 January 2012, paragraph 118

- firstly, explains why it adopts the CAPM as the well accepted financial model to determine the cost of equity
- secondly, explains how it determines each of the parameters within the CAPM, with a particular focus on the determination of the risk free rate and MRP.
- then explains how it estimates the DRP and gearing ratio for Envestra
- also outlines its reasons for its position on forecast inflation
- finally, considers the outcome from the above approach against reasonableness checks on the overall rate of return.

5.3.1 The Capital Asset Pricing Model (CAPM)

The cost of equity is not directly observable and therefore a model is required in order to estimate it. Envestra itself acknowledged this and stated:[486]

> Envestra recognises that any estimate of the cost of equity is open to criticism because estimating an unobservable parameter – such as the cost of equity – is bound to be imperfect. The task, therefore, is to make a reasonable judgment based on the available evidence.

This position is similarly noted by Wright[487] and Ernst and Young. Ernst and Young noted:[488]

> The cost of equity is not directly observable, so it must be estimated or inferred from market data. Finance theory usually guides the process of estimation and the CAPM is often applied in this process.

A financial model must be a well accepted model to be used for determining a return on capital. The Sharpe Lintner CAPM is a well accepted financial model. As noted by the AER during the WACC review, the Sharpe Lintner CAPM has been consistently adopted by regulators and market practitioners. The AER is not aware of any instances where an Australian regulator has adopted an alternative model. Truong, Partington and Peat found that 72 per cent of Australian businesses who responded to their survey adopt the (Sharpe) CAPM in formulating their capital budgeting decisions.[489]

The AER and the Tribunal agree that the Sharpe Lintner CAPM is a well accepted financial model and is appropriate to use in order to estimate the cost of equity. Implicitly, Envestra must also consider that the Sharpe Lintner CAPM is a well accepted financial model because it proposed the model, and a requirement of the NGR is that a well accepted financial model must be used.[490] The AER therefore estimates the cost of equity by combining the best estimate of each parameter that is required within the CAPM. The AER determines the cost of equity (r_e) using the CAPM formula:

$$r_e = r_f + \beta_e \times MRP$$

where:

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[486] Envestra, *Revised Access Arrangement Information, 9 November 2012, Attachment 9.11 Response to Draft Decision – Rate of return*, section 5.2.

[487] S. Wright, *Review of risk free rate and cost of equity estimates: A comparison of UK approaches with the AER*, 25 October 2012, p.2.

[488] Ernst & Young, *Market evidence on the cost of equity: Victorian gas access arrangement review 2013-2017*, 8 November 2012, p. 7

[489] AER, *Final decision: Electricity transmission and distribution network service providers: Review of the weighted average cost of capital (WACC) parameters*, 1 May 2009, p. 335.

[490] Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section* 3.

the AER and Envestra agree the equity beta estimate (β_e) is 0.8.[491]

5.3.2 Risk free rate

The AER agrees with Envestra's proposed method for estimating the risk free rate component of the cost of debt.[492] The AER does not agree with Envestra's proposed method for estimating the risk free rate component for the cost of equity.[493] On both matters, the AER's position is consistent with its position in the draft decision.

The AER's risk free rate method is also consistent for both the cost of debt and the cost of equity.

Conceptually, this method adopts a 10 year forward looking risk free rate, commensurate with prevailing conditions in the market for funds at the commencement of the access arrangement period. Practically, this method adopts the 10 year CGS yield averaged over a short and recent period (chosen by Envestra), as close as practicably possible to the date of the final decision.

The AER considers this method reflects prevailing conditions in the market for funds and the risks involved in providing reference services.

The AER's reasons for adopting this method are summarised in section 5.1.2. In this section, the AER explains those reasons. Further considerations on the risk free rate are discussed in appendix B.

CGS are the best proxy for the risk free rate in Australia

The risk free rate measures the return an investor would expect from an asset with no default risk. CGS are low default risk securities issued by the Australian Government, and are therefore an appropriate proxy for the risk free rate.[494] Each of the three major credit rating agencies issued its highest possible rating to the Australian Government.[495]

Experts generally acknowledge that an observable proxy for the risk free rate is available in Australia.[496] The AER received advice from the RBA, Australian Treasury and AOFM in July 2012 that supported the use of CGS yields as a proxy for the risk free rate in Australia.[497] In the RBA letter, Guy Debelle stated:

> I therefore remain of the view that CGS yields are the most appropriate measure of a risk free rate in Australia.[498]

Similarly, the Treasury and AOFM stated:

> The nominal CGS market is liquid and continues to display the attributes of a well-functioning market.[499]

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491 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section* 3.

492 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section 7.*

493 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section 7.*

494 Gregory also identifies the absence of re-investment risk and inflation risk and characteristics of a risk free rate. Gregory, *The risk free rate and the present value principle*, November 2012, p.5. Lally discusses these risks in his report. Lally, *The present value principle*, March 2013, p. 10-12.

495 Standard and Poor's, viewed 5 March 2013, http://www.standardandpoors.com/prot/ratings/entity-ratings/en/us/?entityID=268976&sectorCode=SOV ; Moody's, viewed 5 March 2013, http://www.moodys.com/credit-ratings/Australia-Government-of-credit-rating-75300; Fitch Ratings, viewed 5 March 2013 http://www.fitchratings.com/gws/en/esp/issr/80442187

496 See, for example, Lally, *The present value principle*, March 2013, p. 13, and Wright, *Review of risk free rate and Cost of equity estimates: A comparison of UK approaches with the AER*, October 2012, p. 3.

497 RBA, *Letter regarding the CGS market*, July 2012; Treasury and AOFM, *Letter regarding the CGS Market*, July 2012.

498 RBA, *Letter regarding the CGS market*, July 2012, p. 1.

While there is no explicit statement to this effect, Envestra appears to agree with this conclusion because it proposed prevailing CGS yields for the risk free rate component of its proposed cost of debt.[500] Furthermore, the two approaches Envestra suggests are acceptable for the risk free rate component of the cost of equity both adopt CGS yields for the risk free rate, albeit over different averaging periods.[501]

Furthermore, in advice to Envestra, CEG makes the following statement:

> The AER goes on to address the issues that I raised and, in each case, the AER concludes that CGS is nonetheless the best proxy for the risk free rate. However, I did not argue otherwise...The argument that I did put related to the need for internal consistency between the risk free rate and MRP in the CAPM.[502]

This statement indicates that CEG agrees CGS yields are an appropriate proxy for the risk free in Australia. The AER addresses CEG's argument on internal consistency in appendix B.2.1.

Appropriate averaging period

The AER considers the best method for determining an appropriate risk free rate is to use a short and recent averaging period as close as practicably possible to the commencement of the access arrangement period. The AER explains its reasons for this position in the following sections.

Prevailing CGS yields are consistent with the CAPM

For the following reasons, using a CGS yield estimated as close as practical to the commencement of the access arrangement period is consistent with the CAPM. Inputs to a model must be appropriate for use in that model, so individual equity parameters in this decision must be consistent with the CAPM framework.

The CAPM uses the most current information to derive the rate of return. In theory, it would use the risk free rate on the day (in this case, the commencement of the access arrangement period), as recognised by the Federal Court in *ActewAGL Distribution v The Australian Energy Regulator* [2011] FCA 639 (the ActewAGL matter).[503]

During the ActewAGL matter, Associate Professor Lally for the AER and Greg Houston for ActewAGL agreed theory requires the risk free rate be an "on the day" rate.[504] The Federal Court acknowledged this agreement:

> There was no dispute between the experts that the CAPM theory suggests that, ideally, the nominal risk-free rate input will be calculated on the day of the final determination.[505]

Associate Professor Lally advised:

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499 Treasury and AOFM, *Letter regarding the CGS Market*, July 2012, p. 2.

500 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section 7*

501 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section 7*

502 CEG, *Response to the AER Vic gas draft decisions: Internal consistency of MRP and risk free rate*, November 2012, p. 14. (CEG, *Response to the AER Vic gas draft decisions*, November 2012).

503 Federal Court of Australia, *ActewAGL Distribution v The Australian Energy Regulator [2011] FCA 639*, 8 June, 2011, paragraph 119.

504 In advice provided to Envestra by NERA, Greg Houston raised concerns with the AER's presentation of his advice to the Federal Court. NERA, *Estimating the cost of equity under the CAPM: Expert report of Gregory Houston*, November 2012, pp. 36-37. In response, the AER has amended its discussion of Mr Houston's advice to the Federal Court.

505 Federal Court of Australia, *ActewAGL Distribution v The Australian Energy Regulator [2011] FCA 639*, 8 June 2011, paragraph 119.

> In relation to the Sharpe-Lintner model, this model always requires a risk free rate prevailing at a point in time for some subsequent period rather than a historical average and application of the model to a regulatory situation would require the risk free rate prevailing at the beginning of a regulatory period.[506]

A prevailing risk free rate is consistent with the building block model and present value principle

For the risk free rate, an averaging period that is as close as practical to the commencement of the access arrangement period promotes consistency with the building block model and the present value principle.

Lally defines the present value principle in this manner:

> The Present Value principle states that the present value of a regulated firm's revenue stream should match the present value of its expenditure stream plus or minus any efficiency incentive rewards or penalties.[507]

The NGR prescribe the use of the building block model when the AER is calculating the total revenue allowance.[508] An important principle of the building block model is the present value principle.[509] Indeed, Lally states:

> In relation to the Building Block model, this is a consequence of the Present Value principle and therefore the same conclusion applies.[510]

Further, as Lally explains:

> The Present Value principle is fundamental to regulation; lower revenues then those that satisfy this principle will fail to entice producers to invest and higher revenues constitute the very excess profit that regulation seeks to prevent (Marshal et al, 1981).[511]

As Lally explains, this principle requires the risk free rate (and MRP) to be estimated at the commencement of the access arrangement period.[512]

The averaging period should be short

A short averaging period provides a reasonable estimate of the prevailing rate while not exposing service providers to unnecessary volatility. It is a pragmatic alternative to using a risk free rate that precisely satisfies the present value principle.

The rate of return must be estimated in a manner consistent with not only that principle, but also the building block model and the CAPM. In advice received prior to the draft decision, Lally stated that all three require a risk free rate estimated at the commencement of the access arrangement period[513]—

506 Lally, *Risk free rate and present value*, August 2012, p. 3.
507 M. Lally, *The present value principle: risk, inflation and interpretation*, March 2013, p. 5 (Lally, *The present value principle*, March 2013)
508 NGR r. 76
509 Biggar, D., *Public utility regulation in Australia: Where have we got to? Where should we be going, Working paper no. 4, ACCC/AER working paper series*, July 2011, p. 58. A similar description of the building block model supported by more detailed analysis can be found in Biggar, D., *Incentive regulation and the building block model*, 28 May 2004, pp. 2-21, accessed on 27 August 2012, <http://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=ACE2004&paper_id=133>
510 Lally, *Risk free rate and present value*, August 2012, p. 3.
511 Lally, *Risk free rate and present value*, August 2012, p. 6.
512 Lally, *The present value principle*, March 2013, p. 6.
513 Lally, *Risk free rate and present value*, August 2012, p. 3

literally, the first market price on the first day of the access arrangement period.[514] However, Lally explained:

> ... the use of this transaction would expose the regulatory process to reporting errors, an aberration arising from an unusually large or small transaction, and a rate arising from a transaction undertaken by a regulated firm for the purpose of influencing the regulatory decision.[515]

A short averaging period (between 10 and 40 business days) as close as practically possible to the commencement of the access arrangement period provides a pragmatic alternative—violating the present value principle only to the minimum extent necessary. Lally states:

> The use of the CAPM in a regulatory situation requires that the risk free rate and the MRP must be the rates prevailing at the beginning of the regulatory period. However pragmatic considerations suggest that the risk free rate be averaged over a short period close to the beginning of the regulatory period.[516]

On the other hand, Lally noted a long term average would more significantly violate the present value principle without providing any pragmatic gain:

> Rates averaged over a much longer historical period would be inconsistent with the present value principle, i.e., they would violate it without offering any incremental pragmatic justification.[517]

Subsequent advice provided by Lally did not change this conclusion. The presence of risky assets does not justify the use of a long-term averaging period.[518]

The AER does not consider a long-term averaging period is an appropriate and reasonable departure from the present value principle. Therefore, the AER does not accept Envestra's proposed historical averaging period for the cost of equity.

Envestra's nominated averaging period for the cost of debt was 31 January 2013 to 20 February 2013. This AER agrees with this averaging period because it is consistent with the AER's considerations in this section. The AER has applied this averaging period for both the cost of equity and the cost of debt. The averaging period is discussed in more detail in appendix B.4.2.

CGS are an observable market determined parameter

CGS yields are observable in a market. As that market is liquid and functioning well,[519] the AER has confidence the market rate reflects the prevailing risk free rate.

Changes in yields for securities traded in a liquid market are likely to reflect the actions of many market participants at each point in time. So, market determined CGS yields are likely to reflect prevailing conditions in the market for funds. On its own, a yield that is low relative to historical averages is not a sign that the yield prevailing at any point in time is no longer a good proxy for the risk free rate. The current CGS yields are likely to reflect strong demand from foreign investors and a general re-assessment of the value of a risk free asset. Lower yields (higher prices) are an expected outcome from increased demand for those assets.

The Treasury and the AOFM noted this point:

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[514] Lally, *Risk free rate and present value*, August 2012, p. 7
[515] Lally, *Risk free rate and present value*, August 2012, p. 7
[516] Lally, *The present value principle*, March 2013, p. 5.
[517] Lally, *Risk free rate and present value*, August 2012, p. 7.
[518] Lally, *The present value principle*, March 2013, p. 6
[519] Treasury and AOFM, *Letter regarding the CGS Market*, July 2012, p. 2.

> The weak and fragile global economy has put downward pressure on benchmark global long-term bond yields, and is driving investors into high quality government debt.[520]

The prevailing yield is the benchmark that risky investments must better

In previous advice, Professor McKenzie and Associate Professor Partington explained the relationship between the prevailing risk free rate and investment decisions:

> There seems to be an implication in some of the submissions that there is something wrong with using the government bond rate as the risk free rate when government bond rates are low. The fundamental point to be made is that the government bond rate sets the current benchmark that a risky project has to beat. Clearly there is little point in taking on a risky project if you can get the same or higher return by investing in a government bond. The government bond thus sets a benchmark; the time value of money.[521][522]

They also advised:

> At the time of writing investors can invest in a 10 year government bond at yield of 3.84%. So a ten year project that offers say 4.5% is worth considering if the risk is low enough. The fact that government bond yields were higher in the past does not make 4.5% a bad deal, or 3.84% too low a benchmark. We see no reason to switch from using the current 10 year government bond yield as the proxy for the risk free rate.[523]

Since the AER received this advice in February 2012, the 10 year CGS yield has further decreased. The risk free rate from Envestra's nominated averaging period is 3.53 per cent. The logic in Professor McKenzie and Associate Professor Partington's advice continues to apply. In prevailing market conditions during Envestra's averaging period, 3.53 per cent is the benchmark that a risky project must exceed. The AER estimates an appropriate risk premium above this rate reflecting prevailing conditions in the market for funds and the risks involved in providing reference services. The risk premium is the product of the equity beta and the MRP. The AER considers the appropriate equity beta and MRP in sections 5.3.4 and 5.3.3.

Prevailing 10 year CGS yield is a forward looking 10 year rate

The prevailing 10 year CGS yield is a forward looking rate. The prevailing 10 year CGS yield varies over time, but this variation does not mean the yield is a 'short term' rate. Rather, according to the expectations theory on the term structure of interest rates, at any point in time the yield on long dated bonds (such as 10 year CGS) incorporates the market's expectation of the yield on shorter dated bonds over the next 10 years. The expectations theory is generally regarded as a partial but not complete explanation of the term structure of interest rates. Other factors are also likely to be relevant.[524]

The method is unbiased

Determining the averaging period in advance helps achieve an unbiased risk free rate.

Regulated businesses have an incentive to seek a WACC that is as high as possible, because it will increase their revenue allowance. If a regulated business can select an averaging period by looking at

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520 Treasury and AOFM, *Letter regarding the CGS Market*, July 2012, p. 1.

521 McKenzie and Partington, *Supplementary report on the MRP*, February 2012, pp. 11–12..

522 The advice was provided for the AER's final determination on Aurora. Many of the contentions made in that process are also being made in this process.

523 McKenzie and Partington, *Supplementary report on the MRP*, February 2012, p. 12.

524 The 'liquidity premium' theory and the 'preferred habitat' theory identify other important determinants of the term structure of debt. Elton et. al., *Modern Portfolio Theory and Investment Analysis 8th ed.* (2010), pp. 516–-521. These concepts are discussed further in appendix B of the draft decision.

historical yields, they may introduce an upward bias.[525] They can select a period with the highest yield available. But, when an averaging period is agreed or specified in advance regulatory "gaming" is less likely because the risk free rate is unknown for that future period.

The possibility of upward bias also applies to a long term average. No particular long term averaging period is clearly superior. Envestra responded to these concerns by proposing the use of a 10 year averaging period.[526] Envestra suggested that there is regulatory precedent from IPART that supports the use of a 10 year averaging period.[527] IPART has indeed taken long term historical averages into account.[528] However, as SFG acknowledges, it has not formally adopted a long term historical estimate in the manner that Envestra has proposed.[529] The precedent value of IPART's approach is not as strong as Envestra suggests. IPART's approach to setting the WACC is discussed in more detail in appendix B.8.2.

The AER thus maintains its position that a short averaging period, determined in advance, minimises the likelihood of bias.

There is no clear evidence that CGS yields are abnormally low

There are references in Envestra's revised proposal, and the consultant reports it submitted, to CGS yields being likely to return to normal. The following statements in Envestra's proposal is an example:

> Ordinarily, therefore, the standard regulatory approach would produce an estimate of the cost of equity that is consistent with Rule 87(1). However, current market conditions are far from normal. [530]

This position finds support in advice from CEG, who state:

> The effect of this is that the prevailing cost of equity is at least as high as under normal market conditions - notwithstanding that the CGS yields are at historic lows.[531]

This raises the question of what "normal" conditions are and whether CGS yields are "abnormally" low.

The analysis above demonstrates that the CGS market is liquid and functioning well. There is no evidence before the AER to suggest that conditions in the CGS market are abnormal. Conversely, there is no clear understanding of "normal" market conditions. Prices (and yields) in markets move up and down all the time depending on the circumstances, demand and supply conditions, and investor expectations. There is no evidence before the AER to suggest that there is mispricing in the CGS market.

McKenzie and Partington also considered the question of whether CGS yields are abnormally low. They did not find that there was reason to describe current CGS yields as abnormally low. They state:

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525 Lally, M., *Expert Report of Martin Thomas Lally*, 13 February 2011, pp. 9-10. Lally's comments in this report were made about a specific approach proposed in the relevant determination but are consistent with the approach taken by the AER in this decision.

526 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012*, section 6.

527 Envestra, *Revised Access Arrangement Information, Attachment 9.11 Response to Draft Decision – Rate of return, 9 November 2012, section 6*.

528 IPART, *Review of water prices for Sydney Desalination Plant Pty Limited from 1 July 2012 - Final Report*, December 2011, p. 93.

529 SFG, *The required return on equity: Response to AER Victorian gas draft decisions*, 7 November 2012, p. 60. (SFG, *The required return on equity*, November 2012)

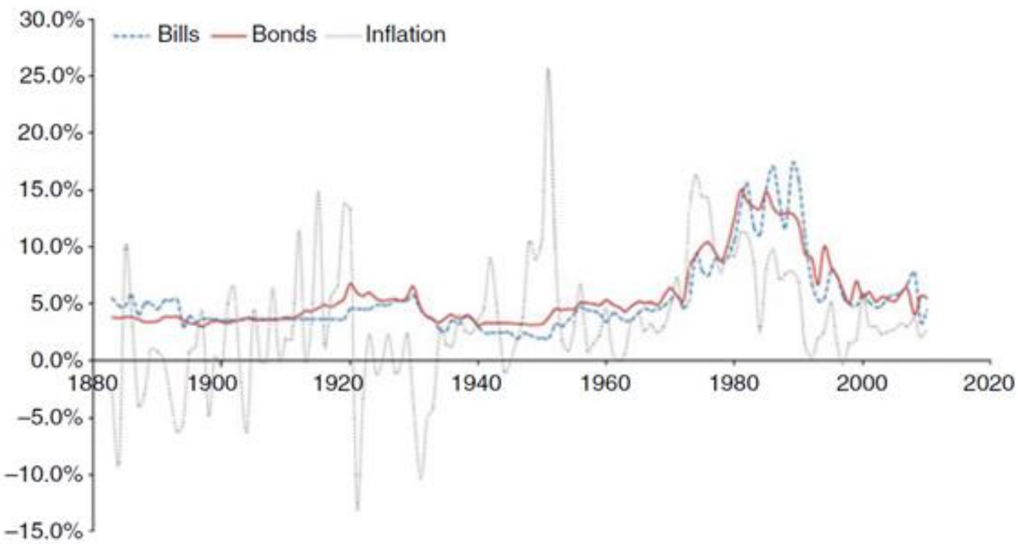
530 Envestra, *Revised Access Arrangement Information, 9 November 2012, Attachment 9.11 Response to Draft Decision – Rate of return, section 5.1*.

531 CEG, *Update to March 2012 Report: on consistency of the risk free rate and MRP in the CAPM*, November 2012, p. 32. (CEG, *Update to March 2012 Report*, November 2012)

> The evidence provided by the data suggests that the history of interest rates over the last few decades is not truly representative of the long run in this market. For both the U.S., UK and Australian markets, evidence exists which suggests that bond yields were stable (and possibly even falling) in the long run. The history of data over the last few decades is anomalous and the high interest rates observed during this period are clearly not representative of the longer time series. As such, one conclusion may be that the current environment is nothing more than a return to the 'normal' long run interest rate regime. On the other hand, it could be argued that there is a new normal and the GFC represents a true regime shirt for global financial markets. It is difficult to determine whether this is the case or not - only in the fullness of time will we be able to comment on this with any certainty.[532]

Their report also presents the following figure from Brailsford et al (2012).[533]

Figure 5.2 Bond yields, bill yields and inflation rates over time



The figure shows:

- Yields in the 1970s and 1980 were high by comparison with historical rates.
- Yields have remained elevated (depressed) for long periods before falling (increasing).

As part of its considerations on the cost of equity, the AER has considered evidence on the stability of the cost of equity and the relationship between the risk free rate and MRP. These issues are further considered in appendix sections B.2.1, B.2.2 and B.2.3.

5.3.3 Market risk premium

The AER agrees with Envestra's proposed MRP of 6 per cent.

In the draft decision, the AER also agreed with Envestra's proposal for a 6 per cent MRP. However, the AER noted Envestra's proposed 6 per cent MRP was proposed in connection with a long term historical average risk free rate. Envestra maintained this position in the revised proposal. It submitted its proposed approach, which adopts long term averages for both the risk free rate and MRP, is one of the two legitimate options to estimate the cost of equity by applying the CAPM. While proposing a

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532 McKenzie and Partington, *Review of the AER's overall approach*, February 2013, p. 5.

533 McKenzie and Partington, *Review of the AER's overall approach*, February 2013, p. 13.

'long term average' MRP of 6 per cent, Envestra's also suggested it would accept a higher 'spot' MRP if the AER decided to address its arguments through the application of 'spot estimates'.[534]

It is well recognised that the MRP cannot be directly observed. Unlike the risk free rate, the evidence available for estimating the MRP is imprecise and subject to varied interpretation. There is no consensus among experts on which method produces the best MRP estimate. In addition, different methods can produce widely different results at the same point in time.[535] For these reasons, the AER considers that it is reasonable to assess a range of evidence to inform the best estimate of the MRP. In this assessment the AER must apply its judgment to interpret the information before it.

The AER considers a 6 per cent MRP reflects prevailing conditions in the market for funds and the risks involved in providing reference services. The AER's reasons for adopting this value are summarised in section 5.1.2. In this section, the AER explains those reasons. Further considerations on the MRP are discussed in appendix B.

Historical excess returns

Long run historical average excess returns support a 10 year forward looking MRP of 6 per cent as reasonable.

Historical excess returns estimate the realised return that stocks have earned in excess of the 10 year government bond rate. They can be directly measured. Although not strictly forward looking, historical excess returns have been used to estimate a forward looking MRP on the view that investors base their forward looking expectations on past experience. The Tribunal recognised this view in the DBNGP matter.[536] In a regulatory context, the use of historical excess returns has advantages, as supported by McKenzie and Partington:

- The estimation methods and the results are transparent.
- The estimation methods have been extensively studied and the results are well understood.
- Historical estimates are widely used and have support as the benchmark method for estimating the MRP in Australia.[537]

Dimson, Marsh and Staunton (2012) indicate there is no better forecast of expected excess returns than the historical average:[538]

> In summary, there are good reasons to expect the equity premium to vary over time. Market volatility clearly fluctuates, and investors' risk aversion also varies over time. However, these effects are likely to be brief. Sharply lower (or higher) stock prices may have an impact on immediate returns, but the effect on long-term performance will be diluted. Moreover volatility does not usually stay at abnormally high levels for long, and investor sentiment is also mean reverting. For practical purposes, we conclude that for forecasting the long run equity premium, it is hard to improve on extrapolation from the longest history that is available at the time the forecast is being made.

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534 Envestra, *Revised Access Arrangement Information, 9 November 2012, Attachment 9.11 Response to Draft Decision – Rate of return*, section 4.

535 See: Damodaran*, Equity risk premiums: determinants, estimation and implications - the 2012 edition*, March 2012, p. 93. He also noted: "No matter what the premium used by an analyst, whether it be 3% or 12%, there is back-up evidence offered that the premium is appropriate."

536 Australian Competition Tribunal, *Application by DBNGP (WA) Transmission Pty Ltd (No 3) [2012] ACompT 14,* 26 July 2012, paragraph 153.

537 M. McKenzie, and G. Partington*, Report to Corrs Chambers Westgarth: Equity market risk premium*, 21 December 2011, pp. 5–6, (McKenzie and Partington, *Equity market risk premium*, December 2011)

538 Dimson, Marsh and Staunton, *Credit Suisse Global Investment Returns Sourcebook 2012*, February 2012, p.37.

This conclusion is informed by their assessment of the current state of research on the MRP, which they summarize as follows:[539]

> Mean reversion would imply that the equity premium is to some extent predictable…Yet despite extensive research, this debate is far from settled. In a special issue of the Review of Financial Studies, leading scholars expressed opposing views, with Cochrane (2008) and Campbell and Thompson (2008) arguing for predictability, whereas Goyal and Welch (2008) find that 'these models would not have helped an investor with access only to available information to profitably time the market'.

The long term averages of historical excess returns, adjusted to incorporate an imputation credit utilisation rate (theta) of 0.35[540], produce a range of 4.9–6.1 per cent (based on arithmetic averages) and 3.0–4.7 per cent (based on geometric averages) over the periods 1883–2011, 1937–2011, 1958–2011, 1980–2011 and 1988–2011 (Table 5.2). The starting point for each of the five estimation periods was chosen because the quality of the underlying data sources changed (in 1883, 1937, 1958 and 1980) and the imputation tax system was introduced (in 1988).[541]

Table 5.2 Historical excess return estimates—assuming a use rate of distributed imputation credits of 0.35 (per cent)

Sampling period	Arithmetic mean	Geometric mean
1883–2011	6.1[a]	4.7
1937–2011	5.7[a]	3.7
1958–2011	6.1[a]	3.5
1980–2011	5.7	3.1
1988–2011	4.9	3.0

[a] Indicates estimates are statistically significant at the 5 per cent level using a two tailed test.
Source: Handley.[542]

The AER considers the strengths and weaknesses of each sampling period, which are:

- Longer time series contain a greater number of observations, so produce a more statistically precise estimate.
- Significant increases in the quality of the data becoming available in 1937, 1958 and 1980.
- More recent sampling periods more closely accord with the current financial environment, particularly since financial deregulation (1980) and the introduction of the imputation credit taxation system (1988).[543]

539 Dimson, Marsh and Staunton, *Credit Suisse Global Investment Returns Sourcebook 2012*, February 2012, p.36.

540 The 0.35 value for theta is consistent with the Australian Competition Tribunal's position in *Application by Energex Limited (Gamma) (No 5) [2011] ACompT9*, November 2009.

541 Brailsford, Handley and Maheswaran, *Re-examination of the historical equity risk premium in Australia,* Accounting and Finance, vol. 48, 2008, pp. 85-86.

542 Handley, *An estimate of the historical equity risk premium for the period 1883 to 2011*, April 2012, p. 6.

543 In a report submitted on Aurora's revised proposal, NERA raised the issue that the market excess returns were less volatile before the 1950s. See: NERA, *Market risk premium*, 20 February 2012, pp. 13–20. The lack of a well developed theory behind what drives the MRP makes the AER cautious of excluding large periods of data because it does not represent a forward looking MRP. Also, other evidence suggests the historical excess returns were too high before the 1950s. See: AER, *APTPPL access arrangement draft decision*, April 2012, pp. 296297–7.
Further, the arithmetic averages of historical excess returns over 1883–2011 and 1958–2011 both produce a historical MRP of 6.1 per cent. The geometric averages are 4.7 and 3.0 respectively. Accordingly, even if the AER were to rely on only the post 1958 data, it would not change its position on the appropriate value of the MRP.

- Shorter time series are more vulnerable to influence by the current stage of the business cycle or other (one-off) events. [544]

The AER considers that there is no one sampling period that is to be preferred, since each period has a number of strengths but at least one weakness. For this reason, the AER considers that all five sampling periods are relevant.

Arithmetic and geometric means

The AER considers the arithmetic average of 10 year historical excess returns would likely be an unbiased estimator of a forward looking 10 year return. However, historical excess returns are estimated as the arithmetic or geometric average of one year returns. If the one year historical excess returns are variable, which they are, then their arithmetic average will overstate the arithmetic average of 10 year historical excess returns. Similarly, the geometric average of one year historical excess returns will understate the arithmetic average of 10 year historical excess returns.[545]

The AER considers both the arithmetic and geometric averages are relevant to consider when estimating a 10 year forward looking MRP using historical annual excess returns.[546] In the Envestra matter, the Tribunal found no error with this approach.[547] The best estimate of historical excess returns over a 10 year period is therefore likely to be somewhere between the geometric average and the arithmetic average of annual excess returns. Also Envestra's consultant, Wright, considers both arithmetic averages and geometric averages of historical data when estimating the MRP.[548]

Bias in historical excess returns

In using historical excess returns as a source of evidence on the forward looking MRP, it is important to consider whether historical estimates are likely to under or overstate a forward looking MRP. As various experts have noted, historical excess returns may be subject to certain biases, including:

- survivorship bias (McKenzie and Partington; Damodoran)[549]
- unanticipated inflation, historically high transaction costs and a historical lack of low cost opportunities for diversification (Siegel)
- bias due to the inclusion of historical data which contains periods of major recessions (Lally)[550]

McKenzie and Partington suggested MRP estimates based on historical data may be overstated relative to true expectations, as a result of survivorship bias.[551] According to Damodoran (2011), survivorship bias is created by estimating historical returns on only stocks that have survived.[552] Historical data excludes negative return stocks that no longer exist, which naturally results in higher

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544 AER, *Final decision—WACC review,* May 2009, pp. 200, 204; Brailsford, Handley and Maheswaran, *Re-examination of the historical equity risk premium in Australia, Accounting and Finance*, 2008, vol. 48, pp. 78–82. (AER, *WACC review final decision*, May 2009)

545 This matter is explained in detail in appendix section B.2.1 of the draft decision.

546 The AER also discusses the comments on the use of geometric averages by SFG, NERA and Lally in appendix section B.5.1.

547 Australian Competition Tribunal, *Application by Envestra Ltd (No 2) [2012] ACompT4*, 11 January 2012, paragraph 157.

548 Wright, *Review of risk free rate and cost of equity estimates*, October 2012, p.20

549 Damodoran, A. *Equity risk premiums: determinants, estimation and implications—the 2012 edition*, Mach 2012, p. 24.

550 M. Lally, *The cost of equity and the market risk premium*, 25 July 2012, p. 24 (Lally, *Cost of equity and the MRP*, July 2012).

551 McKenzie, M. and G. Partington, *Equity market risk premium*, 21 December 2011, pp. 6–7.

552 Damodoran, A. *Equity risk premiums: determinants, estimation and implications—the 2012 edition,* Mach 2012, p. 24.

return estimates. McKenzie and Partington[553] and Joye[554] supported this view. This upward bias is a relevant consideration because the various Australian stock indexes exclude the failed stocks.[555]

Other arguments also suggest the historical excess returns are upwardly biased. Siegel (1999) considered unanticipated inflation means historical returns underestimate real returns on risk free assets.[556] He also submitted historical returns on equity overstate returns actually realised, given historically high transaction costs and the historical lack of low cost opportunities for diversification.[557]

To address the overestimating problem noted by Siegel, Lally suggested one could estimate the MRP by adding back the historical average real risk free rate to the conventional MRP estimate and then deducting an improved estimate of the long-term expected real risk free rate. The modified MRP estimate is 4.9 per cent. Lally noted results from this methodology have been used by both the QCA and the New Zealand Commerce Commission in reaching their conclusions on the MRP.[558]

McKenzie and Partington noted Envestra's consultant Gregory makes a similar argument to Siegel in support of his view that the regulatory rate of return in the UK has been too high. He submits that a comparison of realised bond returns unprotected from inflation with realised equity returns that have some protection from inflation is likely to overstate the MRP.[559]

Lally also suggested historical excess returns may underestimate the forward looking 10 year MRP when an economy has entered a major recession. But he noted Australia has not recently entered a major recession and, even if it had, the downward bias is unlikely to be very large.[560] He also noted:

> ... the fact that the AER bases its estimate of the MRP at least partly upon historical averaging of excess returns does not invalidate its claim that it is estimating the MRP for the next ten years; this estimation methodology is suitable (in conjunction with other methodologies) for estimating the MRP for the next ten years as well as for estimating the long-term average MRP. The use of historical averaging results may introduce a downward bias at the present time, but the effect is likely to be small relative to the standard deviation in the estimate and to possible upward bias in the methodology arising from significant unanticipated inflation in the 20th century.[561]

The AER considers the bias is a relevant consideration when estimating the MRP using historical excess returns. Since it is not clear what the precise magnitude of the bias is, McKenzie and Partington do not recommend adjusting the historical estimate of the MRP. Given that 6 per cent is towards the top of the range of average historical excess returns, the AER considers 6 per cent is a reasonable estimate, and unlikely to underestimate a forward looking MRP.

Forward looking predictors of excess returns

Envestra has submitted consultant reports in support of using dividend yields, dividend yield based DGM estimates and credit spreads to forecast the MRP. In past regulatory decisions, service providers have also proposed other methods to estimate MRP, such as implied volatility. Over the

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553 M. McKenzie, and G. Partington, *Report to the AER: Review of regime switching framework and critique of survey evidence,* 27 August 2012, p. 19, (McKenzie and Partington, *MRP: regime switching framework and survey evidence*, August 2012)

554 Joye, C., *Super funds miss mark in bias to equities,* Australian Financial Review, 14 August 2012.

555 For example, the ASX All Ordinaries Index represents the 500 largest companies listed on the ASX. Market capitalisation is the only eligibility requirement. An underperforming stock that is losing its market share would be eventually be removed from the index. See: http://www.asx.com.au/products/capitalisation-indices.htm#all_ordinaries_index.

556 Lally, *Cost of equity and the MRP*, July 2012, p. 8, (Lally, *Cost of equity and the MRP*, July 2012).

557 McKenzie and Partington, *Equity market risk premium*, December 2011, p. 7

558 Lally, *Review of the AER's methodology*, March 2013, p.29.

559 McKenzie and Partington, *Review of the AER's overall approach*, February 2013, pp. 18.

560 Lally, *Cost of equity and the MRP*, July 2012, p. 24.

561 Lally, *Cost of equity and the MRP*, July 2012, p. 27.

past decade, there is considerable scepticism about evidence for a relationship between observable variables and the MRP. A few studies indicated there is no better forecast of excess returns than the historical average.[562]

For example, Goyal and Welch examine the performance of variables that academic literature suggested as good predictors of the equity premium. These variables include dividend yield, earnings price ratio, corporate bond returns and volatility. Goyal and Welch find that, of the variables that have been proposed to predict excess returns, many produced poor in-sample forecasts. Moreover, they find most variables that performed well in-sample performed poorly out-of-sample.

Goyal and Welch distinguish between in-sample and out-of-sample performance of forecasting models. To understand this distinction, it may be helpful to consider the following passage in Brooks (2008), which insists on the importance of out-of-sample forecast performance:[563]

> In-sample forecasts are those generated for the same set of data that was used to estimate the model's parameters. One would expect the 'forecasts' of a model to be relatively good in-sample, for this reason. Therefore a sensible approach to model evaluation through an examination of forecast accuracy is not to use all of the observations in estimating the model parameters, but rather to hold some of the observations back. The latter sample, sometimes known as the holdout sample, would be used to construct out-of-sample forecasts.

The conclusion of Goyal and Welch is stated below: [564]

> Most models are no longer significant even in sample (IS), and the few models that still are usually fail simple regression diagnostics…Most models have poor out-of-sample (OOS) performance, but not in a way that merely suggests lower power than IS tests. They predict poorly late in the sample, not early in the sample…Therefore, although it is possible to search for, to occasionally stumble upon, and then to defend some seemingly statistically significant models, we interpret our results to suggest that a healthy scepticism is appropriate when it comes to predicting the equity premium, at least as of early 2006. The models do not seem robust.
>
> ...
>
> OOS, most models not only fail to beat the unconditional benchmark[565] (the prevailing mean) in a statistically or economically significant manner, but underperform it outright.

Forward looking measures

There is growing scepticism in the academic literature of forward looking measures of the MRP. However, in this section the AER considers two forward looking MRP measures that are frequently suggested by service providers. Those are:

- DGM estimates—these estimates are advocated by Envestra and its consultant in the initial proposal and the revised proposal. CEG, Capital Research, NERA and Lally all recommended placing at least some weight on DGM estimates for estimating a forwarding looking MRP. The AER considers that DGM based analysis can provide information on the expected MRP, however, this approach is also subject to a number of limitations.

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562 Boudoukh, Richardson and Whitelaw, *Myth of long-horizon predictability,* Review of financial studies, July 2008, vol. 21, no. 4, pp. 1577–605; Timmermann, *Elusive return predictability,* International journal of forecasting, January – March 2008, vol. 24, no. 1, pp. 1–18; Goyal and Welch, *A comprehensive look at the empirical performance of equity premium,* Review of financial studies v, 2008, vol. 21 n, no. 4, pp. 1455–508.

563 Brooks, C, *Introductory Econometrics for Finance*, 2nd ed. Cambridge, Cambridge University Press, 2008, p.245

564 Goyal and Welch, *A comprehensive look at the empirical performance of equity premium,* Review of financial studies v, 2008, vol. 21 n, no. 4, p. 1456 & p. 1504.

565 Unconditional benchmark refers to average historical excess returns in Goyal and Welch.

- Implied volatility glide path—the AER notes this technique was not proposed by Envestra in this review. However, this approach, as suggested by Value Adviser Associates (VAA) in its 2010 report, is the only other forward looking approach that produces an MRP estimate. Therefore the AER gives consideration to this method in both the draft decision and this final decision.

These two forward looking MRP measures give mixed results. DGM estimates can give some insight into the prevailing MRP estimate, although it is subject to a number of limitations. Associate Professor Lally found the current DGM MRP estimates are in the range of 5.9–8.4 per cent after correcting for deficiencies in CEG's method. The other forward looking MRP measure—implied volatility glide path indicates the MRP estimate is currently below its historical average level (and therefore below 6 per cent).

DGM estimates

DGM analysis can provide some information on the expected MRP. The DGM method examines the forecast future dividends of businesses and derives the cost of equity that makes these dividends consistent with the market valuation of the equity of those businesses.

However, DGM based estimates of the return on equity and implied MRP estimates are highly sensitive to the assumptions made. It is necessary that all assumptions made have a sound basis, otherwise estimated results from DGM analysis may be inaccurate and lead analysts into error.[566] This view is also supported by McKenzie and Partington:

> Clearly valuation model estimates are sensitive to the assumed growth rate and a major challenge with valuation models is determining the long run expected growth rate. There is no consensus on this rate and all sorts of assumptions are used: the growth rate in GDP; the inflation rate; the interest rate; and so on. A potential error in forming long run growth estimates is to forget that this growth in part comes about because of injections of new equity capital by shareholders. Without allowing for this injection of capital, growth rates will be overstated and in the Gordon model this leads to an overestimate of the MRP.[567]

Consistent with its position in the WACC review and previous decisions, the AER considers:

- The implied MRP produced by DGM estimates is sensitive to both the model specification and the choice of inputs
- No input assumptions are reliable. Generally, the expected market growth rate in dividends per share (a key input) is proxied with analysts' short term forecasts of market wide earnings per share growth, or long term expectations of GDP growth (or both). Associate Professor Lally advised such proxies are likely to produce an upward bias in the MRP estimates.[568]
- Regulators had previously been wary to lower the MRP when DGM estimates were below 6 per cent.[569] The AER is similarly wary to increase the MRP (based on DGM estimates) even though the DGM estimates can produce estimates above 6 per cent.
- At the WACC review, academics (Officer and Bishop, and CEG) and industry representatives (including the ENA who represents the Victorian gas businesses) considered DGM estimates should be used only as a 'cross check' on the reasonableness of other methods to estimate the

566 For example corporate finance texts have noted “The simple constant-growth DCF [discounted cash flows] formula is an extremely useful rule of thumb” but “Naive trust in the formula has led many financial analysts to silly conclusions.” Brealey, Myers and Allen, *Principles of Corporate Finance: International Edition,* 9th Edition, Boston: McGraw-Hill, 2008, p. 95.

567 McKenzie and Partington, *Equity market risk premium*, December 2011, p. 25.

568 Lally, *Cost of equity and the MRP*, July 2012, pp. 11–18.

569 AER, *WACC review final decision*, May 2009, p. 220.

MRP, rather than as the primary method.[570] In contrast, in this review the regulated businesses and CEG consider substantial weight should be placed on DGM estimates. The reasons for this change in position have not been explained.

- Although DGM is extensively used by US economic regulators in estimating the return on equity[571], it is not well accepted for use in the Australian context.[572]

The AER notes different consultants produce widely different DGM based MRP estimates over a short period. Table 5.3 below illustrates the consultants' DGM estimates from the last year, which range from 5.90–9.56 per cent. DGM estimates from the most recent reports (CEG and Lally) produce a lower range of 5.90–8.89 per cent. For the reasons explained in appendix B, the AER gives greater consideration to Lally's estimates than CEG's estimates. This is because Lally's DGM method is based on CEG's method, however adjusts for certain deficiencies in CEG's method identified by Lally. Lally's method produces a range of 5.90–8.39 per cent.

Table 5.3 Recent DGM based MRP estimates produced by consultants

	Dividend yield	Dividend per share growth	RFR	MRP estimate
CEG (March 2012)	5.68%	6.60%	3.77%	8.52%
Capital Research (Feb 2012)	4.70%	7.00%	5.08%	6.62%
Capital Research (Feb 2012)	5.23%	7.00%	5.08%	7.15%
Capital Research (Feb 2012)	5.71%	7.00%	5.08%	7.63%
Capital Research (Mar 2012)	6.29%	7.00%	3.73%	9.56%
NERA (Feb 2012)	Bloomberg and IBES forecasts	5.65%	3.96%	7.72–7.75%
NERA (Feb 2012)	Bloomberg and IBES forecasts	5.65%	5.50%	6.18–6.21%
NERA (March 2012)	Bloomberg and IBES forecasts	5.65%	3.99%	7.69–7.72%
CEG (November 2012)	5.34%	6.60%	3.05%	8.89%
Lally (March 2013)	5.34%	a mix of long term and short term dividend growth	3.26%	5.90-8.39%

Sources: CEG, Capital Research, Capital Research, NERA, Lally

DGM analysis is producing relatively high MRP estimates at the moment. However, DGM analysis produced MRP estimates just above 2 per cent in 1994 (CEG's modified approach using indexed CGS rates). It is unlikely this would have been seen then or now as a credible estimate of the MRP in 1994. The AER considers the results from the DGM analysis, while also aware of the limitations to this analysis discussed above. The AER discusses its further considerations on DGM estimates in appendix B.

570 AER, *WACC review final decision*, May 2009, pp. 218–219.

571 CEG, Risk free rate and MRP in the CAPM, March 2012, p.38.

572 In most capital markets there are relatively few independent forecasts of future earnings and, consequently, there is a high level of statistical uncertainty surrounding DCF projections of the cost of equity for a particular company. However, in the US there is a very deep market for analysts' projections of company's future earnings. See: NERA, *Review of ESCOSA's decision on ETSA utilities equity beta*, April 2005, p. 23.

Implied volatility

VAA estimated the MRP based on an 'implied volatility glide path' approach, the MRP estimate generated from implied volatility will have the same horizon as the underlying options. The implied volatility approach to estimate the MRP is based on an assumption that the MRP is the price of risk times the volume of risk (volatility), which is based on Merton (1980).

The AER has already set out its concerns with using VAA's implied volatility approach and the implied volatility as an indicator for the MRP in the draft decision and its previous decisions[573]. Specifically, the AER considers that the VAA implied volatility approach:

- inappropriately determines the baseline long run average implied volatility by using a different data series—the realised volatility of a 90 day data window for the S&P/ASX 30 from 1980 onwards.[574] Using this (historical) realised volatility series results in a long run average volatility of 14 per cent. The actual long run average of one of the (forward looking) implied volatility series used by VAA (3 month VIX) is 18.6 per cent. Adopting the higher baseline would reduce the MRP estimated using the VAA approach in all scenarios.

- incorrectly calculates the price per unit of implied volatility using a 'long run historical average MRP' of 7 per cent, when the evidence indicates that this value is approximately 6 per cent.[575] Adopting the lower historical average MRP would reduce price per unit of volatility, which in turn reduces the MRP estimated using the VAA approach in all scenarios.

Although implied volatility was high during the height of the GFC, the current level is significantly below the long run average. Using data updated to 7 February 2013[576], the VIX implied volatility measures at 11.4 per cent, significantly below the long run average of 18.6 per cent (measured from the start of the data series in 1997). Figure 5.3 shows the value of this measure of implied volatility relative to its long run average level across the period since the global financial crisis.

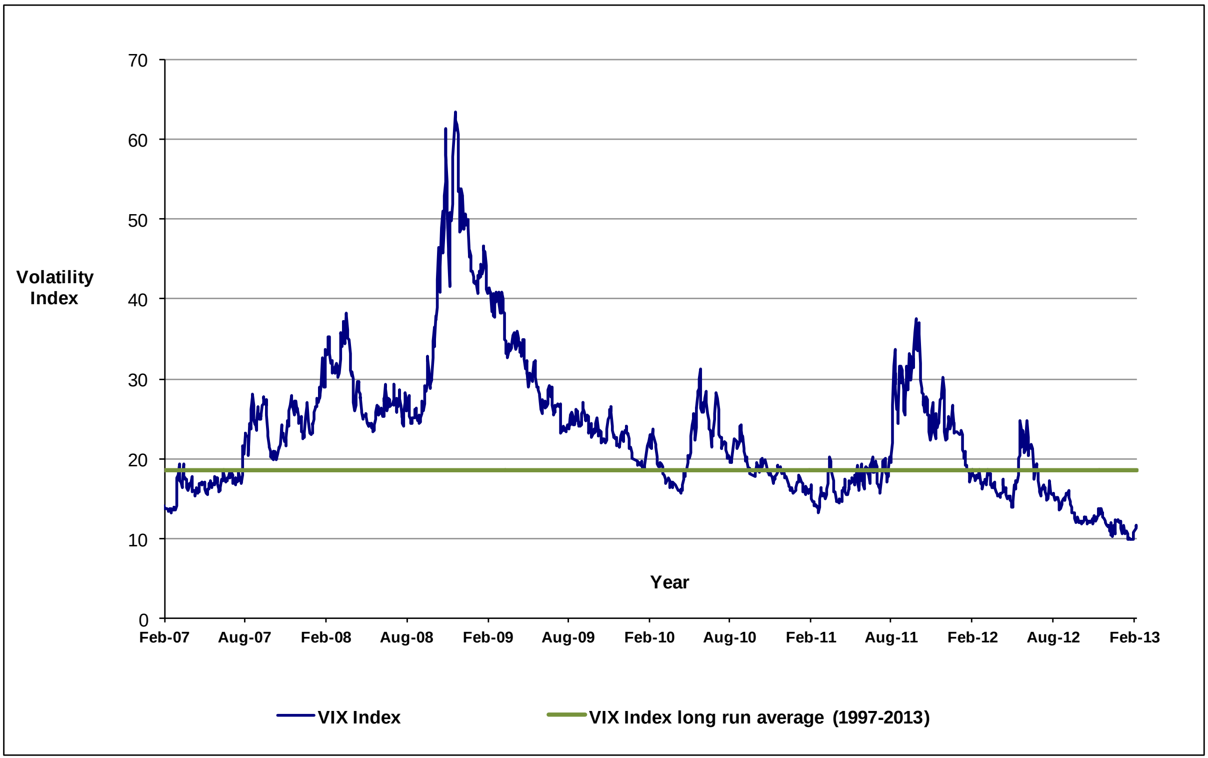
573 AER, *Final decision Envestra Ltd access arrangement proposal for the SA gas network*, June 2011, pp. 195-197.

574 VAA, MRP for *Envestra*, March 2011, p. 4 (footnote 7). Further, VAA appears to end its baseline period in 2009 even when using implied volatility data up to the end of 2010. See Bishop, Fitzsimmons, and Officer (2011), pp. 9, 14 (endnote 5).

575 The AER sets out earlier in this decision its analysis of the historical excess return series.

576 The AER attempts to update rate of return related data in this final decision to 20 February 2013. This is because 20 February 2013 is the end date of the averaging period of the Victorian gas business (Envestra) whose averaging period ended the latest. However, at the time of finalising this decision VIX data from Bloomberg was only available until 7 February 2013. Therefore the data was updated to 7 February 2013 for this implied volatility analysis.

Figure 5.3 Implied volatility (VIX) over time



Source: Citibank VIX implied volatility index (3 month put/call options on S&P/ASX 200), sourced via Bloomberg code CITJAVIX.

By directly applying VAA's approach, the current one year MRP is 5.7 per cent—this is derived by applying a constant premium per unit risk to implied volatility of 11.4 per cent for 3 month options on th ASX 200 index.[577] Transitioning to a long term average of 6 per cent, this implied volatility approach produces an MRP below 6 per cent.

Further, if the VAA approach is corrected for the AER's concerns above, it produces a current one year MRP of 3.7 per cent (based on a revised constant premium per unit risk to implied volatility of 11.4 per cent for 3 month options on ASX 200 index). The revised constant premium per unit risk is 0.32, which is derived by dividing a more realistic long term MRP of 6 per cent by the long run average volatility of 18.6 per cent, measured from the start of the data series in 1997. This converts to a 10 year MRP of 5.54 per cent.[578]

The AER does not consider that VAA's implied volatility glide path approach produces a robust basis on which to place substantive weight in estimating a 10 year forward looking MRP. However, even if weight were to be given to this approach, it would currently support an MRP estimate below 6 per cent. The AER notes that this is a forward looking measure that until recently was strongly advocated

577 Note the constant premium per unit risk is 0.5, which is consistently used by VAA. Also, VAA uses implied volatility for 1 year options on ASX 200 index, while the AER applied implied volatility for 3 month options on ASX 200 index. However, the AER notes VAA found the 3 month and 12 month option volatilities are highly correlated, the correlation coefficient is 0.92. See: VAA, *Market risk premium estimate for January 2010-June 2014 prepared for WestNet Energy*, December 2009, p.13.

578 Converting the one-year implied MRP to a 10 year forward looking MRP requires further assumptions, VAA assumed this one-year implied MRP will fade to a long term historical average MRP over three years. It also noted JCP assumed step reversion after two years. The AER is not entirely clear how VAA faded a one-year implied MRP into a long term average MRP, since VAA report provided no further explanation. The AER estimated a 10- year volatility implied MRP of 5.54% based on JCP assumption—that is assuming the MRP will be 3.7% for the first two years and reverts to a long term average MRP for the next eight years. See: Bishop, Fitzsmmons, Officer, 'Adjusting the market risk premium to reflect the global financial crisis', *The Finsia Journal of Applied Finance*, Issue 1, 2011, p.9 and p. 14. For the long term average MRP the AER has adopted 6 per cent, which reflects long term average historical excess returns.

by regulated businesses. It is appropriate to consider this measure, among other measures of the MRP, having regard to the strengths and weaknesses of this approach.

As noted above, and further in appendix B, both DGM based and implied volatility based estimates of a forward looking MRP are subject to certain limitations. A further limitation is, in prevailing market conditions, these two approaches produce vastly different results. Implied volatility estimates suggest the 10 year forward looking MRP is around 5.54 per cent. This is somewhat below 6 per cent. DGM estimates suggest the MRP is around 5.90–8.39 per cent (based on Lally's estimates). This ranges from slightly below 6 per cent to materially above 6 per cent. However, taking both measures together, and having regard to the strengths and weaknesses of these methods, the AER considers 6 per cent is a reasonable estimate of the 10 year forward looking MRP.

Survey evidence

The AER attempts to estimate investors' expectations of what the MRP will be in the future and not simply rely on the excess stock market returns that have been achieved in the past. The AER considers surveys of market practitioners and academics are relevant as they reflect the forward looking MRP applied in practice. The AER is aware of the Tribunal comments made in relation to the survey evidence. The AER applies the criteria noted by the Tribunal to the survey evidence it considers in this decision and concludes the survey results are still relevant to inform the forward looking 10-year MRP.[579]

In the draft decision, the AER noted that survey based evidence needed to be treated with caution as the results may be subject to limitations. The relevance of some survey results depend on how clearly the survey sets out the framework for MRP estimation. This includes the term over which the MRP is estimated and the treatment of imputation credits. Survey based estimates may be subjective, because market practitioners may look at a range of different time horizons and they are likely to have differing views on the market risk. This concern may be mitigated as the sample size increases.[580]

The AER considered survey evidence on the MRP before and after the WACC review. It includes:

- KPMG (2005) surveyed 33 independent expert reports on takeover valuations from January 2000 to June 2005. It found the MRP adopted in valuation reports was in a 6–8 per cent range. KPMG reported 76 per cent of survey respondents adopted an MRP of 6 per cent.[581]
- Capital Research (2006) found the average MRP adopted across a number of brokers was 5.09 per cent.[582]
- Truong, Partington and Peat (2008) surveyed chief financial officers, directors of finance, corporate finance managers or similar finance positions of 365 companies included in the All Ordinaries Index at August 2004. From the 87 responses received, 38 were relevant to the MRP. They found the MRP adopted by Australian firms in capital budgeting was in a 3–8 per cent range, with an average of 5.94 per cent. The most commonly adopted MRP was 6 per cent.[583]

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579 Australian Competition Tribunal, *Application by Envestra Limited (No 2) [2012] ACompT 3*, 11 January 2012, paragraphs 159–163.
580 Australian Competition Tribunal, Application by Envestra Limited (No 2) [2012] ACompT 3, 11 January 2012, paragraphs 159–63.
581 KPMG, *Cost of capital—market practice in relation to imputation credits*, August 2005, p. 15.
582 Capital Research, *Telstra's WACC for network ULLS and the ULLS and SSS businesses—review of reports by Prof. Bowman*, March 2006, p. 17.
583 Truong, G. Partington, G. and Peat, M., *Cost of capital estimation and capital budgeting practices in Australia,* Australian Journal of Management, June 2008, vol. 33, no. 1, p. 155.

- Bishop (2009) reviewed valuation reports prepared by 24 professional valuers from January 2003 to June 2008. It found the average MRP adopted was 6.3 per cent, and 75 per cent of these experts adopted an MRP of 6 per cent.[584]

- Fernandez (2009) surveyed university finance and economics professors around the world in the first quarter of 2009. The survey received 23 responses from Australia and found the required MRP used by Australian academics in 2008 was in a 2.0–7.5 per cent range, with an average of 5.9 per cent.[585]

- Fernandez and Del Campo (2010) surveyed analysts around the world in April 2010. The survey received seven responses from Australian analysts and found the MRP that they used in 2010 was in a 4.1–6.0 per cent range, with an average of 5.4 per cent.[586]

- A further survey by Fernandez et al. (2011) in April 2011 reported the MRP used by 40 Australian respondents was in a 5–14 per cent range, with an average of 5.8 per cent.[587]

- Asher (2011) surveyed 2000 members of the Institute of Actuaries of Australia. Asher reported 33 of a total of 58 Australian analysts who responded to the survey expected the 10 year MRP to be 3–6 per cent. The most commonly adopted MRP value was 5 per cent. The report also illustrated that expectations of an MRP much in excess of 5 per cent were extreme.[588]

- A further survey by Asher (2012) in March 2012 reported 49 useful responses, with an average 10 year MRP of 4.6 per and two thirds of the responses falling in the range 4-6%.[589]

- Like KPMG (2005), Ernst Young (2012) surveyed 17 independent expert reports on takeover valuations from January 2012 to October 2012. It found the mid-point MRP adopted in valuation reports was in a 6–7 per cent range and 71 per cent of them adopted a mid-point MRP of 6 per cent.[590]

- The most recent survey by Fernandez et al. (2013) in June 2012 reported the MRP used by 73 Australian respondents. Respondents include both academics and a wide range of practitioners. It found the MRP the respondent used in 2012 was in a 3.0-10.0 per cent range, with an average of 5.9 per cent.[591] The number of Australian respondents to this survey was reasonably large, greater than previous surveys, and resulted in similar MRP responses. This provides the AER with a degree of further confidence in the results of MRP surveys.

Table 5.4 summarises the key findings of the surveys.

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584 Bishop, S., *A conservative and consistent approach to WACC estimation by valuers*, Value Advisor Associates, 2009.

585 Fernandez and Del Campo, *Market Risk Premium used by Professors in 2008: A Survey with 1400 Answers, IESE Business School Working Paper*, WP-796, May 2009, p. 7.

586 Fernandez and Del Campo, *Market Risk Premium Used in 2010 by Analysts and Companies: A Survey with 2400 Answers, IESE Business School*, May 2010, p. 4.

587 Fernandez, Arguirreamalloa and Corres, *Market Risk Premium used in 56 Countries in 2011: A Survey with 6,014 Answers,* IESE Business School Working Paper, WP-920, May 2011, p. 3.

588 Asher, *Equity Risk Premium Survey—results and comments*, Actuary Australia, July 2011, no. 161, pp. 13–14.

589 Asher, *Equity Risk Premium Survey 2012: results and comments*, Actuary Australia, July 2012, pp. 28-29.

590 Ernst & Young, *Market evidence on the cost of equity: Victorian gas access arrangement review 2013-2017*, 8 November 2012, p.23. The AER further considers the Ernst and Young report in appendix B.

591 Fernandez, Arguirreamalloa and Corres, *Market Risk Premium used in 82 Countries in 2012: A Survey with 7,192 Answers*, IESE Business School Working Paper, CH-14, January 2013, p.3.

Table 5.4 Key findings of MRP surveys

	Numbers of responses	Mean	Median	Mode
KPMG (2005)	33	7.5%	6.0%	6.0%
Capital Research (2006)	12	5.1%	5.0%	5.0%
Truong, Partington and Peat (2008)	38	5.9%	6.0%	6.0%
Bishop (2009)	27	na	6.0%	6.0%
Fernandez (2009)	23	5.9%	6.0%	na
Fernandez and Del Campo (2010)	7	5.4%	5.5%	na
Fernandez et al (2011)	40	5.8%	5.2%	na
Asher (2011)	45	4.7%	5.0%	5.0%
Asher (2012)	49	4.6%	5.0%	4.0-6.0%
Ernst & Young (2012)	17	6.26%[592]	6.0%	6.0%
Fernandez et al (2013)	73	5.9%	6.0%	na

Sources: KPMG (2005), Capital Research (2006), Truong, Partington and Peat (2008), Bishop (2009), Fernandez (2009), Fernandez and Del Campo (2010), Fernandez et al. (2011), Asher (2011), Asher (2012), Fernandez et al. (2013).

Survey measures of the MRP across different years, different survey respondents or sources, and different authors support an MRP of 6.0 per cent. For the surveys under consideration, the most commonly used MRP was 6 per cent.

McKenzie and Partington place significant weight on survey evidence due to the triangulation of that evidence.[593] The idea behind the triangulation is that a specific survey might be subject to a particular type of bias (although there is no compelling demonstration of it). However, that the type of bias would likely be much less consistent across surveys using different methods and different target populations.

Lally also supported the use of survey evidence and suggested the recent Fernandez survey is the most relevant survey evidence. However, its average of 5.9 per cent should be considered as an upper bound as some respondents to this survey will have provided responses for an MRP defined against bank bills.[594]

Appendix B details the AER's further analysis and responds to SFG's view on survey evidence.

Recent Australian Competition Tribunal decisions

In 2011, Envestra challenged the AER’s decisions to adopt an MRP of 6 per cent for Envestra’s South Australia and Queensland gas distribution businesses. Envestra submitted the AER should have accepted Envestra’s proposed 6.5 per cent MRP. The Tribunal concluded the AER's adoption of a 6 per cent MRP was reasonably open to it on the evidence:

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592 Ernst & Young only presented mid-point MRP in its report. Therefore the actual mean from those 17 valuation reports might be different to what is presented here.

593 McKenzie and Partington, *Supplementary report on the MRP*, February 2012, p. 19; McKenzie and Partington, *MRP: regime switching framework and survey evidence*, August 2012, p. 28.

594 Lally, *Review of the AER’s methodology*, March 2013, p.32

> The critical issue in this section of the review is whether the AER's determination of the MRP at 6% was reasonably open to it on the evidence. As has already been mentioned, there was substantial evidence before the AER, both that submitted to it by service providers and that sourced by the AER itself. This evidence was not conclusive. It was incumbent upon the AER to exercise its judgment in deciding on an appropriate MRP. ...
>
> It is not sufficient for Envestra to persuade the Tribunal that 6.5% should be preferred. It must demonstrate the unreasonableness of the decision made by the AER. Unless this can be done, the Tribunal would be merely reaching a different conclusion as to the preferable result. The mere fact that the Tribunal may prefer a different rate does not entitle it to substitute its preferred MRP for that of the AER unless a ground of review has been made out. In all the circumstances of this matter, it was reasonably open to the AER to choose a MRP of 6%.[595]

The Tribunal handed down a similar decision in its review of ATCO's (formerly WA Gas Network's) and DBNGP's access arrangements.[596] In both decisions, the ERA considered the available information and exercised its judgement to determine the appropriate MRP. The Tribunal subsequently found no error in the ERA's determination of a 6.0 per cent MRP.

Expert advice commissioned by the AER

CEPA noted when the UK regulators directly estimating the MRP, the starting point is often historical data produced by Dimson, Marsh and Staunton (DMS). Forward looking estimates are often used as cross-checks for the DMS estimates, but are sometimes used more to check the reasonableness of the figure than set such a figure.[597] The premium of Australian equities over bonds for 1900-2011 from DMS is 5.6 per cent based on a geometric mean and 7.5 per cent based on an arithmetic mean. DMS noted this might be an overestimation as Brailsford, Handley and Mahesweran (2008) identified dividend prior to 1958 were overstated. Further, CEPA found the valuation reports presented by Ernst and Young do support an MRP that is equal to about 6 per cent.[598]

McKenzie and Partington agreed with the AER that the 6 per cent MRP as used by the AER is not just a choice based on the historic average of the MRP. Rather, it is based upon a broader set of evidence, which includes historical, utility-based[599], survey based, and implied estimates of the equity market risk premium. Each evidence presents its own unique set of challenges and possesses its own limitations. McKenzie and Partington have comprehensively reviewed the above evidence in their December 2011 paper. In their most recent February 2013 report, they reviewed the AER's method in estimating the cost of equity and concluded again that 6 per cent is a reasonable estimate of the market risk premium.[600]

Lally holds a similar view. He notes the AER did not estimate the long run average value for the MRP. The AER uses results from both forward looking methods and historical averaging of excess returns

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595 Australian Competition Tribunal, *Application by Envestra Limited (No 2) [2012] ACompT 4*, 11 January 2012, paragraphs 145 and 148.

596 Australian Competition Tribunal, *Application by WA Gas Networks Pty Ltd (No 3) ACompT 12,* 8 June 2012, paragraphs 105–8.
Australian Competition Tribunal, *Application by DBNGP (WA) Transmission Pty Ltd (No 3) [2012] ACompT 14,* 26 July 2012, paragraphs 161–3.

597 CEPA, *Advice on estimation of the risk free rate and market risk premium, report prepared for the Australian Energy Regulator*, 12 March 2013, p.23.

598 CEPA, *Advice on estimation of the risk free rate and market risk premium, report prepared for the Australian Energy Regulator*, 12 March 2013, p.60.

599 The AER does not use utility based methods of the MRP as a distinct method on its own. Rather, the AER's application of utility theory has been in relation to assessing the reasonableness of historical excess returns as a forward looking estimate of the MRP. McKenzie and Partington found this utility theory suggests that historical risk premia are too high and therefore historical excess returns may overstate a forward looking MRP. See: M. McKenzie, and G. Partington, *Report to Corrs Chambers Westgarth: Equity market risk premium*, 21 December 2011, pp.4-8 and p.36.

600 McKenzie and Partington, *Review of the AER's overall approach*, February 2013, pp. 30-31.

for estimating the MRP and the results from forward looking methods unambiguously constitute estimates of the prevailing rather than the long-term average value for the MRP.[601]

In estimating the MRP, Lally favours an approach that minimises the mean squared error[602] and this leads to a consideration of the results from a wide range of methods. These methods include the historical averaging of excess returns (6 per cent), the historical average of excess returns modified for the "great inflation shock" in the 20th century (4.9 per cent), the result from the DGM approach (5.9-8.4 per cent), and the result from surveys (up to 5.9 per cent).

The median[603] of these approaches is 6.0 per cent. Lally notes a wide range of other methods are available and the cut-off point is a matter of judgement. If the historical average real market return[604] (favoured by Gregory and Wright) is considered, the estimated nominal MRP is about 8%. Adding this to the other methods, the median of these five approaches is still 6%.

Lally also considers that evidence from foreign markets may also be considered. For the first, second and fourth of the five methods described above, the cross-country averages are 6.0%, 4.0%–5.0%, and up to 5.8%. These additional results are consistent with those for Australia and therefore Lally considers these reinforce the conclusion that the appropriate MRP estimate for Australia at the present time is 6.0 per cent.[605]

Relationship between the risk free rate and market risk premium

CEPA noted the relationship between the risk free rate and the MRP is difficult to test empirically as the MRP is unobservable and any regressions would rely on developing a robust/consistent time series of investors' expectations. As such, the arguments presented by academics, regulators and companies have tended to be more indirect, and conclusions have therefore been presented in more uncertain terms. As a result, CEPA considered there is not enough evidence to justify making a firm conclusion about the relationship between the risk free rate and the MRP.[606]

McKenzie and Partington performed a comprehensive literature review on the relationship between the risk free rate and the MRP. Despite the strong support of a negative relationship by Envestra's consultants, they found both a positive and a negative relationship is possible. Therefore they concluded the relationship between the MRP and the level of interest rates is an open question. They considered submissions received from Envestra in support of such a relationship are not sufficiently well established to form the basis for a regulatory adjustment to the MRP.[607] AER outlines and considers further McKenzie and Partington's report in appendix B.3.3. McKenzie and Partington's review of the academic literature on the theoretical and empirical evidence on the stability of the cost of equity, and on the relationship between the risk free rate and MRP, was more comprehensive than the review of the academic literature in any of the consultant reports submitted by Envestra. For this reason, among others discussed in appendix B, the AER has relied on the conclusion of McKenzie and Partingon's report over the conclusion from the reports submitted by Envestra.

Lally reviewed evidence presented by CEG, Wright, Gregory, SFG and NERA in support of a stable cost of equity or a negative relationship between the risk free rate and MRP. He identified numerous

601 Lally, *Review of the AER's methodology*, March 2013, pp.5-6.
602 The MSE is the average over the squared differences between estimated value and the true value.
603 Lally explained, as some methods provide estimated ranges rather than point estimates, the mean cannot be determined and therefore the median is considered. Lally, *Review of the AER's methodology*, March 2013, p. 32.
604 This approach is discussed in appendix B.
605 Lally, *Review of the AER's methodology*, March 2013, pp.38.
606 CEPA, *Advice on estimation of the risk free rate and market risk premium,* March 2013, p.25.
607 McKenzie and Partington, *Review of the AER's overall approach*, February 2013, pp. 21-28

problems in the evidence presented by Envestra's consultants.[608] In addition, Lally applied Australian data using Wright's approach and found the time-series of MRP estimates is much more stable than that for the average real market return, and therefore supports estimating the MRP rather than the real market cost of equity from historical data.[609] While Lally noted there may be a negative relationship between the real risk free rate and the MRP, it isn't sufficiently strong to suggest the real market cost of equity is more stable than the MRP.[610] The AER further considers Lally's report in appendix section B.3.3.

The concerns raised by Lally and McKenzie and Partington on the consultant reports submitted by Envestra are relevant. Based on their advice, the AER concludes the theoretical and empirical evidence is not sufficiently strong in support of a relatively stable cost of equity or a strong negative correlation between the risk free rate and the MRP. Accordingly, the AER concludes its approach in estimating the cost of equity produces a reasonable cost of equity estimate that is commensurate with the prevailing conditions in the market for funds.

Recent practice among Australian regulators

Australian regulators consistently applied an MRP of 6 per cent in recent regulatory decisions. The regulators determined the MRP under a specific CAPM framework:

- The MRP is forward looking (not an historical measure) and cannot be directly observed.
- The MRP is a long term forward looking MRP (for example, 10 years) rather than a short term forward looking MRP (for example, one year). As a result, short term MRP estimates have little relevance.
- The MRP is for a domestic CAPM, which means the relevance of overseas evidence depends on the similarities between overseas and domestic market conditions, and consequently may have limited relevance.[611]

Table 5.5 sets out the MRP adopted recently by Australian state and territory regulators responsible for economic regulation across the electricity, water and rail industries.

Table 5.5 Recent regulatory decisions

Regulator	Decision date	Sector	MRP (%)
ESCOSA	February 2012	Water	6.0
QCA	May 2012	Water	6.0
ESCV	June 2012	Rail	6.0
IPART	June 2012	Water	5.5–6.5
IPART	June 2012	Water	5.5–6.5
ERA	September 2012	Electricity	6.0
QCA	December 2012 (draft decision)	Water	6.0

608 Lally, *Review of the AER's methodology*, March 2013, pp.8-18.
609 Lally, *Review of the AER's methodology*, March 2013, p.13. .
610 Lally, *Review of the AER's methodology*, March 2013, pp.16..
611 For example, Lally considers and compares evidence on the MRP based on domestic and overseas data.

Source: ERA, ESCV, QCA, IPART, ESCOSA. [612]

In the DBNGP matter, the Tribunal commented on the desirability of regulatory consistency:[613]

> The Tribunal regards regulatory consistency as a laudable objective, provided the particular regulator (in this case the ERA) independently fulfils its decision-making functions and responsibilities. Each regulator must do so in the context of the particular applicable legislation, and in the context of the particular issue and relevant material on that issue. The NGL under the NGA WA Act, the National Gas Law and the NGR are in most respects the same. It is not therefore surprising that the ERA should be aware of decisions of the AER, and vice versa, on particular provisions which have to be addressed. It is to be expected, in such circumstances, that experienced and well qualified regulators would also reach similar conclusions on such matters. It is to the benefit of providers of regulated services, the users of those services, and the community that—where appropriate—regulatory consistency should exist.

The AER has independently reached its conclusion by exercising its judgment on the evidence presented above. The AER has reached a similar conclusion on the MRP as that reached by state regulators. Like the AER, the ERA and QCA have consistently applied an MRP of 6.0 per cent over the recent years. While IPART has consistently set the boundaries of its WACC range by applying an MRP in the range of 5.5-6.5 per cent and a prevailing (low) risk free rate, it has chosen an overall WACC point estimate towards the top of its WACC range due to the current low risk free rate. The AER discusses the approaches of ERA, QCA and IPART in detail in appendix B. In appendix B, the AER also considers the approaches of UK and US regulators.

5.3.4 Equity beta

The AER accepts Envestra's proposed equity beta of 0.8 in its revised access arrangement proposal.

The equity beta provides a measure of the 'riskiness' of an asset's return compared with the return on the entire market. The equity beta reflects the exposure of the asset to systematic or 'non-diversifiable' risk, which is the only form of risk that requires compensation under the CAPM.

In the draft decision, the AER agreed with Envestra's proposed equity beta of 0.8. The AER agreed with this value because the empirical evidence indicated a point estimate of between 0.4 and 0.7 for the equity beta of electricity and gas service providers.[614] Adopting an equity beta just above this range was in recognition of the level of imprecision around these estimates and the desirability of stability in regulatory decision making over time.[615] The AER's full reasons are set out in its draft decision.[616]

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[612] Essential Service Commission of South Australia (ESCOSA), *Final Advice:* Advice on a Regulatory Rate of Return for SA Water, February 2012, p. 50; Queensland Competition Authority, *Final Report:* SunWater Irrigation Price Review: 2012–17, Volume 1, May 2011, p. 503; Essential Service Commission of Victoria (ESCV)), *V/line access arrangement final decision*, June 2012, p. 208. Independent Pricing and Regulatory Tribunal (IPART), *Water – Final report:* Review of prices for Sydney Water Corporation's water, sewerage, drainage and other services: From 1 July 2012 to 30 June 2016, June 2012, pp. 198, 204; IPART, *Water – Final report: Review of prices for Sydney Catchment Authority: From 1 July 2012 to 30 June 2016,* June 2012, pp. 90, 118, 123; ERA, *Final decision on proposed revisions to the access arrangement for the* Western Power network submitted by Western Power, 5 September 2012, p. 241. QCA, *Draft Report:* Seqwater Irrigation Price Review: 2013–17, Volume 1, December 2011, p. 259.

[613] Australian Competition Tribunal, Application by DBNGP (WA) Transmission Pty Ltd (No 3) [2012] ACompT 14, 26 July 2012, paragraph 333.

[614] AER, *Final decision: Electricity transmission and distribution network service providers: Review of the weighted average cost of capital (WACC) parameters*, 1 May 2009, pp. 239–344

[615] Most Australian regulators had previously provided electricity and gas service providers with an equity beta of either 0.9 or 1.0.

[616] AER, *Draft decision: Envestra*, September 2012, pp. 144-145

Envestra also adopted an equity beta of 0.8 in its revised access arrangement proposal.[617] The AER is not aware of any new information that causes it to depart from its draft decision position. Accordingly, the AER accepts Envestra's 0.8 equity beta in its revised proposal.

5.3.5 Debt risk premium

The AER accepts Envestra's proposed DRP method in its revised access arrangement proposal.

The DRP is the margin above the nominal risk free rate that a debt holder would require to invest in the debt issued by a benchmark efficient service provider. Combined with the nominal risk free rate, the DRP represents the return on debt and is an input into the rate of return.

In the draft decision, the AER agreed with Envestra's proposed benchmark and method for estimating the DRP.[618] Envestra also adopted the same benchmark and method in its revised access arrangement proposal.[619] For this final decision, the AER has updated Envestra's proposed DRP to reflect the agreed averaging period.[620] This results in a DRP of 3.23 per cent.[621]

In assessing Envestra's proposal, the AER also took into account recent market evidence. This includes two debt issuances by the APA Group.[622] The AER, however, considers that the available market evidence is of limited use. The reasons for this are discussed in greater detail in section B.7.2 of the appendix, and include:

- the financing costs of a single entity should not be considered to be reflective of either the market as a whole, or the benchmark regulatory firm
- the available market evidence does not match the characteristics of the benchmark firm (or debt issuance).

The AER also considered the submission by the Energy Users Coalition of Victoria—that the Bloomberg BBB fair value curve overcompensated service providers for their actual cost of debt.[623] The AER stated in its draft decision that it intends to undertake a review into alternatives to the Bloomberg fair value curve. The AER considers that the current development of the rate of return guidelines represents the most appropriate forum to consider these alternatives.

617 Envestra, *Revised Access Arrangement Information, 9 November 2012, Attachment 9.11 Response to Draft Decision – Rate of return*, section 3.

618 The AER made minor amendments to the bond sample selected by Envestra for the extrapolation of the Bloomberg fair value curve. However, these amendments were to achieve consistency with the bond selection criteria proposed by Envestra. See section 4.3.6 of the draft decision for a detailed explanation. AER, *Draft decision: Envestra*, *Attachment 4,* September 2012.

619 Envestra, *Revised Access Arrangement Information, 9 November 2012, Attachment 9.11 Response to Draft Decision – Rate of return*, section 3.

620 The agreed averaging period was from 31 January 2013 to 20 February 2013.

621 For clarity, the paired bonds used to extrapolate the Bloomberg fair value curve in this final decision are the pair of Stockland bonds (maturing in 2016 and 2020), and the pair of Sydney Airport Finance bonds (maturing in 2015 and 2021). Estimated yields from both UBS and Bloomberg are available for the Stockland issuances, while only UBS data is available for the Sydney Airport Finance bonds. Each bond pair has been given equal weight in determining the extrapolation adjustment. That is, the Stockland spreads have been averaged to determine a single estimate, with this estimate subsequently averaged with the single Sydney Airport estimate.

622 In September 2012, the APA Group completed the issuance of $515 million of subordinated notes in Australia. This hybrid capital was issued at 450 basis points above the BBSW. Shortly thereafter, in November 2012, the APA Group raised £350 million of debt financing in the UK. The APA Group swapped this debt into AUD at an average fixed rate of 7.36 per cent.

623 Energy Users Coalition of Victoria, *Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals*, June 2012.

5.3.6 Forecast inflation

The AER accepts Envestra proposed inflation forecasting method in its revised access arrangement proposal.

This methodology is based on the geometric average of:

- the RBA's most recent inflation forecasts for the longest period available (two years), and
- the mid point of the RBA's inflation targeting band for a further eight years.

Following this method, in this final decision, the AER adopts a 10 year forward looking inflation forecast of 2.50 per cent. This result is shown in Table 5.6.

In the draft decision, the AER agreed with Envestra's proposed inflation forecasting method. Envestra's proposed method was consistent with that adopted by the AER in previous decisions. Envestra also adopted the same method in its revised access arrangement proposal.

Since the draft decision, the RBA released its February 2013 *Statement on Monetary Policy* which includes updated inflation forecasts for 2013 and 2014. As indicated in the draft decision, the AER has updated the RBA's short term inflation forecasts based on the most recent RBA statement available at the time of the final decision.

Table 5.6 AER inflation forecast (per cent)

	2013	2014	2015 to 2022	10 year forecast (Geometric average)
Forecast inflation	2.50 [a]	2.50 [a]	2.50	2.50

Source: RBA, Statement on Monetary Policy, February 2013, p. 65.
Notes: (a) The RBA published a range of 2-3 per cent for its 2013 and 2014 forecast inflations. The AER has selected the mid-point of 2.5 for the purposes of this final decision.

5.3.7 Gearing ratio

The AER accepts Envestra's proposed gearing ratio of 60 per cent in its revised access arrangement proposal.

The gearing ratio is the ratio of the value of debt to total capital (that is, both debt and equity) and is used to weight the cost of equity and cost of debt when determining the rate of return. Under NGR, in determining the rate of return, it is assumed the service provider meets benchmark levels of efficiency and uses a financing structure that meets benchmark standards as to gearing for a going concern.[624]

In the draft decision, the AER agreed with Envestra's proposed gearing ratio of 60 per cent. The AER agreed with a 60 per cent gearing ratio because this level is supported by relevant available empirical evidence.[625]

Envestra also adopted a gearing ratio of 60 per cent in its revised access arrangement proposal.[626] The AER is not aware of any new information that causes it to depart from its draft decision position. Accordingly, the AER accepts Envestra's 60 per cent gearing ratio in its revised proposal.

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624 NGR, r.87(2)(a).

625 AER, Final decision: Electricity transmission and distribution network service providers: Review of the weighted average cost of capital (WACC) parameters, 1 May 2009, p. 126.

5.3.8 Reasonableness checks on overall rate of return

The AER considers the approach in this decision provides a reasonable estimate of the benchmark rate of return. At the same time, the AER recognises that while the overall rate of return in this decision is similar to that in recent decisions, it is lower than that in previous decisions. There is no single robust method for estimating the overall rate of return. However, the AER's reasonableness checks suggest that the overall rate of return broadly accords with market expectations.

Techniques available to assess the overall rate of return can produce a range of plausible results. Each of these techniques has weaknesses that prevent them from being given significant weight. Nevertheless, they do provide a useful reasonableness check for the AER's primary approach. The AER examined:

- assets sales
- trading multiples
- broker WACC estimates
- recent decisions by other regulators
- the relationship between the cost of equity and the cost of debt.

For this final decision, the AER determines an overall rate of return using a nominal vanilla WACC of 7.39 per cent. This is based on a cost of equity of 8.33 per cent, a cost of debt of 6.76 per cent and a gearing level of 60 per cent. The cross checks listed above suggested the regulated rate of return is not unreasonable:

- Recent regulated assets have generally been sold at a premium to the RAB. In addition, recent RAB trading multiples are consistently greater than one (averaging around 1.2). This evidence provides the AER with a degree of confidence that its current approach in calculating the rate of return is reasonable.
- The overall rate of return just falls in the range of estimates found in broker reports (7.38-10.02 per cent). The lower bound of this range has decreased from the draft decision due to lower WACCs in more recent broker reports. The upper bound was calculated from a less recent report dated October 2012[627], and if this one report was excluded the upper bound would reduce to 9.52%. However, the AER notes the broker WACC technique is subject to known limitations and inherent imprecision.
- While the overall rate of return is lower than AER decisions from more than a year ago, it is in line with recent regulatory decisions made by other Australian regulators (5.78–8.65 per cent). It is also in line with other recent AER decisions.
- The cost of equity determined by the AER is greater than the cost of debt. This accords with what is expected according to finance theory, given investment in equity is more risky than investment in debt.

Appendix B.7.2 explores each overall rate of return reasonableness check technique in detail.

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626 Envestra, *Revised Access Arrangement Information, 9 November 2012, Attachment 9.11 Response to Draft Decision – Rate of return*, section 3.

627 AER analysis based on Goldman Sachs, *APA Group: Non cash significant item leads to FY13 EBITDA guidance upgrade*, 24 October 2012, p. 2.

5.4 Revisions

The AER proposes the following revisions to make the access arrangement acceptable.

Revision 5.1 Make all necessary amendments to reflect the AER's final decision on the rate of return on capital for the access arrangement period, as set out in Table 5.1 of this attachment.

6 Depreciation

When determining the total revenue for Envestra's Victorian and Albury distribution businesses (Envestra), the AER must decide on the depreciation for the projected capital base (or return of capital).[628] Regulatory depreciation is used to model the nominal asset values over the access arrangement period and represents the depreciation allowance in the total revenue requirement. In this attachment, the AER outlines its final decision on Envestra's annual regulatory depreciation allowance.[629] The AER also sets out its consideration of specific matters that affect the estimate of regulatory depreciation over the 2013–17 access arrangement period. These include:

- the standard economic lives for depreciating new assets associated with forecast net capex
- the remaining economic lives for depreciating existing assets in the opening capital base.

6.1 Final decision

The AER does not approve Envestra's revised proposed total forecast regulatory depreciation allowances for the 2013–17 access arrangement period of:

- $88.5 million ($nominal) for Envestra Victoria
- $3.9 million ($nominal) for Envestra Albury.

This is because the AER's adjustments to other building block components have had a consequential effect on the forecast regulatory depreciation allowances. These are discussed in other attachments and include:

- the roll forward of the opening capital base (attachment 3)
- forecast capex (attachment 4).

The AER's final decision on Envestra's total forecast regulatory depreciation allowances over the 2013–17 access arrangement period is:

- $88.1 million ($nominal) for Envestra Victoria as shown in Table 6.1. This represents a reduction of $0.4 million ($nominal) or 0.4 per cent of the revised proposed regulatory depreciation allowance for Envestra Victoria
- $3.8 million ($nominal) for Envestra Albury as shown in Table 6.2. This represents a reduction of $0.1 million ($nominal) or 1.3 per cent of the revised proposed regulatory depreciation allowance for Envestra Albury.

The AER accepts Envestra's revised proposed standard economic lives. The AER also accepts Envestra's revised proposed weighted average method to calculate the remaining economic lives as at 1 January 2013. Based on the AER's final decision on the roll forward of the opening capital base (discussed in attachment 3), the AER has updated the remaining economic lives for this final decision.

628 NGR, r. 76(b).

629 Regulatory depreciation allowance is the net total of the straight-line depreciation (negative) and the annual inflation indexation (positive) on the projected capital base.

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

	2013	2014	2015	2016	2017	Total
Straight-line depreciation	40.1	44.3	50.0	54.3	58.4	247.1
Less: indexation on opening capital base	27.9	29.9	31.9	33.6	35.5	158.9
Regulatory depreciation	12.2	14.4	18.0	20.7	22.9	88.1

Source: AER analysis.

Table 6.2 AER's final decision on Envestra Albury's depreciation allowance ($million, nominal)

	2013	2014	2015	2016	2017	Total
Straight-line depreciation	1.4	1.5	1.7	1.8	1.9	8.3
Less: indexation on opening capital base	0.9	0.9	0.9	0.9	0.9	4.5
Regulatory depreciation	0.5	0.7	0.8	0.9	1.0	3.8

Source: AER analysis.

6.2 Revised proposal

In its revised proposal, Envestra proposed total regulatory depreciation allowances for the 2013–17 access arrangement period of:[630]

- $88.5 million ($nominal) for Envestra Victoria as set out in table 6.3
- $3.9 million ($nominal) for Envestra Albury as set out in table 6.4.

Envestra adopted the standard economic lives and remaining economic lives as set out in the AER's draft decision to calculate the revised proposed depreciation allowances.

Table 6.3 Envestra Victoria's revised proposed depreciation allowance ($million, nominal)

	2013	2014	2015	2016	2017	Total
Straight-line depreciation	39.8	45.3	52.0	57.3	62.0	256.5
Less: indexation on opening capital base	27.7	30.7	33.9	36.7	39.0	168.0
Regulatory depreciation	12.1	14.6	18.1	20.6	23.1	88.5

Source: Envestra Victoria, *Revised proposal PTRM*, November 2012.

[630] Envestra Victoria, *Revised proposed PTRM*, November 2012; Envestra Albury, *Revised proposed PTRM*, November 2012.

Table 6.4 Envestra Albury's revised proposed depreciation allowance ($million, nominal)

	2013	2014	2015	2016	2017	Total
Straight-line depreciation	1.4	1.5	1.7	1.8	1.9	8.4
Less: indexation on opening capital base	0.9	0.9	0.9	0.9	0.9	4.5
Regulatory depreciation	0.5	0.7	0.8	0.9	1.0	3.9

Source: Envestra Albury, *Revised proposal PTRM*, November 2012.

6.3 Assessment approach

The AER's assessment approach for the regulatory depreciation allowance is set out in its draft decision. See section 5.3, attachment 5 of the draft decision for a detailed explanation of the assessment approach.

There were no submissions that commented on Envestra's depreciation allowance.

6.4 Reasons for decision

The AER's final decision on Envestra's regulatory depreciation allowances for the 2013–17 access arrangement period is:

- $88.1 million ($nominal) for Envestra Victoria. This is a reduction of 0.4 million ($nominal) or 0.4 per cent of the revised proposed regulatory depreciation allowance.
- $3.8 million ($nominal) for Envestra Albury. This is a reduction of 0.1 million ($nominal) or 1.8 per cent of the revised proposed regulatory depreciation allowance.

The AER accepts Envestra's revised proposed standard economic lives for the 2013–17 access arrangement period. The AER also accepts Envestra's revised proposed weighted average method to calculate the remaining economic lives as at 1 January 2013.

These regulatory depreciation allowances reflect the AER's final decision on other elements of Envestra's revised proposal that impact on the proposed regulatory depreciation allowances (discussed in the relevant attachments).

6.4.1 Standard economic lives

The AER accepts Envestra's revised proposed standard economic lives for the 2013–17 access arrangement period. These revised proposed standard economic lives reflect the revisions proposed by the AER in its draft decision. [631]

The AER's draft decision accepted most of Envestra's proposed standard economic lives (except for the 'Land & buildings' and the 'SCADA' asset classes).[632] The AER considered that these proposed standard economic lives are consistent with the standard economic lives the ESC approved in the 2008–12 access arrangement period.[633] However, as a result of the AER's draft decision to split the 'Land & buildings' asset class into two separate asset classes to apply from 1 January 2013, the AER

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631 Envestra Victoria, *Revised proposal PTRM*, November 2012; Envestra Albury, *Revised proposal PTRM*, November 2012.

632 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, pp. 154-157.

633 ESC, *Envestra Vic GAAR 2008 Revenue Model Post Appeal Panel Decision*, 2008; ESC, *Envestra Albury GAAR 2008 Revenue Model Post Appeal Panel Decision*, 2008.

assigned a standard economic life of 50 years to the 'Buildings' asset class. The AER did not assign a standard economic life to the 'Land' asset class.[634] In relation to the 'SCADA' asset class, the AER's draft decision required that the proposed standard economic life of 10 years be increased to 15 years. The AER considered that a standard economic life of 15 years for the 'SCADA' asset class is consistent with the requirements of the NGR.

Envestra's revised proposal adopted all the standard economic lives as set out in the draft decision.[635]

The AER's final decision on Envestra's standard economic lives is set out in Table 6.5.

6.4.2 Remaining economic lives

Consistent with the draft decision, the AER accepts Envestra's proposed weighted average method for calculating the remaining economic lives as at 1 January 2013 for this final decision.[636] Based on the AER's final decision on the roll forward of the opening capital base (discussed in attachment 2), the AER has updated the remaining economic lives for this final decision.

The AER's final decision on Envestra's standard economic lives and remaining economic lives for its Victorian and Albury distribution businesses for the 2013–17 access arrangement period is set out in Table 6.5.

Table 6.5 AER's final decision on Envestra's standard and remaining economic lives as at 1 January 2013 (years)

Asset class	AER final decision – standard economic life	AER final decision – Envestra Victoria remaining economic life	AER final decision - Envestra Albury remaining economic life
Mains & services	60	41.0	37.4
Meters	15	8.0	8.0
Land	n/a	n/a	n/a
Buildings	50	21.0	0.0
SCADA	15	7.9	n/a
Computer equipment	5.0	3.5	n/a
Other assets	15	11.0	0.0

Source: AER analysis.
n/a Not applicable.

6.5 Revisions

The AER proposes the following revisions to make the revised access arrangement proposals acceptable:

634 Because land is a non-depreciating asset, for modelling purposes, the AER used a term of 'n/a' as the standard economic life input for the 'Land' asset class to apply from 2013.

635 Envestra Victoria, *Revised proposal PTRM*, November 2012; Envestra Albury, *Revised proposal PTRM*, November 2012.

636 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 158.

Revision 6.1: Make all necessary amendments to reflect the AER's final decision on the regulatory depreciation allowances for the 2013–17 access arrangement period, as set out in Table 6.1 and Table 6.2.

Revision 6.2: Make all necessary amendments to reflect the AER's final decision on the remaining economic lives as at 1 January 2013, as set out in Table 6.5.

7 Operating expenditure

Operating expenditure (opex) refers to the operating, maintenance and other non-capital costs incurred in providing pipeline services.[637] It incorporates labour costs associated with operating the gas distribution network.

The AER is required to assess Envestra's forecast opex to decide whether it is satisfied the forecast opex complies with applicable criteria prescribed by the NGL and NGR.[638] This includes that any forecast or estimate must be arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances.[639]

7.1 Final decision

7.1.1 Envestra Victoria

The AER's final decision is not to approve a forecast opex of $328.0 million ($2011) for the 2013–17 access arrangement period for Envestra's Victorian network. The AER instead considers forecast opex of $308.7 million ($2011) reflects a forecast opex that complies with the criteria governing opex and the criteria for forecasts and estimates.[640]

The differences between the AER's final decision on forecast opex and Envestra's revised opex forecast proposal primarily reflects different views about forecast step changes above base year opex and forecast labour cost escalation.

Table 7.1 compares the AER's final decision to Envestra's initial and revised proposal for the Victorian network and the AER's draft decision for each year of the 2013–17 access arrangement period.

Table 7.1 Comparison of Envestra Victoria's initial and revised proposals, and AER draft and final decisions ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	63.8	71.8	75.4	76.0	77.8	364.8
AER draft decision	57.5	58.2	58.9	59.6	60.3	294.5
Envestra revised proposal	64.2	66.0	65.6	65.5	66.7	328.0
AER final decision	59.0	60.8	62.0	62.9	63.9	308.7

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

7.1.2 Envestra Albury

The AER's final decision is not to approve a forecast opex of $10.9 million ($2011) for the 2013–17 access arrangement period for Envestra's Albury network. The AER instead considers forecast opex of $10.41 million ($2011) reflects a forecast opex that complies with the criteria governing opex and the criteria for forecasts and estimates.[641]

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637 NGR, r. 69.
638 NGR, rr. 91, 74(2), 100.
639 NGR, r. 74(2).
640 NGR, rr. 91, 74(2).
641 NGR, rr. 91, 74(2).

The differences between the AER's final decision on forecast opex and Envestra's revised opex forecast proposal primarily reflects different views about forecast step changes above base year opex and forecast labour cost escalation.

Table 7.2 compares the AER's final decision to Envestra's initial and revised proposal for the Albury network and the AER's draft decision for each year of the 2013–17 access arrangement period.

Table 7.2 Comparison of Envestra Albury's initial and revised proposals, and AER draft and final decisions ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra initial proposal	2.14	2.41	2.53	2.56	2.69	12.33
AER draft decision	2.65	2.67	2.70	2.71	2.73	13.46
Envestra revised proposal	2.17	2.22	2.18	2.15	2.18	10.91
AER final decision	2.04	2.05	2.09	2.10	2.13	10.41

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

7.2 Revised proposal

Envestra's revised proposal for the Victorian network forecasts total operating expenditure of $328.0 million ($2011) for the 2013–17 access arrangement period. This is a reduction of $36.7 million ($2011) from Envestra's initial proposal of $364.8 million ($2011).

Envestra's revised proposal for the Albury network forecasts total operating expenditure of $10.91 million ($2011) for the 2013–17 access arrangement period. This is a reduction of $1.42 million ($2011) from Envestra's initial proposal of $12.33 million ($2011).

Envestra's revised proposal:

- adopted the majority of the AER's draft decision amendments to base year opex with the exception of the treatment of movement in provisions
- adopted the AER's draft decision approach to labour cost escalation and materials cost escalation with the exception of the source of the labour cost escalation forecast
- included fourteen step changes for the Victorian network.[642] Four of these step changes adopts the AER's draft decision
- included seven step changes for the Albury network.[643] Three of these step changes adopts the AER's draft decision
- adopts the AER's draft decision on the forecast cost of ancillary reference services
- includes a revised forecast for the cost of the Network Management Fee and for debt raising costs

642 Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012.
643 Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012.

7.3 Assessment approach

The AER’s assessment approach for opex is set out in attachment 6 of the AER’s draft decision.[644]

The AER also considered submissions to inform its final decision on opex. The AER received submissions on opex from the Energy Users Coalition of Victoria (EUCV) and the Victorian Minister for Energy and Resources.

The EUCV provided a submission setting out its concerns regarding the Victorian distribution businesses' proposals.[645] The EUCV considers the outcome of the AER's draft decision analysis is consistent with the long term growth in opex and has resulted in an appropriate outcome. The EUCV considers that Envestra' revised opex claim is not justifiable but notes that because much of the information is confidential, its assessment is limited to an assessment of the information Envestra made public. It also agrees with the approach taken by the AER in the draft decision in relation to step changes. The EUCV considers that unless an exogenous change has occurred, then it cannot be classed as a step change.[646]

The Victorian Minister for Energy and Resources provided a submission supporting the AER's approach to assessing the Victorian distribution businesses' opex proposals. It notes that the assessment of step changes in operating expenditure tends to be focused on increases in expenditure and not on decreases in expenditure. As there are variations in expenditure from year to year, the Minister notes the AER needs to consider the extent to which small increases in expenditure will be offset by small decreases in expenditure that have not been forecast.[647]

The AER's consideration of specific comments made by the EUCV and the Minister are discussed in the relevant section of this chapter.

Where the AER considered additional material to inform this final decision, this is noted in its reasons for this decision.

In forming its views the AER has also considered advice from Deloitte Access Economics (DAE) on labour cost escalators.[648]

7.4 Reasons for decision

The AER's final decision is not to approve Envestra's forecast opex for the Victorian and Albury networks.

The AER accepts Envestra's proposal that its opex forecast be based on a base year roll forward method, using 2011 as the base year, consistent with its initial proposal and the AER's draft decision.

Using this method, historical expenditure, and particularly 2011 expenditure, plays a key role in forecasting and assessing efficient opex.

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644 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp. 168–169.
645 Energy Users Coalition of Victoria, *Submission to the AER: AER draft decision and revised applications from Envestra, Multinet and SP AusNet*, January 2013, pp. 25–26.
646 Energy Users Coalition of Victoria, *Submission to the AER: AER draft decision and revised applications from Envestra, Multinet and SP AusNet*, January 2013, p. 25.
647 Minister for Energy and Resources, *Victorian Gas Access Arrangement Review – Victorian Government Submission*, 14 January 2012, pp. 3–4.
648 Deloitte Access Economics, *Forecast growth in labour costs in Victoria –report prepared for the AER*, 4 February 2013.

The importance of 2011 expenditure is partly due to the efficiency sharing mechanism in Envestra's existing access arrangement. The efficiency sharing mechanism recognises the incentive to reduce opex is driven by both the ex ante opex allowance and carryover amounts.[649] The use of actual opex in determining the opex allowance for the following access arrangement period is a key factor in whether the mechanism will achieve its stated objective. This is to allow Envestra to retain the reward associated with efficiency improving initiatives for five years. For the mechanism to achieve this objective, opex must be forecast based on actual expenditure in the penultimate year of the preceding access arrangement period, in this instance 2011.

If external benchmarks, or a bottom up forecast, were used to set opex allowances, Envestra's opex allowance would not reflect revealed costs, and revealed efficiencies would not be clawed back.[650] Consequently, Envestra would be rewarded twice, once in the ex ante opex allowance, and a second time in the carryover amounts under the mechanism. Therefore, it is important actual expenditure in 2011 be used as the basis for setting opex forecasts for the 2013–17 access arrangement period, where an efficiency sharing mechanism exists.

However, there are a number of reasons why efficient opex in the 2013–17 access arrangement period will be different from actual expenditure in 2011. It is necessary to take these into account to ensure Envestra retains the reward associated with efficiency improving initiatives for five years.

1. First, increased demands for Envestra's outputs may require it to expand its network. It is reasonable that an efficient service provider will require more inputs, and thus greater opex, to deliver more output. It therefore is reasonable to assume it needs an allowance for network growth.

2. Second, it is reasonable to assume that the cost of inputs for an efficient firm to produce the same level of output may not change at the same rate as CPI. Consequently it is reasonable to account for real cost changes in Envestra's inputs. However, to the extent the cost of inputs change, the input mix which minimises costs will also likely change. Thus, to apply input cost escalation while assuming a constant input mix will provide at least the efficient costs of a prudent service provider.

3. Third, there may be other reasons beyond Envestra's control that will increase or decrease its costs. For example, regulatory obligations may change requiring Envestra to increase expenditure to meet those new obligations. For this reason the AER allows for other incremental increases above base year opex (often referred to as step changes). Generally step changes should only be provided for cost increases beyond the service provider's control. Otherwise the step change would represent an increase in costs to produce the same level of output and thus a loss in efficiency.

While the AER agrees that Envestra’s opex in the 2013–17 access arrangement period will need to differ from the opex it incurred it 2011, the AER does not agree that Envestra’s proposed adjustments to its base year opex comply with the opex criteria or the criteria with forecasts and estimates.

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649 An ex ante opex allowance provides an incentive to reduce opex since it allows a network service provider to retain all opex underspends during the access arrangement period. However, since opex is mostly recurrent, the incentive to reduce expenditure declines as the period progresses since the network service provider would not be able to retain the savings for as long. Carryover amounts allow the network service provider to retain opex savings for five years regardless of the year in which the savings are made.

650 Under a revealed cost opex forecasting approach actual opex is used as the basis for determining opex forecasts. Consequently revealed efficiency savings are 'clawed back' when actual opex, including the revealed efficiency savings, is used to forecast opex for the following access arrangement period. This shares the efficiency gains between the network service provider and its customers. However, if something other than actual costs is used to forecast opex revealed efficiencies have no impact on opex forecasts and the efficiencies are retained by the network service provider.

The adjustments to base year opex proposed by the AER in its final decision include additional allowances for Envestra above its base year opex for:

- an escalation in labour costs
- an increased Energy Safe Victoria (ESV) levy
- opex related to Envestra’s network expansion (network growth escalation, meter station charges, new extensions, opex for regional SCADA)
- new incentive payments that are likely to result in new connections and/or increased gas load for which Envestra would not otherwise be compensated for (network development expenditure)
- new vegetation management costs that the AER expects a prudent service provider would incur to meet its regulatory obligations (easement vegetation management)
- a material non-recurrent program to comply with regulatory requirements relating to pipeline safety which the AER agrees is prudent to commence in the 2013–17 access arrangement period (pipeline integrity remediation works)
- administration of the carbon tax
- a new safety program that responds to recent concerns identified by the ESV and WorkSafe Victoria (gas pipes in drains)
- meter reading services previously provided for Envestra by the Australian Energy Market Operator (AEMO) (interval meter data management)
- forecast Network Management Fee payments and the forecast cost of ancillary reference services not included in Envestra's base year estimate
- forecast debt raising costs

In general, the AER has not made adjustments to Envestra’s base year opex where it does not agree there needs to be an incremental increase in Envestra’s total opex to implement the program, or where Envestra’s proposed increase in expenditure relates to circumstances within Envestra’s control. For some adjustments, the AER does not propose the adjustment to base year opex made by Envestra but considers some increase above base year opex is required.

The AER’s final decision is discussed in further detail in this section under the following headings:

- forecasting base year opex
- network growth
- escalation of base year opex
- step changes
- Network Management Fee and ancillary reference services
- debt raising costs and liquidity costs

Further reasoning about the AER’s final decision on real cost escalation is provided in appendix A.

Where Envestra's position in its revised proposal is the same as the position as the AER adopted in the draft decision, this is noted in the relevant section. Refer to attachment 6 of the draft decision for these reasons.

7.4.1 Forecasting base year

Envestra proposed its actual expenditure for 2011 be used to forecast its opex for the 2013–17 access arrangement period, subject to the following adjustments:

1. remove movements in provisions (Victoria only)
2. add payments made from provisions (Albury only)
3. remove licence fees

Envestra adopted the AER's draft decision to not remove network development expenditure and to remove licence fees from its base year opex. However, Envestra did not adopt the AER's draft decision on the treatment of movements in provisions.

The AER approves Envestra's revised proposal to forecast opex based on actual expenditure in 2011 and to remove licence fees from base year expenditure for the reasons set out in its draft decision.[651]

The AER also approves Envestra's treatment of movement in provisions for both Envestra Victoria and Envestra Albury in its revised proposal for the reasons set out below.

Movement in provisions (Victoria)

The AER approves Envestra's revised proposal to not remove movements in provisions from actual expenditure in 2011 to determine base opex.

In its revised proposal, Envestra agreed with the principle that movements in provisions should not be included in the base year for the purposes of forecasting opex. However it noted that an adjustment to the 2011 base year for the Victorian network was not required because movements in provisions are not disclosed as opex in the audited regulatory accounts. Instead movements in provisions are disclosed as depreciation/impairment in its income statement in its regulatory accounts.[652]

The AER agrees that because Envestra Victoria's base year opex does not include movements in provisions no adjustment is required.

Payments in provisions (Albury)

The AER approves Envestra's revised proposal to remove payments in provisions from actual expenditure in 2011 to determine base opex.

For Envestra Albury movements in provisions are disclosed as opex in its regulatory accounts. The reason for the difference between the Victorian and Albury networks is due to the ownership status of the assets to which the provisions relate. Envestra Victoria is required under relevant accounting standards to disclose the movement in provisions against the cost of the asset (that is, as 'depreciation/impairment') because it owns the assets. However, Envestra does not own the Albury

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[651] AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012, p. 171.
[652] Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, pp. 1–2.

assets that relate to the provisions. Consequently, the movement in provision for restoration costs is disclosed as opex (and disclosed as a separate operating cost category).[653]

In its draft decision the AER removed movements in provisions from Envestra's actual opex when it calculated Envestra Albury's incentive mechanism carryover. It also removed movements in provisions from base opex to ensure Envestra Albury not be penalised twice for the increase in liabilities paid from provisions in 2011. It noted that had it determined the negative carryover accrued by Envestra Albury in the 2008–12 access arrangement period should not be applied, it would not have adjusted its base year expenditure to include liabilities paid from provisions since these liabilities do not represent recurrent expenditure.[654]

In this final decision, the AER has determined that the Gas Code does not allow for negative carryovers and the negative carryover accrued by Envestra Albury in the current access arrangement period should be set to zero (attachment 8). Accordingly, Envestra Albury would not be unfairly penalised if liabilities paid from provisions were removed from base opex. Given the liabilities paid from provisions in 2011 relate to specific liabilities that are not expected to be incurred in the 2013–17 access arrangement period they should be removed from base opex.

Interaction with the incentive mechanism

Forecast opex and efficiency carryovers work together to provide Envestra an efficient opex forecast and its share of efficiency gains and losses. For example, if Envestra made an efficiency loss in the base year this would suggest base year expenditure was inefficient. Consequently, using base year expenditure to forecast opex, without making any adjustments to base opex to remove inefficient costs, would produce an opex forecast greater than the efficient amount. However, this is appropriate if Envestra also incurs a negative carryover from the incentive mechanism since the two revenue streams together provide an efficient opex forecast plus Envestra's share of efficiency losses.

For the reasons outlined in attachment 8, the negative efficiency carryovers accrued in the 2008–12 access arrangement period will not be applied to Envestra. Consequently, to produce an efficient opex forecast, base opex should be scrutinised and any inefficient opex removed. Despite accruing a negative opex carryover in the current access arrangement period, Envestra did not identify any opex inefficiencies in its base opex. In the absence of evidence identifying specific inefficiencies in base opex, the opex forecasts determined in this decision represent the best forecasts possible in the circumstances.[655] However, because inefficient opex has not been removed from base opex, and the negative carryovers accrued will not be paid, these opex forecasts will be upwardly biased. This ensures Envestra will be provided a reasonable opportunity to recover at least its efficient costs.[656] The AER notes that the opex incentive mechanism to apply to Envestra in the 2013–17 access arrangement period does allow for negative carryovers (see attachment 8).

7.4.2 Network growth

The AER's final decision is to accept Envestra's network growth methodology, and to update Envestra's opex forecast to reflect the AER's decision on demand discussed in attachment 10.

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653 Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, p. 2.
654 AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012, p. 172.
655 NGR, r. 74(2)(b).
656 NGL, s. 24(2).

In its draft decision the AER approved Envestra's benchmark rate of $19.90 ($2011) to forecast the incremental cost associated with new customer connections. However the AER did not consider Envestra's proposed customer number forecasts were arrived at on a reasonable basis and did not represent the best forecasts possible in the circumstances. Consequently, the AER adjusted Envestra's opex for network growth to reflect its draft decision on customer numbers.[657]

As part of its revised proposal Envestra submitted new customer numbers. The AER considers the customer numbers in Envestra's revised proposal have been arrived at on a reasonable basis and represents the best forecasts possible in the circumstances (see attachment 10). The AER has updated its network growth forecast to reflect Envestra's updated customer number forecasts since its revised proposal for its Victorian network.

7.4.3 Escalation of base year opex

Real cost escalators

The AER does not approve Envestra's proposed real labour cost escalators as it is not satisfied that they have been arrived at on a reasonable basis or represent the best possible forecast of labour cost escalation over the 2013–17 access arrangement period. The AER accepts Envestra's proposal to adopt CPI only for materials cost escalation. Appendix A contains the AER's more detailed consideration of the real cost escalators proposed by Envestra.

Table 7.3 outlines the impact of the AER's final decision on real cost escalators for Envestra's Victorian network.

Table 7.3 Envestra Victoria—impact of real cost escalation

	2013	2014	2015	2016	2017	Total
Envestra revised proposal	0.4	1.0	1.5	2.0	2.5	7.4
AER final decision	0.3	0.5	0.8	1.1	1.5	4.1
Difference	–0.1	–0.5	–0.7	–0.8	–1.0	–3.2

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

Table 7.4 outlines the impact of the AER's final decision on real cost escalators for Envestra's Albury network.

Table 7.4 Envestra Albury—impact of real cost escalation

	2013	2014	2015	2016	2017	Total
Envestra revised proposal	0.01	0.03	0.05	0.06	0.08	0.23
AER final decision	0.01	0.01	0.03	0.04	0.05	0.13
Difference	–0.00	–0.02	–0.02	–0.02	–0.03	–0.10

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

[657] AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012, p. 174.

7.4.4 Step changes

Envestra classified proposed step changes as:

- opex related to capex
- one-off opex projects
- permanent changes in opex

Opex related to capex

Envestra proposed four step changes for the Victorian network where the proposed opex was related to proposed capex. Projects classified as opex related to capex include:

1. regional SCADA
2. IT–road map initiative[658]
3. extensions to new towns
4. knowledge management

Envestra forecast increased opex for the Albury network for all of the above projects except for extensions to new towns.

In its revised proposal, Envestra adopted the step change for regional SCADA approved in the AER's draft decision. It did not include a step change for the IT-road map initiative, which was also consistent with the AER's draft decision. Envestra did not submit any further information on these step changes. For this reason, the AER's final decision on these proposals is consistent with its draft decision.[659]

Envestra resubmitted step changes for extensions to new towns and knowledge management. The AER's final decision and reasons for its decision on these proposals is set out below.

One-off opex projects

Envestra proposed six step changes for the Victorian network for one-off opex projects. Projects classified as one-off opex projects include:

1. pipeline integrity remediation works
2. pipeline signage replacement[660]
3. holes in meter boxes
4. pipe saddle support repairs
5. gas pipes in drains

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658 Envestra, *Access arrangement proposal*, 30 March 2012, p. 99.

659 AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012, pp. 174-191.

660 Envestra, *Access arrangement proposal*, 30 March 2012, pp. 99–100.

6. easement vegetation management[661]

Of these projects, Envestra proposed increased opex for the Albury network for proposed pipeline integrity remediation works and pipeline signage replacement.

In its revised proposal, Envestra adopted the step change for pipeline integrity remediation works approved in the AER's draft decision. It did not include a step change for pipeline signage replacement, which was also consistent with the AER's draft decision. Envestra did not submit any further information on these step changes. For this reason, the AER's final decision on these proposals is consistent with its draft decision.[662]

Envestra resubmitted step changes for holes in meter boxes, pipe saddle support repairs, gas pipes in drains and easement vegetation management. The AER's final decision and reasons for its decision on these proposals is set out below.

Permanent changes in opex

Envestra proposed eleven step changes for the Victorian network for permanent changes in opex. Projects classified as permanent changes in opex include:

1. cost of carbon
2. network monitoring and control
3. interval meter data management
4. graphical information system analyst
5. increased maintenance rates
6. increase in insurance costs
7. change in regulatory policy—reactive mains replacement
8. National Energy Customer Framework (NECF)
9. technical training
10. meter station charges
11. network development[663]

Envestra proposed increases in opex for the Albury network for seven of the above projects. Forecast opex for Envestra's Albury network is not affected by cost of carbon, meter station charges, increase in insurance costs, the proposed change in regulatory policy.

In its revised proposal, did not include step changes for network monitoring and control, a graphical information systems analyst, increased maintenance rates, increase in insurance costs, change in

661 Envestra proposed this project as capex in its initial proposal. The AER draft decision did not accept Envestra's classification and instead assessed it as an opex step change.

662 AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012, pp. 174-191.

663 Envestra, *Access arrangement proposal*, 30 March 2012, pp. 101–104.

regulatory policy and NECF, This is consistent with the AER's draft decision.[664] Envestra adopted the step changes for cost of carbon and interval meter data management approved in the AER's draft decision. For the reasons set out in its draft decision, the AER in this final decision approves expenditure for each of those step changes.[665]

Envestra resubmitted step changes for technical training, meter station charges and network development. It also included a step change for a forecast Energy Safe Victoria (ESV) levy increase.

A comparison between the step changes in Envestra's revised proposals and the AER's final decision is below in Table 7.5 and Table 7.6. The following sections discuss the AER's final decision and reasons for the decision in relation to each step change where Envestra's revised proposal differs from the AER's draft decision.

Table 7.5 Envestra Victoria—impact of step changes ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra revised proposal	7.6	8.5	7.1	6.2	6.5	35.8
AER final decision	2.7	4.0	4.5	4.8	5.1	21.0
Difference	–4.9	–4.5	–2.6	–1.4	–1.4	–14.8

Note: Envestra proposal includes network development expenditure above base year expenditure, insurances and is corrected for errors. Consequently it does not reconcile with table 6.3 of Envestra AAI. Totals may not add due to rounding.
Source: AER analysis.

Table 7.6 Envestra Albury—impact of step changes ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra revised proposal	0.16	0.17	0.10	0.05	0.06	0.54
AER final decision	0.02	0.03	0.04	0.04	0.04	0.17
Difference	–0.13	–0.14	–0.06	–0.02	–0.02	–0.37

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

AER approach to assessing step changes

Step changes generally fall into three categories:

1. regulatory change
2. non-recurrent expenditure
3. discretionary expenditure

These categories are indicative only. They indicate how the AER can assess whether expenditure meets the applicable criteria prescribed by the NGL and NGR.

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664 AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012,

665 AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012,

Regulatory change

The AER generally considers an increase in opex to meet an existing regulatory requirement would be an efficiency loss as it would cost a business more to meet the same requirement. Consequently a step change would not be required.

However, the AER also recognises a gas service provider should be provided with a reasonable opportunity to recover at least the efficient costs incurred in complying with a regulatory obligation or requirement.[666] In some circumstances there may be external factors, beyond its control as to why a gas service provider might require an increase in expenditure to meet an existing regulatory requirement. In these circumstances, a step change may be required.

Non-recurrent expenditure

A gas service provider's opex program will not be exactly the same from year to year. Actual opex in the base year reflects both recurrent expenditure and non-recurrent expenditure. Consequently base year opex will include non-recurrent expenditure that will not be required in the next access arrangement period for the same activities. However, non-recurrent expenditure incurred in the base year is not typically removed from base year opex. Consequently, the fact a particular activity was not undertaken in the base year is not sufficient evidence to demonstrate a step change is required. Instead, whether base year opex will be sufficient to fund the proposed activity, or whether a step up in opex is required, needs to be considered on a case by case basis.

The Victorian Ministers for Energy and Resources made the same point in his submission:[667]

> The assessment of step changes in operating expenditure tends to be focused on increases in expenditure and not on decreases in expenditure. There will be some variation in expenditure from year to year—the AER needs to consider the extent to which small forecast increases in expenditure will be offset by small decreases in expenditure that have not been forecast.

The AER considers there could be reasons where a significant increase in non-recurrent expenditure is required. In some cases a gas service provider may have relatively limited discretion in whether or not to undertake this expenditure. For example, some maintenance costs may be lumpy. As a result, base year opex may be insufficient to cover the costs of the new program of expenditure. In this case a step change in opex may be required.

Discretionary expenditure

The AER does not typically consider an incremental increase above base year opex is required for discretionary expenditure.

For instance, a gas service provider might propose step changes above base year opex for projects or programs it stated would increase productivity.[668] However, if a new program of expenditure delivers productivity savings those cost savings should also be factored into the forecast of total opex. Adding a step change above base year opex to total opex will not produce an efficient forecast if the cost savings resulting from the step change are not taken into account.

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666 NGL, s. 24(2)(b).

667 Minister for Energy and Resources, *Victorian Gas Access Arrangement Review – Victorian Government Submission*, 14 January 2012, pp. 3–4.

668 Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, pp. 13–14.

Similarly if a project or program is being undertaken at a gas service provider's discretion on productivity grounds then it is only prudent if the cost savings outweigh the costs. Consequently a step change is not required because, all else equal, total opex will be reduced by the project or program.

In some limited circumstances the benefits of a discretionary project may not be productivity gains, but the project is expected to lead to lower prices to customers. If there are few benefits to the gas service provider, the benefits of undertaking the project to the gas service provider may not outweigh the cost of the project. Therefore it may not undertake the project without an increase in opex. A step change in opex may be necessary so that customers benefit in the long term.

Response to Envestra comments about AER step change approach

Envestra raised concerns with the AER's approach to assessing step changes. It submitted that the AER's assessment was inconsistent with the NGL and NGR requirements.[669] In particular, Envestra referred to the following from the AER's draft decision as indicating that the AER had not applied the relevant criteria:[670]

> In general the AER considers an increase in opex is not consistent with r. 91 of the NGR where the additional expenditure is intended to address a regulatory requirement or industry standard that has not changed since the 2008–12 access arrangement period. The AER considers that an increase in opex to implement an existing regulatory requirement may provide an incentive for service providers to spend less than required in meeting such requirements or standards. The AER considers this practice is not consistent with a prudent service provider acting efficiently in accordance with accepted good industry practice to achieve the lowest sustainable cost of delivering pipeline services.
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> In some cases, the AER considers that expenditure may be consistent with the requirements governing opex under r. 91 of the NGR but it considers that an incremental increase in the total opex allowance would not be consistent with rr. 74 or 91 of the NGR. For instance, if expenditure is intended to improve productivity, the AER would generally consider, unless circumstances indicate otherwise, that there is sufficient expenditure in base year opex in order to fund the program.
>
> The AER's assessment of proposed step changes also recognises that the opex carried out by a service provider will not be exactly the same from year to year. For instance actual opex in the base year reflects both recurrent expenditure and non-recurrent expenditure. However, when forecasting opex for the 2013–17 access arrangement period the AER has not sought to estimate all non-recurrent expenditure incurred in the base year. Therefore to ensure a forecast of total opex that is consistent with r. 74 of the NGR, the AER also does not automatically consider there should be an incremental opex because the expenditure was not incurred in the base year but needs to be incurred in the 2013–17 access arrangement period. Instead the AER considers on case by case basis whether base year opex would be likely to be sufficient in order to fund the proposed program of opex or whether an incremental increase in opex is required.

For clarification, the AER assesses opex against r. 91 and r. 74(2) to determine prudent and efficient expenditure for the 2013–17 period. The AER's observation, as set out above, that an increase in opex to implement an existing regulatory requirement may provide an incentive for service providers to spend less, was an observation on what might occur if the AER were to approve certain expenditure. However, this observation was not related to the AER's assessment of Envestra's opex under rr. 91 and 74(2).

Because the AER is using a base year forecasting approach the AER accepts that base year expenditure, for 2011, is at least the efficient and prudent amount. This is because Envestra was subject to an incentive mechanism in that base year. The opex forecast and incentive mechanism

669 Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, pp. 9–15.

670 AER, *Draft decision*, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp. 174–175.

carryover amounts work together to provide Envestra an efficient opex forecast plus its share of efficiency gains and losses. However, both Envestra Victoria and Albury accrued a negative carryover amount in the 2008–12 access arrangement period that will not be applied in the 2013–17 access arrangement period (attachment 8). Consequently base opex may provide more than the efficient amount of opex a prudent service provider would required to meet its regulatory obligations (section 7.4.1).

There are a number of reasons why efficient opex for the 2013–17 period may vary from the 2011 base year expenditure. The AER's approach to an assessment of any additional expenditure is set out above. To this extent, the AER agrees with Envestra's submission that past expenditure, based on 2011, might not be sufficient to address existing regulatory obligations over subsequent years in that external drivers/circumstances could possibly warrant an increase. The AER assessed this on a case by case basis based on the information before it.

Envestra further submitted that many regulatory obligations do not have an identifiable threshold between compliance and non-compliance, and therefore there are various levels of compliance that can exist. The AER generally accepts that this may be the case but is of the view that Envestra would have factored in the appropriate degree of risk when deciding what level of expenditure was necessary to ensure compliance in the base year. If a step change is required, Enevstra would need to identify why the level of risk in the base year will no longer be acceptable or identify an external driver/circumstance that will change the level of the risk.

In relation to the AER's observation that expenditure in some cases may be consistent with r. 91 but an incremental increase in the total opex allowance would not be consistent, the AER was referring to the possibility that expenditure for a certain category might be justified as prudent but the expenditure would not be efficient when taking into account the total level of opex.

For step changes related to productivity improvements Envestra stated that a step change would be required because otherwise it would need to fund the cost of the productivity improvement but the benefits would be passed through to consumers. It considered this would discourage investments that improve productivity that, in the long run, would benefit consumers in terms of price, quality, safety, reliability and security of supply. [671]

However, Envestra's view does not reflect the treatment of costs and benefits under the incentive mechanism applicable to Envestra. The opex incentive mechanism that will apply to Envestra will ensure it will retain both costs (increases in opex) and productivity benefits (reductions in opex) for five years (attachment 8). Consequently Envestra will be provided with effective incentives to make productivity improvements.[672] Further, since it retains both the costs and benefits for five years it will also be provided with a reasonable opportunity to recover at least its efficient costs if the productivity improvement is efficient and the benefits outweigh the costs.[673]

In regards to non-recurrent expenditure, Envestra stated it had concerns with the AER's approach to setting forecast opex. In particular it was concerned it may not provide it a reasonable opportunity to recover at least its efficient costs.[674] Despite this, Envestra did not provide any evidence non-recurrent opex in the base year was insufficient to cover non-recurrent expenditure in the 2013–17 access arrangement period.

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[671] Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, p. 14.
[672] NGL, s. 24(3).
[673] NGL, s. 24(2).
[674] Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, p. 14.

7.4.5 Assessment of proposed step changes

Extensions to new towns

The AER's final decision is to approve opex for extensions to new towns.

Envestra's initial proposal included a step change for extensions to new towns. Once Envestra's network is extended, Envestra noted there would be routine levels of maintenance associated with the expanded infrastructure.[675]

The AER's draft decision did not approve the capex component for the extensions to new towns,[676] therefore it was not satisfied an increase in opex would be required.[677]

Envestra's revised proposal included further information which was not available to the AER at the time of the draft decision to support a proposed extension project and the Merrifield development. Further, on 17 January 2013, Envestra provided the AER with an additional proposal to extend its network to another region.[678]

The AER assessed Envestra's proposed extensions to new towns in attachment 4.

The AER is satisfied this increase in the physical size of Envestra's network requires an incremental increase in opex. Therefore, the AER considers the proposed step change is consistent with opex that would be incurred by a prudent service provider and would meet r. 91 of the NGR requirements.

Knowledge management

The AER's final decision is to not approve the opex for the knowledge management proposals.

As discussed in attachment 4 the AER considers the capex component of Envestra's knowledge management proposal does not satisfy the new capital expenditure criteria.[679] Therefore, the AER is not satisfied an increase in opex for knowledge management would be opex 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.[680]

Holes in meter boxes

The AER's final decision is to not approve a step change above base year opex for holes in meter boxes. Envestra's proposal addresses a regulatory requirement that has not changed since the 2008–12 access arrangement period and it would double count non-recurrent maintenance costs included in the base year. For these reasons the AER does not consider an incremental increase above base year opex would be required by a prudent service provider acting efficiently in accordance with accepted good industry practice to achieve the lowest sustainable cost of delivering pipeline services.

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675 Envestra, *Access arrangement proposal*, 30 March 2012, p. 99.
676 AER, *Draft decision*, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, attachment 3.
677 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2,* September 2012, p. 176.
678 Envestra, *Response to AER information request FD3b* sent 11 January 2013, received 17 January 2013.
679 NGR, r. 79(1).
680 NGR, r. 91(1)

In addition, and for the same reasons, the forecast expenditure is not arrived at on a reasonable basis, or the best estimate possible in the circumstances.[681]

In its initial proposal, Envestra proposed a step change to address a safety concern in relation to gas meter wall boxes installed in Envestra's Victorian network. Envestra considered there to be a risk that gas from certain gas meter wall boxes could flow into the wall cavities and roof spaces of buildings, creating a risk of fire or explosion. Envestra proposed systematic inspection and rectification of certain installations to address this issue.[682]

The AER's draft decision was not to approve an increase in opex to fund this program.[683] Envestra is required to ensure meter boxes comply with the Australian gas installation standard AS 5601. If Envestra needs an incremental increase above the opex it incurred in 2011 to address the issue it would imply that Envestra is not currently compliant with the Australian standard. The AER considered a prudent service provider would have already taken measures to address this issue. The AER also considered providing additional funding for a gas service provider to comply with an existing industry standard would not promote good industry practice.

In its revised proposal Envestra did not adopt the AER's draft decision.[684] Envestra submitted that the expenditure was compliant with r. 91 as it would be required by a prudent service provider acting efficiently. Envestra submitted that the affected meters were non compliant because they were either installed prior to the development of the standard, installed prior to the development of the current version of the standard, or affected by third party actions outside of Envestra’s control. Envestra also submitted that the expenditure is prudent because it is intended to address a risk that is potentially fatal.[685]

Using the revealed cost approach to forecasting opex, base year costs represent a reasonable estimate of efficient costs. The AER accepts it may be prudent to repair holes in meter boxes for the reasons set out by Envestra. However, because there has been no change in regulatory requirements for holes in meter boxes, a step change in opex would not be required by a prudent service provider. The efficient costs of funding such a program to meet its existing regulatory requirements would already be covered by its base year opex allowance.

The AER is also not satisfied a forecast of opex that includes increased expenditure to rectify non-compliant meter boxes is reasonable. Some maintenance activities undertaken by a gas service provider every year are non-recurrent. Therefore Envestra's base year opex will include expenditure on some activities that may have been efficient in 2011 but do not need to be undertaken in the 2013–17 access arrangement period. As base year opex includes funding for one-off projects, adding a step change to base year opex would not reflect a forecast of total opex arrived at on a reasonable basis, or represent the best estimate of opex possible in the circumstances.[686]

The AER also considers that Envestra's explanation for the reasons behind its non-compliance do not justify a step change. First, standards are generally not retrospective. Second, if the problem changed Envestra's risk profile to the extent that it warranted immediate action, a prudent and efficient service provider would have repaired or replaced all non-compliant installations prior to or not long after the

681 NGR, r. 91(1), r. 74(2).
682 Envestra, *Victorian access arrangement information*, 30 March 2012, p. 99.
683 AER, *Access arrangement draft decision, Envestra Ltd. 2013-17*, September 2012, Attachment 6, p. 177.
684 Envestra, *Victorian revised access arrangement information - Attachment 6.7: Operating expenditure*, November 2012, p. 15.
685 Envestra, *Victorian revised access arrangement information - Attachment 6.7: Operating expenditure*, November 2012, p. 15.
686 NGR, r. 74(2).

standard was changed, or when Envestra became aware the installations might be affected by third party actions. The standard, requiring that meters be completely sealed from any adjoining recesses or cavities, was in place at least as early as 2004.[687] Envestra did not identify any external driver/circumstance that has changed the risks associated with holes in meter boxes since the 2008–12 access arrangement period. That Envestra has deferred the expenditure runs contrary to the urgency that Envestra submits is present in its access arrangement information.

The AER also considers that in this case the magnitude of the risk, the step change is intended to address, is not relevant to determine if a step change is required. As mentioned above, the AER considers that Envestra already receives adequate compensation in its base year opex to rectify holes in meter boxes.

Pipe saddle support repairs

The AER's final decision is to not approve a step change for pipe saddle support repairs. The AER considers it addresses a regulatory requirement that has not changed since the 2008–12 access arrangement period and it would double count non-recurrent maintenance costs included in the base year. For these reasons the AER considers an incremental increase above base year opex is not required. Therefore, such expenditure would not 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, In addition, and for the same reasons, the forecast expenditure is not arrived at on a reasonable basis, or the best estimate possible in the circumstances.[688]

In its initial proposal, Envestra included a step change to carry out a repair/rectification program for approximately 430 pipework saddle supports installed in Envestra's Victorian network to eliminate contact areas susceptible to corrosion.[689] Pipework saddle supports are used as supporting structures for various gas pipeworks and valves.

The AER in its draft decision did not approve an increase in opex to fund this program.[690] It was not satisfied an increase in opex for pipe saddle support repairs would be opex required by a prudent service provider acting efficiently. Pipe saddle supports must be inspected regularly in accordance with AS 2885.3. The AER considered that corrosion in pipelines would be identified, and dealt with, at the time of these regular inspections in the most cost effective manner available - which may be to replace the pipe saddle supports. Also, gas service providers regularly undertake non-recurrent maintenance. As discussed above, Envestra's base year opex includes some non-recurrent expenditure. Providing a step change for this item would double count this type of expenditure.

In its revised proposal Envestra did not adopt the AER's draft decision.[691] Envestra submitted that the expenditure was compliant with r. 91 as it would be required by a prudent service provider acting efficiently. Envestra submitted that its repair plan was the most efficient way to manage the costs associated with pipe saddle support repairs.

The AER considers, where a regulatory requirement has not changed from the previous regulatory period, base year costs will generally include the funds necessary to discharge a gas service provider's regulatory responsibilities. As discussed above in relation to the holes in meter boxes

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687 AS 5601- 2004 4.13.5(b)
688 NGR, r. 91(1), r. 74(2).
689 Envestra, *Victorian access arrangement information*, 30 March 2012, p. 100.
690 AER, *Access arrangement draft decision, Envestra Ltd. 2013-17*, September 2012, Attachment 6, p. 178.
691 Envestra, *Victorian revised access arrangement information - Attachment 6.7: Operating expenditure*, November 2012, p. 17.

proposal, where this is the case, a step change in opex would generally not be required by a prudent service provider.[692]

The AER is also not satisfied a forecast of opex that includes increased expenditure to rectify non-compliant meter boxes is a forecast of total opex that has been arrived at on a reasonable basis or is the best forecast possible in the circumstances.[693] Base year opex will include expenditure on some non-recurrent maintenance. As a result, a forecast of opex that includes a step change for pipe saddle support repairs would be upwardly biased.

The AER considers that Envestra's position, that the proposed pipe saddle support repairs are the best way to manage the problem identified, does not address the AER's points. Envestra has submitted that a step change for the pipe saddle supports repair program is required because it is the most efficient manner to manage costs associated with pipe saddle support repairs. The AER accepts that the pipe saddle support program may be the most efficient way for Envestra to discharge its regulatory responsibilities but the AER is assessing the efficient level of expenditure. The base year already compensates Envestra for the maintenance of pipe saddle repairs. If the proposed pipe saddle support repair program is more cost effective than current maintenance arrangements it would represent a cost saving and therefore no step change would be required.

Gas pipes in drains

The AER's final decision to approve a step change for a program to address gas pipes in drains. The AER considers Envestra's proposed expenditure addresses a directive from the ESV. An incremental increase above base year opex is required to implement this program.

In its initial proposal Envestra included a step change to minimise the risks from gas pipes, installed in Envestra's Victorian network, that have been laid through stormwater drains and sewers.[694]

The AER's draft decision was to not accept this step change. It concluded that if the risks associated with gas pipes installed in drains are material, Envestra acting in accordance with good industry practice to achieve the lowest sustainable cost of delivering pipeline services would have taken immediate action to address this risk. [695] The AER did not consider an increase in opex to fund a program to address a risk that should have already been addressed prior to the 2013–17 access arrangement period would be in accordance with good industry practice.

In its revised proposal, Envestra submitted that it had been directed by the Energy Safe Victoria (ESV) and WorkSafe Victoria to deliver a program to mitigate the risks posed by gas pipes that may have penetrated drains.[696]

The AER accepts that Envestra faces increased costs not already accounted for in their base year, to conduct the surveys required by WorkSafe Victoria and the ESV. Although this step change is not in direct response to a regulatory change, the survey of mains and services in drains responds to a directive from the ESV.[697] Envestra was required to go through a consultation process with the ESV about how to mitigate the risks associated with gas pipes in drains. As Envestra was required to consult with the ESV on its mitigation plan, Envestra was unable to take immediate action after the

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692 NGR, r. 91(1).
693 NGR, r. 74(2).
694 Envestra, *Victorian access arrangement information*, 30 March 2012, p. 100.
695 AER, *Access arrangement draft decision, Envestra Ltd. 2013-17*, September 2012, Attachment 6, p. 179.
696 Envestra, *Victorian revised access arrangement information - Attachment 6.7: Operating expenditure*, November 2012, pp. 18-19.
697 Energy Safe Victoria audit report, 17 November 2010

problem was identified. For these reasons the AER considers an incremental increase above base year opex would be required by a prudent service provider.[698]

The AER also notes that the gas pipes in drains program is a non-recurrent cost. In many instances (e.g holes in meter boxes) the AER considers there does not need to be an increase in total opex to fund a non-recurrent program. However, in this instance, the expenditure is intended to address a directive from the ESV and WorkSafe Victoria. Because the proposed expenditure is non-recurrent expenditure to address an external directive to reduce a safety risk, the reasons why the expenditure is required are similar to those for a change in regulatory requirement. Given there are external factors which are driving the proposed expenditure, the AER considers there is a stronger case for an increase in total opex than other proposed non-recurrent expenditure. Therefore, on balance, the AER also considers that an increase in total opex to fund this program would be required by a prudent and efficient service provider. Envestra's forecast reflects a forecast arrived at on a reasonable basis and the best estimate possible in the circumstances.[699]

Easement vegetation management

The AER's final decision is to propose a step change above base year opex of $2.9 million ($2011) for recurrent easement vegetation management costs for Envestra Victoria and $0.1 million ($2011) for Envestra Albury. The AER considers that this represents opex that 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.[700]

In its initial proposal Envestra included a step change to clear highly vegetated areas and maintain the cleared pipeline corridors. It considered the program would:

- ensure line of sight of marker posts is maintained along pipeline corridors
- ensure access to pipeline corridors is provided for pipeline operation, maintenance and emergency activities
- mitigate the risk of tree root growth damaging pipeline coating; and
- mitigate future liabilities associated with vegetation clearance and net gain obligations.[701]

Envestra submitted that this project is required by AS/NZS 2885.3-2001 and there was no other option but to proceed with the vegetation management program as proposed to ensure compliance with statutory obligations.[702]

The AER's draft decision was to increase opex for part of Envestra's proposal.[703] The AER accepted that some ongoing costs associated with complying with AS/NZS 2885.3-2001 were not included in Envestra's base year costs. However, the AER did not increase Envestra's opex associated for extra works required to clear vegetation growth that should have been cleared in earlier access arrangement periods. The AER considered a prudent service provider would have already taken measures to address this issue and so would not require additional spending on the initial clearance of the pipelines and associated environmental net gain offset costs.

698 NGR, r. 91(1).
699 NGR, r. 74(2)(a)
700 NGR, r. 91(1).
701 Envestra, *Victorian Access arrangement information - Business Case* VA33, 30 March 2012, p. 131.
702 Envestra, *Victorian Access arrangement information - Business Case* VA33, 30 March 2012, p. 1
703 AER, *Access arrangement draft decision, Envestra Ltd. 2013-17*, September 2012, Attachment 6, p. 190.

In its revised proposal Envestra did not adopt the AER's draft decision.[704] Envestra considered the AER's proposed allowance is not sufficient for Envestra to be able to satisfy its regulatory obligations. Envestra noted that it was prudent to defer expenditure on the implementation of its vegetation management program due to the lengthy nature of environmental planning processes.[705] It considered the risks associated with the non-compliance had only become material in recent years due to increased rainfall and the increase in risk prompted Envestra to develop its vegetation management plan.[706]

Envestra considered there to be an inconsistency in the AER's view that Envestra should be funded for part of a cost that meets the NGR, but not be funded for another part. It noted that it had not been provided with an allowance previously for this expenditure.[707]

The AER does not agree with Envestra's submissions in its revised proposal. The AER addresses these issues below.

When considering whether a total opex allowance is sufficient, the AER must consider whether a prudent service provider would have sufficient revenue in order to be able to efficiently deliver all reference services. As outlined above in response to Envestra's comments about step changes, the AER generally assumes that the total opex allowance incurred in the base year is sufficient for a prudent service provider to be able to efficiently deliver all reference services in that year. Given that opex is generally recurrent and stable, this provides a reasonable basis for forecasting opex for the future. An advantage of this approach - as opposed to top-down forecasting approaches – is it provides the regulated business with the flexibility to use its base year allowance to meet all regulatory standards, and manage all risks associated with delivering all reference services that were present in 2011. How a business manages those risks is a decision for the business.

For this reason the AER generally considers there does not need to be a step change above base year opex to manage circumstances that were present in the base year.

Envestra's proposal relates to a regulatory standard that has been in been place since 2001. The Australian Pipeline Industry Association Ltd Code of Environmental Practice – Onshore Pipelines and AS/NZS 2885.3-2001 Pipelines – Gas and Liquid petroleum, Part 3: Operation and Maintenance specifies minimum requirements for the operation and maintenance of pipelines. In its proposal, Envestra outlines specific requirements for the management of vegetation along pipeline corridors in accordance with pipeline licence conditions:

- signs shall be maintained along the route so that the pipeline can be properly located and identified from the air, ground or both. (AS2885.3-2001, Section 6.3 Pipeline Marking).
- unless approved, vegetation shall be restricted to allow free passage along the pipeline route. Vegetation, whose roots may damage the anti-corrosion coating of the pipeline, shall not be permitted in the vicinity of the pipeline.' (AS2885.3-2001, Section 6.4.4 Vegetation On and Near the Pipeline).

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704 Envestra, *Victorian revised access arrangement information - Attachment 6.7: Operating expenditure*, November 2012, p. 16-17..

705 Envestra, *Victorian revised access arrangement information - Business Case* VA33A, November 2012, p. 4

706 Envestra, *Victorian revised access arrangement information - Attachment 6.7: Operating expenditure*, November 2012, p. 16.

707 Envestra, *Victorian revised access arrangement information - Business Case* VA33A, November 2012, p. 5.

- regrowth of trees within 3 metres of the trench centreline shall be removed at seedling or sapling stages to ensure tree roots do not create a safety risk to the pipeline. (Australian Pipeline Industry Association Code of Environmental Practice, Section 5.1.3 Vegetation Management).[708]

The AER considers that since this standard came into place, a prudent service provider acting efficiently, in accordance with accepted good industry practice to achieve the lowest sustainable cost of delivering pipeline services would have incurred ongoing expenditure since 2001 to ensure it continued to adhere to this standard.

However, Envestra has stated that it has incurred some ongoing expenditure since 2001 but due to increased rainfall there has been rapid growth in vegetation, which has 'brought this issue to management attention and highlighted the need for more urgent action'.[709] Envestra has stated that it 'could be argued that it is non-compliant'.[710]

The AER has no evidence to substantiate Envestra's comment about possible non-compliance with the relevant standard.[711] In any case, changes in weather conditions are possible at any time. A prudent service provider acting efficiently, in accordance with accepted good industry practice, would have been be aware of the risk of rainfall, and how it may affect compliance with any relevant industry standards. It would have taken appropriate measures from 2001 to address these risks and factored such risks into its compliance strategy. For these reasons, the AER considers an increase in opex above Envestra's base year opex related to initial clearance of overgrown vegetation is not warranted.

In making this decision, the AER has taken into account Envestra's claims that environmental planning processes restricted it from meeting its native vegetation requirements. However, Envestra did not provide any evidence to support these claims. The AER notes that Envestra conducted environmental assessments of each of its transmission pressure pipelines between December 2007 and March 2009.[712] Envestra did not provide any evidence to explain why it did not begin to clear native vegetation soon after it completed the first of these assessments.

The AER also notes that Envestra has not previously been provided with a step change for increased native vegetation requirements. However, the AER does not consider this to be a relevant factor. As outlined above, the relevant standard has been in place since 2001. As the AER considers Envestra has already had a reasonable opportunity to manage the risks associated with overgrown native vegetation, it does not consider a step up in Envestra's base year opex to initially clear overgrown vegetation would be required by a prudent service provider. Envestra itself states a reason why it requires an increase in its forecast opex now is because it did not clear native vegetation until after there had been increased rainfall. This would have increased the cost of native vegetation clearance.

The AER also notes that both SP AusNet and Multinet would be subject to the same native vegetation requirements. While these distributors do provide services in different regions, neither has proposed a step change for this type of the expenditure. Therefore the AER assumes that each of these service providers are already compliant with their respective obligations in 2011. It is unclear why Envestra needs to be treated differently to these service providers.

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708 Envestra *Victorian Access arrangement information - Business Case* VA33, 30 March 2012, p. 4.

709 Envestra has referred to two different periods of increased rainfall. In its response to AER information request 35 Envestra referred to increased rainfall in the thirty six month period up to July 2011. In its revised proposal it referred to increased rainfall in 2010.

710 Envestra, *Response to AER information request* 35, 3 August 2012.

711 NGR, r. 91(1).

712 Envestra, *Victorian revised access arrangement information - Business Case* VA33A, November 2012, p. 5

The AER, however, does accept that a prudent service provider acting efficiently would incur increased opex in the future to ensure ongoing compliance with vegetation maintenance requirements.[713] To date, Envestra has only spent $0.1 million ($2011) annually on easement vegetation management. According to Envestra's access arrangement information, to maintain an acceptable level of compliance with AS/NZS 2885.3-2001 in the future, it would need to spend $0.7 million ($2011) annually in the future. A prudent service provider would incur ongoing costs in maintaining native vegetation, regardless of when it initially cleared vegetation along its transmission pipelines. As a result the AER proposes step changes across both Envestra businesses for vegetation maintenance costs not already included in Envestra's base year. The AER’s final decision reflects the value of the recurrent costs as quoted by Envestra less the costs for vegetation management that it already undertakes.[714]

The AER's draft decision took the same approach. However, the AER has realised that the figure in the draft decision did not subtract Envestra's existing annual expenditure of $0.1 million ($2011) on vegetation management. As these costs are already included in the base year, the AER is not satisfied that a step change that includes these costs is reasonable and would not be the best possible estimate in the circumstances.[715]

Technical training

The AER's final decision is to not approve a step change for technical training. The training program would lead to productivity gains. Therefore a forecast of total opex that includes the costs of the program without accounting for productivity gains would be upwardly biased, and therefore would be a forecast of opex that is not arrived at on a reasonable basis or would not be the best estimate possible in the circumstances.[716] For this reason, a forecast of opex that included this step change would not reflect a forecast of total opex that 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.[717]

In its initial proposal Envestra included a step change to implement computerised training modules for its staff. Envestra submitted the proposed project was an important element in its ability to deliver reference services in a safe manner.[718]

In its draft decision the AER did not approve the proposed step change. The project was likely to produce productivity gains, thereby reducing Envestra's labour costs.[719] The project was also not associated with any new regulatory requirement; therefore Envestra's existing training regime should satisfy its current needs.[720]

In its revised proposal Envestra maintained that the step change was necessary. Envestra submitted the step change would be required by a prudent service provider because:

- Envestra's current training arrangements will not be sufficient to meet the increasing need to provide basic competency training that has emerged due to experienced workers leaving

713 NGR, r. 91(1).
714 Envestra, *Victorian revised access arrangement information - Business Case* VA33A, November 2012, p. 2; Envestra, *Response to AER information request* 35, 3 August 2012.
715 NGR, r. 74(2).
716 NGR, r. 74(2).
717 NGR, r. 91(1).
718 Envestra, *Victorian access arrangement information*, 30 March 2012, p. 102.
719 AER, *Access arrangement draft decision, Envestra Ltd. 2013-17*, September 2012, Attachment 6, p. 182.
720 AER, *Access arrangement draft decision, Envestra Ltd. 2013-17*, September 2012, Attachment 3, p. 94.

- there would be no productivity improvements from the program as it is designed to offset expected declines in productivity associated with experienced staff leaving the industry[721]
- the estimated cost of the project is accurate.[722]

The reasons why the AER does not agree with this assessment are set out below.

Skills shortage

Envestra submitted that, although there was no new regulatory change, changes to Envestra's training programs are necessary. Existing training systems now in place are currently sufficient, but the skills shortage in the industry necessitate that Envestra change its training regime. As Envestra hires more junior staff it will need to provide more basic competency training.[723]

Envestra also submitted that if a service provider were to adopt the AER's assertion that current training regimes are appropriate, the corollary is that there would never be improvements in training regimes. [724]

The AER does not consider a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services would require a step change for the technical training program.[725] When a revealed cost opex forecasting approach is used, the base year expenditure includes the efficient amount of labour costs required to provide the reference service. This amount includes real cost escalation for forecast labour costs increases. To the extent a skilled labour shortage is expected, the effect of the shortage on labour costs will be reflected in forecast labour cost escalation. When staff leave, funds become available for Envestra to hire new staff. How Envestra decides to respond to its skills shortage is a business decision for Envestra.

The AER has not concluded that improvements in training should not be undertaken. The AER considers, where there are no new regulatory obligations, it is a choice for the network service provider to determine if it should change its training program. If a network service provider chooses to change their training program, a step change is not necessary as funding for training is included in its base year opex.

Productivity

Envestra submits the technical training program would not result in any productivity gains. As experienced staff leave, less productive staff with lower productivity, will replace them. Envestra considers technical training will not lead to substantial productivity gains, but rather it will prevent a reduction in productivity.

The AER does not consider a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services would require this step change.[726] If Envestra trains its workers, its productivity levels will be higher than if

721 Envestra, *Response to information request 18*, 7 July 2012, p. 8.
722 Envestra, *Victorian revised access arrangement information - Business Case* VA23A November 2012, pp. 2–4 (Confidential attachment),.
723 Envestra, *Victorian revised access arrangement information - Business Case* VA33A, November 2012, p. 4 (Confidential attachment).
724 Envestra, *Victorian revised access arrangement information - Business Case* VA33A, November 2012, p. 4 (Confidential attachment).
725 NGR, r. 91(1).
726 NGR, r. 91(1).

they are not trained, all else equal. Because trained workers are more productive than untrained workers there will be a productivity gain from the training and therefore reduced opex (since less labour is required to undertake the same amount of work). Where a training regime change leads to a productivity gain that outweighs the costs of the change, a prudent service provider would not require a step change. Where a training regime change leads to a productivity gain that does not outweigh the costs of the change, a prudent service provider would not implement the training regime. As a result, the AER considers Envestra does not require a step change for its technical training program.

As the AER considers a prudent service provider would not require a step change for the technical training program, the AER is also not satisfied including step change for this training would lead to a forecast of total opex that has been arrived at on a reasonable basis, or is the best forecast possible in the circumstances.[727]

Meter station charges

The AER's final decision is not to approve a step change of $3.8 million ($2011) for increased custody transfer meter (CTM) charges. Increased CTM charges are necessary to service growing demand so a prudent service provider would require an incremental increase in opex. However, the AER does not accept Envestra's forecast of CTM charges. Envestra's forecast is based on APA GasNet's forecast capital cost of upgrading existing metering installations and installing new stations. The AER is not satisfied that the forecast capital cost of upgrading the meters are arrived at on a reasonable basis or represent the best forecast possible in the circumstances.[728] For this reason the AER considers Envestra's proposed increase in opex for CTM charges is opex that would not 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.[729] The AER proposes a step change in opex of $1.5 million ($2011).

In its initial proposal, Envestra proposed a step change for increased CTM charges. CTMs measure the transfer of gas from transmission networks to distribution networks. Envestra pays CTM charges to APA GasNet to provide this service. As the demand for gas on Envestra's network increases, APA GasNet must build new and upgrade existing CTM stations to service this demand. When this happens, APA GasNet increases CTM charges to reflect the extra costs it incurs in the provision of these services.[730]

Envestra submitted that the increased charges relate to upgrades of four existing CTM facilities and the construction of four new CTM facilities. In its initial proposal, Envestra predominantly used historical CTM charges of similar projects to forecast the increase in opex.[731] This is because:

> CTMs are generally comprised of standard components and facilities, with differences accounting for the volume of gas injected. CTMs are designed to handle a range of flows, and therefore it is not uncommon for various CTMs to be very similar in terms of general capacity and functionality.[732]

In its draft decision, the AER accepted a prudent service provider would require a step change for increased CTM charges for three of the upgrades (Whittlesea, Healesville and Shepparton) and three new CTM stations (Pakenham, Wollert and Clyde North). However, the AER did not accept Envestra's

727 NGR, r. 74(2).
728 NGR, r. 74(2).
729 NGR, r. 91(1).
730 In this sense, the step change is related to an increase in network growth. However, Envestra proposed it as a step change therefore for the purposes of the final decision it has been assessed as a step change.
731 The increase in CTM charges for the Dandenong station was based on fifteen per cent of the estimated capital cost of Envestra's upgrade.
732 Envestra, *Response to AER information request 2*, 10 May 2012, p. 6.

forecast of CTM charges. This is because the AER found that one of the new CTM stations was not required (Dandenong), one of the upgrades appeared to be inconsistent with APA GasNet's metering strategy (Longwarry), and the CTM charges for upgrades seemed high relative to the capital costs APA GasNet had forecast in its 2011 metering strategy.[733] The AER therefore accepted that an increase in opex was required, but less than the amount proposed by Envestra.

The AER proposed a step change in opex of $1.1 million ($2011).[734] The main difference between the AER's forecast and Envestra's forecast was the AER's draft decision not to approve the CTM charge for the proposed Dandenong station.

The AER's forecast also differed to Envestra's forecast because it used a different forecast for the Whittlesea, Healesville and Shepparton upgrades. The AER forecast its step change for these upgrades at fifteen percent of the forecast capital costs. The AER adopted this methodology because recent CTM charges incurred by Envestra were approximately 15 per cent of the estimated capital cost of CTM station upgrades. The AER's forecast adopted Envestra's forecast CTM charges for the new CTM stations at Pakenham, Wollert and Clyde North stations.

In its revised proposal, Envestra did not adopt the AER's forecast of CTM charges either for new stations or upgrades. Envestra did adopt the AER's approach to forecasting costs for CTM upgrades, that is by basing this on 15 per cent of the estimated capital costs but it applied this approach to new CTM stations also. It also proposed higher forecasts for all upgrades and new stations based on recent quotes provided by APA GasNet as to the costs that it expects to incur for the new CTM stations and upgrades. Envestra also resubmitted its proposal for a CTM charge increase for the Longwarry CTM station upgrade and submitted that a new upgrade is required at Mernda. It accepted the AER’s draft decision not to approve the new CTM installation at Dandenong. Based on the above, Envestra submitted that an increase in opex of $3.8 million ($2011) is required. [735]

Based on information provided by Envestra for the final decision, the AER accepts that the two CTM upgrades for Mernda and Longwarry, not approved in the AER's draft decision, are prudent and efficient. The AER considers that due to forecast customer growth, Envestra will need to upgrade the existing meter facilities at Mernda and Longwarry in the 2013–17 access arrangement period to service the likely increase in gas consumption.

However, the AER does not accept Envestra's forecast of the likely increase in CTM charges as a result of forecast upgrades and new installations.

Envestra's proposed step change in CTM charges is significantly higher than its initial proposal (see below).

Figure 7.1 Proposed CTM charge increases, comparison of initial proposal to revised proposal

	Comparison to initial proposal
Clyde North	+308%

[733] APA GasNet, *2011 Metering Strategy Plan*, 20 January 2010.

[734] AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, p. 183.

[735] Envestra, *Victorian revised access arrangement information - Business Case* V26A, November 2012 (Confidential attachment).

Healesville	+88%
Longwarry	+88%
Pakenham	+308%
Shepparton	+7%
Whittlesea	+32%
Wollert	+199%

Source: AER analysis

Envestra has not provided sufficient evidence to justify the costs underlying its revised forecast. Without this justification, the AER considers the proposed cost of the upgrades and new installations do not reflect prudent and efficient costs. As such, the AER does not consider Envestra's forecast CTM charge increases reflect the opex criteria or the criteria for forecasts and estimates.[736]

The AER requested that Envestra provide further information about the drivers influencing the cost increases. The AER sent three information requests seeking such information.[737] In particular the AER sought from Envestra:

- information APA GasNet provided to justify its quotes[738]
- how APA GasNet's forecasts were formed, and why they differ to previous APA GasNet quotes and Envestra estimates[739]
- more detailed information on the historical capital costs and charges associated with construction and upgrading CTM stations. [740]

In its correspondence with Envestra the AER noted that APA GasNet's costs significantly exceeded past quotes for the capital costs of similar facilities.[741]

In response, Envestra submitted that:

1. Based on recent capital costs of installing Traralgon CTM station, it considered APA GasNet's quotes to be reasonable.[742]
2. Historical capital costs for CTM stations are no longer relevant due to real cost increases.[743]
3. It considered it would not be reasonable or efficient to incur considerable expense in questioning APA GasNet's quotes at this stage, because they are budget estimates only, and detailed costs will be reviewed as the project advances.[744] Envestra considered its approach to obtaining initial

736 NGR, r. 91(1), r. 74(2).
737 AER, *Information request FD4a*, 28 November 2012; AER, *Information request FD10a*, 21 December 2012; AER, *Information request FD10b*, 30 January 2013.
738 AER, *Information request FD4a*, 28 November 2012;
739 AER, *Information request FD10a*, 21 December 2012.
740 AER, *Information request FD10b*, 30 January 2012.
741 AER, *Information request FD10a*, 21 December 2012.
742 Envestra, *Response to information request FD4a*, 12 December 2012, p. 3.
743 Envestra, *Response to information request FD4a*, 12 December 2012, p. 3.
744 Envestra, *Response to information request FD10a*, 24 January 2013, p. 5.

quotes and then obtaining final quotes at a later stage just before implementation is consistent with good industry practice when planning capital works.[745]

4. Because the construction of CTMs is core business for APA GasNet, Envestra considered that APA GasNet's quotes provide the best forecast of CTM capital costs.[746]

5. Previous AER regulatory reviews would confirm that GasNet is a prudent and efficient service provider. Envestra also believed that such costs would also benchmark well against other similar projects approved by the AER in previous review processes and against any further engineering analysis that the AER might consider appropriate.

The AER has addressed each of these points below:

1. The Traralgon CTM station is significantly different to the new stations proposed by Envestra. The AER notes that the transmission pipeline service for the Traralgon station is thirteen times longer than those estimated for the new Pakenham, Wollert and Clyde North stations.[747] As a result, the AER considers the capital cost for the new Traralgon station is not comparable to the forecast capital cost for Pakenham, Wollert and Clyde North stations.

2. The AER considers that recent real cost increases do not explain such a large increase in APA GasNet's underlying costs. Meter installations are composed of labour costs and materials costs. Based on the wage price index, labour costs associated with the gas industry have only increased by 4.2 per cent in real terms since 2007.[748] The AER notes that the real cost of some materials associated with the gas pipeline industry fell in real terms over the period 2009–2012.[749] The AER also notes that APA GasNet did not propose materials real cost escalation for the 2013–17 access arrangement period. If APA GasNet considered that materials were rising faster than the consumer price index, then it is reasonable to assume APA GasNet would have proposed materials real cost escalation in its recent access arrangement proposal. The increase, or lack thereof, in real labour and materials costs for transmission pipelines indicate that real cost increases do not account in APA GasNet's forecast increase in the costs to install or upgrade a meter station.

3. The AER recognises that quotes are refined closer to the date the project is implemented, and, and as a result, the actual cost of projects often differ from the forecast cost. However, this is true of any forecast. The AER must be satisfied that the forecast was arrived at on a reasonable basis and is the best estimate in the circumstance. The AER considers that a prudent service provider would question such large increase in the price that it receives from a supplier, even if were an initial quote. Accepting such a large increase in costs without question, regardless of the competencies of the supplier, is not a forecast arrived at on a reasonable basis, is not the best estimate possible in the circumstances, and would not be consistent with good industry practice.

4. For similar reasons as set out in point 3 above, the AER considers that a prudent service provider would not accept such a large increase in price on the basis that the nature of APA GasNet's core business is construction.

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745 Envestra, *Response to information request FD10a*, 24 January 2013, p.4- 5.
746 Envestra, *Response to information request FD10b*, 24 January 2013, p. 2.
747 Envestra, *Response to information request FD10c*, 14 February 2013.
748 ABS, *Wage Price Index:* Catalogue number 6345.0, September 2012; ABS, *Consumer Price Index:* Catalogue number 6401.0, September 2012;
749 AER, Draft decision, *SPI Networks (Gas) Pty Ltd 2013 – 17: Part 3*, September 2012, p. 83.

5. APA GasNet's CTM facilities are not regulated by the AER. It is Envestra's CTM charges which the AER is regulating. Therefore the most relevant information that the AER has access to about CTM capital costs is the information that Envestra has provided to the AER about the capital costs of installing and upgrading CTM facilities. Given the quotes APA GasNet provided to Envestra are significantly above the historical costs of installing or upgrading CTMs, the AER considers APA GasNet's forecasts do not benchmark well compared to the historical costs of providing similar services.

Given the above, the AER considers that the forecasts of CTM charges submitted by Envestra do not meet the criteria for forecasts and estimates. The AER instead proposes a step change in opex of $1.5 million for increased CTM charges.

In its final decision, the AER agrees with Envestra's revised proposal to the extent that it accepts that CTM charges should be 15 per cent of the estimated capital costs for both new CTM stations and upgrades. The AER considers that it is preferable to have a consistent approach for estimating expenditure for CTM charges associated with new CTM stations and upgrades as essentially it is the same type of expenditure. However, for the above reasons, the AER does not accept the estimated capital costs for the new CTM stations and upgrades as estimated by APA GasNet and provided to Envestra. Therefore the AER has used a revised forecast of the capital costs of the new CTM stations and upgraded CTM stations.

For new CTM stations the AER has based its forecast on the capital cost of the Beveridge CTM station because the specifications of the Beveridge station (transmission pipeline service, meter skid, and hot tapping) are similar to those forecast to be required for the new sites.[750] The AER notes that Envestra used the CTM charges it paid for the Beveridge station as the basis for its opex forecast in its initial proposal for its proposed Clyde Park and Pakenham CTM charges.

The AER escalated the costs of the Beveridge station to $2011 to account for both labour and materials cost escalation. The weights for labour and materials used in the escalation are based on the proportions of labour and materials used in the construction of the Beveridge CTM station. The AER also included the cost of land in its capital cost forecast based on information provided by Envestra.[751] The AER's forecast CTM charge associated with new meter stations is fifteen per cent of the estimated capital cost of the new installations.

The AER has also estimated its forecast of costs for CTM upgrades based on 15 per cent of the capital cost of historical upgrades. The AER acknowledges that there is some variability in the capital costs associated with upgrading CTMs. As a result, the AER has forecast the capital costs for CTM upgrades for both CMF 200 and CMF 300 meters, based on the average cost of past upgrades, using information provided by Envestra.[752] As above, costs were escalated to $2011 for changes in both materials and labour costs, using weights derived from the same data. The approach the AER has adopted for forecasting the cost of CTM upgrades is consistent with the approach the AER adopted in the draft decision, in that it is based on fifteen per cent on the estimated capital cost of the upgrades. However, in this final decision, the AER has not used the information APA GasNet reported about the capital cost of the meter station upgrades in its 2011 Metering Strategy. The AER has assessed the updated capital costs APA GasNet now expects to incur but, for the reasons set out above, considers that a forecast of Envestra's CTM charges based on such a forecast is not arrived at on a reasonable basis or the best possible estimate in the circumstances.

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750 Envestra, *Response to information request 2*, 17 May 2012.

751 Envestra, *Response to information request FD4a*, 12 December 2012, p. 3;

752 Envestra, *Response to information request FD10b*, 24 January 2013, p. 4. Envestra, *Response to information request 2*, 17 May 2012.

Network development expenditure

The AER's final decision is to:

- approve a step change of $4.21 million ($2011) for Envestra's Victorian network for the incentive payments as the increase in the take-up rate is likely to result in new connections and/or increased gas load (a scope change). The AER is satisfied Envestra's proposal for the Victorian network will require an incremental increase in total opex not recovered elsewhere; and

- not approve a step change of $0.6 million ($2011) for Envestra's Victorian network for the website costs as the proposed step change is not driven by a change in scope or other external driver. Therefore, the AER considers an incremental increase in total opex for website costs would not result in opex that reflects prudent and efficient expenditure, consistent with r. 91 of the NGR.

- approve Envestra's revised proposal not to include a step change for network development expenditure for its Albury network.

Envestra's initial proposal included expenditure of $17.2 million ($2011) for network development in respect of the Victorian network and $0.6 million ($2011) for the Albury network. These forecasts were derived from a 'zero base' and accordingly Envestra excluded 2011 actual network development opex from the base opex.

The AER's draft decision did not accept Envestra's approach to forecasting network development expenditure on the basis that the operation of the efficiency carryover mechanism (ECM) requires that the base year opex be consistent with the opex used to determine any carryover amounts under the ECM. As such, the AER included 2011 actual network development expenditure in the base opex. However, the AER's draft decision did not approve an incremental increase in network development opex above the 2011 base year amount. The AER considered a step change for network development expenditure was not consistent with rr. 74(2) and 91 of the NGR because:

- network development expenditure is discretionary and Envestra had the opportunity to undertake a prudent and efficient level of expenditure in the 2008–12 access arrangement period and was incentivised to do so through the ECM

- the AER did not consider the forecast take-up rate of incentive payments was substantiated, and therefore the forecast did not comply with r. 74(2) of the NGR.[753]

Envestra's revised proposal adopted the AER's approach in the draft decision to include 2011 network development expenditure in base year opex. However, Envestra did not agree with the AER's decision to reject the step change above the 2011 base year amount. As such, Envestra allocated the forecast network development costs between a base amount and a step change amount in its revised proposal.[754] Envestra's proposed step change of $4.81 million ($2011) for the Victorian network includes web-site development costs and an increase in incentive payments that were not incurred in Envestra's 2011 actual network development expenditure.

[753] AER, Draft decision, *Envestra access arrangement proposal for 1 January 2013 – 31 December 2017: Part 2*, September 2012, pp. 188–189

[754] Envestra, *Revised access arrangement proposal Attachment 6.3A: Network Development*, 9 November 2012, p. 1.

Envestra's revised proposal for the Albury network did not propose a major expansion of network development relative to the actual 2011 expenditure. As such, Envestra's revised proposal has not proposed a step change for network development expenditure for the Albury network.[755]

Incentive payments

The AER's draft decision did not approve an incremental increase in total opex for the incentive payments as it was not satisfied the forecast increase in the take-up rate was the best possible forecast and therefore inconsistent with r. 74(2) of the NGR. Envestra's revised proposal included further information supporting the forecast increase in the take-up rate of the incentive payments including additional information on the take-up of incentive payments from the winter 2012 program.[756] The AER considers this further information substantiates Envestra's proposition that the take-up rate of incentive payments will increase over time. Further, the data on outcomes from the winter 2012 program indicates Envestra's forecast take-up rate is reasonable.

The AER notes that this proposed step change does not arise from a legislative change. However, the AER has considered the specific driver of this step change and determined that it is appropriate that Envestra is provided an allowance to cover the increased costs. As noted above, there are a number of reasons why efficient opex in the 2013–17 access arrangement period may differ from actual expenditure in 2011.

The AER considers that Envestra has provided evidence that its incentive programs are increasing in scale as a result of greater uptake. This results in Envestra providing a greater amount of services to its customers through greater network throughput. The AER considers so long as the costs of the incentive programs are less than the benefit provided to Envestra's customers it is efficient to expend money. Envestra provided a cost benefit analysis demonstrating this was the case.[757]

The Victorian Minister for Energy and Resources did not support a step change for the incentive payments. The Minister considered it was not in Envestra's current customers' interests, as they are effectively required to pay for others to connect to the gas network so that benefits can accrue to the connected customers in 15 years time. The Minister also raised concerns around the equity impacts of the program and the length of the payback period.[758]

The AER notes the Victorian Minister for Energy and Resources' concerns with Envestra's incentive program. However, the AER considers Envestra's cost benefit analysis indicates that this program will be consistent with the opex criteria and in the long term interests of consumers.[759] The AER considers it is in the long-term interests of customers to increase utilisation of the pipeline, as this will enable the costs associated with operating the gas network to be spread across a greater volume of gas transported through the network. This results in lower transportation costs per unit of energy for consumers. The AER therefore considers it appropriate to approve a step change for this expenditure.

As outlined in section 7.4.4 the AER typically does not consider an incremental increase above base opex is required to implement a discretionary project. Generally, the AER compensates service providers for the increased opex due to increased customer numbers and gas throughput through network growth escalation or scope changes. Envestra is compensated for increased costs due to

755 Envestra, *Revised access arrangement proposal Attachment 6.3A: Network Development*, 9 November 2012, p. 11.
756 Envestra, *Revised access arrangement proposal Attachment 6.7: Operating Expenditure*, 9 November 2012, p. 8.
757 Envestra, *Access arrangement proposal Attachment 6.3: Network Development Plan*, 30 March 2012, p. 26. (Confidential attachment)
758 Minister for Energy and Resources, *Victorian Gas Access Arrangement Review – Victorian Government Submission*, 14 January 2012, p. 4.
759 NGR, r. 91, NGL s. 23.

network growth through an adjustment to opex for the incremental cost of new customer connections. However, in this case the AER considers the increased costs of the incentive payments is not captured by this network growth adjustment or escalation factors. This is because it is not related to the physical size of the network or purely related to increased network connections. Rather, this is a separate project designed to secure additional network load through the increased take-up of gas hot water heaters and gas heaters. As the increased costs due to the change in scope of this program are not covered elsewhere, the AER considers it appropriate to provide a step change. The AER therefore considers the proposed incremental increase in total opex for incentive payments reflects prudent and efficient expenditure.

Website costs

The AER considers an incremental increase in Envestra's opex for website costs is opex that would not 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.[760]

The AER notes that this proposed step change does not arise from a legislative change. However, the AER has considered the specific driver of this step change and determined that it is not appropriate that Envestra is provided an allowance to cover the increased costs. The AER considers that this differs from the incentive programs as the AER cannot see how it can be characterised as a change in scope of one of Envestra's programs. The service Envestra is delivering will be essentially unchanged, however Envestra seeks additional allowances to undertake this unchanged program.

Further, the proposed step change in opex for website costs is discretionary. As such, Envestra had the opportunity to undertake a prudent and efficient level of website development costs during the 2008–12 access arrangement period. The AER considers that due to this and the operation of the ECM, Envestra's actual network development expenditure in the base year (2011) was prudent and efficient. Therefore, the AER considers an incremental increase in total opex for website costs is not required.

Energy Safe Victoria (ESV) levy

The AER's final decision is to propose an increase in forecast opex for the forecast costs of an increased ESV levy. It addresses a regulatory requirement and represents detailed forecasts provided by the ESV, resulting in the best forecast possible of the ESV levy.

Envestra proposed a step change in opex linked to an Energy Safe Victoria (ESV) levy rise in the 2013–14 financial year. [761]

In its draft decision, the AER decided to address the increase in the ESV levy through Envestra's annual tariff variation mechanism.[762] This was because it was thought at that time that the levy could not be determined before the final decision was made.

Since its initial proposal Envestra has been provided with new information on the proposed levy. Because the increase in the levy now has some quantum, Envestra proposed to treat it as a step change rather than a cost pass through.

760 NGR, r. 91(1)
761 Envestra, *Victoria & Albury revised access arrangement information*, November 2012, p. 21.
762 AER, *Access arrangement draft decision, Envestra Ltd: 2013-17*, September 2012, Attachment 6, p. 266.

The AER agrees that an increase in opex for an ESV levy rise in 2013–14 should be reflected as a step change in Envestra's forecast opex for the 2013–17 access arrangement period. The increase in the levy relates to a change in regulatory requirements, and therefore a prudent service provider would need it.

However the AER considers that Envestra's forecast costs for the change in the ESV levy are not the best forecast or estimate possible in the circumstances.[763] After Envestra lodged its revised proposal the AER obtained more detailed information on how the ESV calculated the levies. Based on this information the AER considers Envestra's forecasts greater than necessary to meet the cost of the levies (Table 7.7). The main difference between the AER and Envestra forecasts is that the AER's forecasts account for the fact that the ESV's levies are collected for financial years rather than calendar years.

Table 7.7 ESV levy cost forecasts ($million, 2011)

	2013	2014	2015	2016	2017	Total
Envestra revised proposal	2.1	2.2	2.3	2.4	2.4	11.4
AER final decision	1.0	2.0	2.1	2.2	2.2	9.5
Difference	–1.1	–0.2	–0.2	–0.2	–0.2	–1.9

Source: ESV and Envestra revised access arrangement information.

The AER considers that the estimates provided by the ESV represent the best forecasts in the circumstances. As a result, in the final determination the AER has used the ESV estimates rather than those provided by Envestra.

In its revised proposal, Envestra also included a factor in its tariff variation formula to account for any differences in the ESV levy that may occur.[764] The AER considers that it is not necessary to include a factor in the tariff variation formula for the ESV levy because the ESV forecasts account for expected increases in the levy.

7.4.6 Network Management Fee and ancillary reference services

The AER's final decision adopts a forecast for the cost of the Network Management Fee (NMF) Envestra will incur in the 2013–17 access arrangement period and the cost of ancillary reference services.

In its draft decision the AER accepted Envestra's approach to forecast these costs using a bottom-up forecasting approach.

The NMF is a contractual payment Envestra makes to the APA Group as part of its outsourcing arrangement Envestra has assumed payments will be equal to 3 per cent of smoothed annual revenue. This is consistent with the payments that will be required under its contract with the APA Group. The NMF is then allocated equally to opex and capex.

The AER proposes a lower forecast of Envestra's smoothed annual revenue requirement (see Part A) than Envestra. Therefore, the AER considers Envestra's NMF forecast is not the best estimate in the

763 NGR, r. 74(2)(b)
764 Envestra, *Victoria & Albury revised access arrangement information*, November 2012, p. 21.

circumstances.[765] The AER has re-forecast the allowance for the NMF based on its final decision on Envestra's smoothed annual revenue requirement.

For ancillary reference services, Envestra adopted the AER's forecast in its revised proposal. The AER's final decision on opex reflects the forecast in Envestra's revised proposal.

7.4.7 Debt raising costs and liquidity costs

The AER outlined its established approach to calculating debt raising costs in its draft decision.[766] Envestra's revised proposal adopted the AER's established approach and incorporated the benchmark debt raising cost allowance (as expressed in basis points per annum) determined by the AER in its draft decision.[767] Envestra provided no additional information on debt raising costs—including no additional information on the method outlined in the Deloitte report, which was submitted with the initial proposal. Therefore, the AER agrees with Envestra's revised proposal regarding the approach to determine Envestra's debt raising cost allowance.

Benchmark debt raising costs

As flagged in the AER's draft decision, the AER has updated the benchmark allowance for Envestra's final RAB and WACC values.[768] The AER's benchmark allowance provides for three standard sized bond issues for Envestra Victoria and one standard sized bond issues for Envestra Albury. The unit costs and the benchmark debt raising cost are shown in Table 7.8 for Envestra Victoria and in Table 7.9 for Envestra Albury.

Table 7.8 AER's final decision on debt raising costs for Envestra Victoria based on a nominal WACC of 7.39 per cent

Value	Explanation	1 issue	2 issues	3 issues
Opening RAB	The AER accepted opening RAB ($m, 2012)			1117.4
Total amount raised	Multiples of median MTN ($250m)	$250m	$500m	$750m
Gross underwriting fee	Median gross underwriting spread, upfront per issue, amortised	6.52	6.52	6.52
Legal and roadshow	$195 000 upfront per issue, amortised	1.13	1.13	1.13
Company credit rating	$55 000 per annum	2.20	1.10	0.73
Issue credit rating	4.5 basis points	0.65	0.65	0.65

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

766 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017 Part 2 attachments*, September 2012.

767 Envestra *(Vic and Albury), Access arrangement proposal, attachment 9.11 - rate of return, section 3*, 30 March 2012. Envestra (Vic), *PTRM* 'input' tab, cell G200. Envestra (Albury), PTRM 'input' tab, cell G199.

768 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017 Part 2 attachments*, September 2012, p.197. The debt raising costs (as expressed in dollar amount) in this final decision differs from that in Envestra's revised proposal because of the updated RAB and WACC inputs.

	upfront per issue, amortised			
Registry Fees (Startup)	$4 000 upfront per issue, amortised	0.02	0.02	0.02
Registry Fees (Ongoing)	$9 000 per issue per annum	0.36	0.36	0.36
Total	**Basis points per annum**	**10.9**	**9.8**	**9.4**

Source: AER analysis

Table 7.9 AER's final decision on debt raising costs for Envestra Albury based on a nominal WACC of 7.39 per cent

Value	Explanation	1 issue	2 issues	3 issues
Opening RAB	The AER accepted opening RAB ($m, 2012)	34.8		
Total amount raised	Multiples of median MTN ($250m)	$250m	$500m	$750m
Gross underwriting fee	Median gross underwriting spread, upfront per issue, amortised	6.25	6.25	6.25
Legal and roadshow	$195 000 upfront per issue, amortised	1.13	1.13	1.13
Company credit rating	$55 000 per annum	2.20	1.10	0.73
Issue credit rating	4.5 basis points upfront per issue, amortised	0.65	0.65	0.65
Registry Fees (Startup)	$4 000 upfront per issue, amortised	0.02	0.02	0.02
Registry Fees (Ongoing)	$9 000 per issue per annum	0.36	0.36	0.36
Total	**Basis points per annum**	**10.9**	**9.8**	**9.4**

Source: AER analysis

Because of the economies of scale from spreading the costs of a company credit rating across multiple issuances, the debt raising cost benchmark for Envestra Victoria is 9.4 bppa of total debt raised and 10.9 bppa of total debt raised for Envestra Albury.

This has resulted in the debt raising costs outlined in Table 7.10 for Envestra Victoria and in Table 7.11 for Envestra Albury.

Table 7.10 Debt raising costs for Envestra Victoria ($million, 2011)

	2013	2014	2015	2016	2017
Debt raising costs	0.60	0.63	0.65	0.67	0.69

Source: AER analysis

Table 7.11 Debt raising costs for Envestra Albury ($million, 2011)

	2013	2014	2015	2016	2017
Debt raising costs	0.02	0.02	0.02	0.02	0.02

Source: AER analysis

Liquidity costs

In its initial proposal, Envestra proposed liquidity costs of $9.3 million (nominal) for Envestra Victoria and $0.09 million (nominal) for Envestra Albury over the 2012–17 access arrangement period.[769] Envestra stated:[770]

> 'Liquidity risk is the risk that a business will have insufficient funds to meet its financial commitments in a timely manner. The two key elements of liquidity risk are short-term cash flow risk and long-term funding risk. The long-term funding risk includes the risk that loans may not be available when the business requires them or that such funds will not be available for the required term or at acceptable cost. All businesses need to manage liquidity risk to ensure that they remain solvent.'

The AER did not provide an allowance for liquidity costs in its draft decision. The AER concluded that it already provides Envestra with an allowance for working capital to meet its short term liabilities and therefore, liquidity costs are not required. Further, if Envestra included its working capital allowance in its liquidity cost calculation, then using Envestra's calculation method, an allowance for liquidity would not be required. This was the case notwithstanding the unrealistic assumptions in Envestra's calculation methodology.[771] The inclusion of both an implicit working capital allowance and explicit liquidity cost allowance would 'double count' the compensation required for liquidity risk. Allowing Envestra to double recover costs would not 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.[772] Also, Envestra has been provided with a reasonable opportunity to recover at least the efficient costs.[773]

Envestra did not repropose liquidity costs in its revised proposal. The AER agrees with Envestra's revised proposal to not include liquidity costs in its access arrangement.

[769] Envestra Vic, Envestra (Albury) *PTRM* 'liquidity costs' tab.
[770] Envestra, *Victoria Access arrangement information*, 30 March 2012, p. 163. Envestra, *Albury Access arrangement information*, 30 March 2012, p. 147.
[771] AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017 Part 2 attachments*, September 2012, p. 198-201.
[772] NGO, s. 23,
[773] NGO, s. 24; AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 201.

7.5 Revisions

7.5.1 Envestra Victoria

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision X.1: Make all necessary amendments to reflect the AER's final decision on the proposed opex allowances for the 2013–17 access arrangement period, as set out in Table 7.1.

7.5.2 Envestra Albury

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision X.1: Make all necessary amendments to reflect the AER's final decision on the proposed opex allowances for the 2013–17 access arrangement period, as set out in Table 7.2.

8 Incentive mechanism

Incentive mechanisms are an important tool to provide service providers continuous incentives to reduce costs and increase efficiency in the provision of pipeline services. Incentive mechanisms provide a financial reward (or penalty) for efficiency gains (or losses) achieved compared to expenditure benchmarks for the access arrangement period. Any rewards (or penalties) for efficiency gains (or losses) are added to the service provider's total revenue and carried forward for five years after the year in which the efficiency gain (or loss) is made. Five years corresponds to the length of the access arrangement period.

This attachment presents the AER’s assessment of Envestra's proposed:

- carryovers from the operation of the incentive mechanism in the 2008–12 access arrangement period, namely the benefit sharing allowance
- incentive mechanism for the 2013–17 access arrangement period.

8.1 Final decision

8.1.1 Carryover from the 2008–12 access arrangement period

Envestra Victoria

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

Envestra Albury

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

8.1.2 Incentive mechanism for the 2013–17 access arrangement period

Envestra Victoria

The AER does not approve the opex incentive mechanism in Envestra Victoria's revised access arrangement proposal. A table of opex benchmarks should be inserted to clarify the values to be used to calculate efficiency gains. This will encourage efficiency in the provision of services by Envestra Victoria[774] and provide more effective incentives in order to promote economic efficiency with respect to those services.[775]

The AER does not approve Envestra Victoria's proposed capex incentive mechanism. This is because it would not encourage efficiency in the provision of services by the service provider contrary to r 98(1). It would provide an incentive to overinvest in the network and would not act as an effective incentive that promoted economic efficiency, contrary to the RPP.[776] For these reasons the AER also considers that it is not consistent with the national gas objective.[777] The AER does not propose to include any alternative capex incentive mechanism.

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[774] NGR, r. 98(1).
[775] NGR, r. 98(3); NGL, s. 24(3).
[776] NGL, s. 24(6); NGL, s. 24(3); r. 98(3).
[777] NGR, r.100(a); NGL, s. 23.

Envestra Albury

The AER does not approve the opex incentive mechanism in Envestra Albury's revised access arrangement proposal. A table of opex benchmarks should be inserted to clarify the values to be used to calculate efficiency gains. This will encourage efficiency in the provision of services by Envestra Albury[778] and provide more effective incentives in order to promote economic efficiency with respect to those services.[779]

The AER does not approve Envestra Albury's proposed capex incentive mechanism. This is because it would not encourage efficiency in the provision of services by the service provider contrary to r 98(1). It would provide an incentive to overinvest in the network and would not act as an effective incentive that promoted economic efficiency, contrary to the RPP.[780] For these reasons the AER also considers that it is not consistent with the national gas objective.[781] The AER does not propose to include any alternative capex incentive mechanism.

8.2 Revised proposal

8.2.1 Carryovers accrued in the 2008–12 access arrangement period

Envestra Victoria's and Envestra Albury's revised proposals excluded the negative carryover amounts accrued in the 2008–12 access arrangement period from the calculation of total revenue for the 2013–17 access arrangement period. Envestra submitted that the incentive mechanism in its current access arrangement does not operate to result in revenue decrements. In addition, based on an ESCV appeal panel decision, it considered section 8.44 of the Gas Code makes no statutory provision for such decrements.[782]

8.2.2 Proposed incentive mechanism for the 2013–17 access arrangement period

Envestra adopted the revisions to the opex incentive mechanism in the AER's draft decision in its revised access arrangements for both Envestra Victoria and Envestra Albury.[783]

However, despite adopting the revisions, Envestra submitted that a separate/additional incentive mechanism is not required given the existing efficiency incentives included in its agreement with APA. It submitted that these incentives provide the main drivers of continuous improvement in the company.[784]

Envestra proposed the capital expenditure efficiency mechanism that applied in the 2008–12 access arrangement period be applied again in the 2013–17 period.[785]

8.3 Assessment approach

The AER's assessment approach for incentive mechanisms is set out in its draft decision. See attachment 7 of the draft decision for a detailed explanation of the assessment approach.[786]

778 NGR, r. 98(1).
779 NGR, r. 98(3); NGL, s. 24(3).
780 NGL, s. 24(6); NGL, s. 24(3); r. 98(3).
781 NGR, r.100(a); NGL, s. 23.
782 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, pp. 4–8.
783 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, p. 9.
784 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, p. 8.
785 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, p. 9.
786 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 2, September 2012, pp. 205–206.

The Victorian Minister for Energy and Resources' written submission on Envestra's revised access arrangement commented on the revised proposal for incentive mechanisms. The AER took this submission into account in forming its final decision on Envestra's proposed incentive mechanisms.

8.4 Reasons for decision

8.4.1 Carryover from the 2008–12 access arrangement period

The AER approves the proposed zero carryover from the 2008-12 regulatory period because there is no provision under the Gas Code that allows for the application of negative carryovers.

Under clause 5(1)(a) of the NGR transitional provisions, the AER must take into account the operation of an incentive mechanism approved 'under section 8.44 of the Gas Code and ensure, in particular, that revenue calculations made for the next access arrangement period properly reflect increments or decrements resulting from the operation of the incentive mechanism'.

The AER therefore applied the decrements accrued by Envestra Victoria and Envestra Albury in the 2008–12 access arrangement period in its draft decision.[787] However, Envestra objected to this approach in its revised proposals on the basis that an ESCV appeal panel decision in 2008 had broader application than recognised by the AER in its draft decisions.[788] Multinet also raised the same objection in its revised proposal.[789]

In that appeal, Envestra Albury objected to the application of a negative carryover it accrued during its 2003–2008 access arrangement period.[790] Its access arrangement was approved by the ESCV under the Gas Code. The Essential Services Commission Appeal Panel upheld the appeal and varied the carryover to zero on the basis that there is 'no power or discretion' provided by the Gas Code, under section 8.44 or other of the Gas Code provisions, which enabled the ESCV to make provision for negative carryovers in Envestra Albury’s access arrangement.[791] Section 8.44 of the Gas Code provides:

> The Reference Tariff Policy should, wherever the Relevant Regulator considers appropriate, contain a mechanism (an Incentive Mechanism) that permits the Service Provider to retain all, or any share of, any returns to the Service Provider from the sale of the Reference Service:
>
> (a) during an Access Arrangement Period, that exceed the level of returns expected for that Access Arrangement Period; or
>
> (b) during a period (commencing at the start of an Access Arrangement and including two or more Access Arrangement Periods) approved by the Relevant Regulator, that exceed the level of returns expected for that period, particularly where the Relevant Regulator is of the view that the additional returns are attributable (at least in part), to the efforts of the Service Provider. Such additional returns may result, amongst other things, from lower Non Capital Costs or greater sales of Services than forecast.

787 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, Part 2, September 2012, pp. 203–216.
788 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, pp. 4–7.
789 Multinet, *Revised access arrangement information*, 9 November 2012, pp. 175–181.
790 Essential Services Commission Appeal Panel, Application by the Albury Gas Company (Envestra Albury), E2/2008, 11 November 2008.
791 Essential Services Commission Appeal Panel, Application by the Albury Gas Company (Envestra Albury), E2/2008, 11 November 2008, paragraph 177.

The ESCV Appeal Panel held that section 8.44 was limited to sharing extra returns resulting from reduced costs but did not extend to imposing penalties for efficiency losses.[792]

On review, the AER accepts the position submitted by Envestra as to the broader application of the ESCV Appeal Panel Decision specifically its findings that 'only positive incentive mechanisms were contemplated and intended by the Code'.[793]

For this reason, the AER considers Envestra Victoria's and Envestra Albury's carryovers should be revised to zero.

8.4.2 Incentive mechanism to apply in the 2013–17 access arrangement period

Opex incentive mechanism

The AER does not approve the opex incentive mechanism in Envestra's revised proposal.

Revision 7.3 of the AER's draft decision required Envestra to include a table in its access arrangement specifying the forecast opex amounts to be used in calculating efficiency gains (losses). Clause 11 of the incentive mechanism required by the AER's draft decision stated the opex forecasts in this table be used as the basis for measuring efficiencies under the scheme. The purpose of this revision was to remove any potential uncertainty as to which values should be used when efficiency gains (losses) are calculated at the end of the access arrangement period.

Envestra did not include clause 11 or the table in its revised proposal.

The AER considers clarifying the values to be used to calculate efficiency gains will encourage efficiency in the provision of services by Envestra[794] and will provide more effective incentives in order to promote economic efficiency with respect to those services.[795]

Capex incentive mechanism

The AER does not accept Envestra's revised proposal to retain the current capex incentive mechanism for the 2013–17 access arrangement period. As noted in its draft decision, the AER considers the current capex incentive scheme provides inappropriate incentives to inefficiently defer capex that is not volume adjusted.[796] Further, the lack of an adequate service standard incentive as a counter balance leads to the potential for under-investment and over-utilisation of the pipeline. This is inconsistent with an incentive mechanism that encourages efficiency in the provision of services by the service provider,[797] and the RPP.[798]

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792 Essential Services Commission Appeal Panel, Application by the Albury Gas Company (Envestra Albury), E2/2008, 11 November 2008, paragraph 175.

793 Essential Services Commission Appeal Panel, Application by the Albury Gas Company (Envestra Albury), E2/2008, 11 November 2008, paragraphs 173–175.

794 NGR, r. 98(1).

795 NGR, r. 98(3); NGL, s. 24(3).

796 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, pp. 211–212.

797 NGR, r. 98(1).

798 NGR, r. 98(3); NGL, s. 24.

Deferral of capex

The AER noted in its draft decision that cumulative efficiency carryover schemes applied to capex can deliver incentives to defer capex to a later access arrangement period even when it is not efficient to do so.[799] These comments related only to those schemes that are not volume adjusted.

Envestra did not address this issue in its revised proposal.

External reviews of energy network regulation

Envestra considered the AER's draft decision was inconsistent with the findings of the Productivity Commission in its review of electricity network regulatory frameworks. In its draft report the Productivity Commission recommended:[800]

> The Australian Energy Regulator should develop an efficiency benefit sharing scheme to apply to capital expenditure that provides consistent incentives to reduce capital expenditure, both over time and when compared with operating expenditure.

The AER agrees a consistent incentive to reduce capex expenditure is preferable to declining incentives. However, the capex incentive mechanism proposed by Envestra does not provide consistent incentives to reduce capex. While it does provide a constant incentive to reduce capex unit rates, it does not provide a constant incentive to reduce associated volumes. Consequently the capex incentive mechanism proposed does not provide a constant incentive to reduce capex.

Also, the capex incentive mechanism proposed does not provide balanced incentives between the different capex categories. That is, Envestra would have an incentive to shift capex from unadjusted categories to volume-adjusted categories. Envestra would thereby benefit from an efficiency gain achieved for unadjusted capex while avoiding any equivalent penalty in volume-adjusted capex (as a result of the benchmark adjustment mechanism). In this way it would have an incentive to overinvest up to the value of the carryover payment.[801] Therefore, the AER considers the proposed mechanism does not provide effective incentives in order to promote economic efficiency.[802]

Envestra also noted the AEMC, in its Draft Decision on proposed changes to the National Electricity Rules, proposed the scope for the introduction of capital expenditure efficiency schemes be broadened.[803] However, the conclusions from the AEMC's review of the economic regulation of electricity network service providers are not directly applicable to gas networks. The gas framework has stronger inherent capex incentives than the electricity framework at the time of the review, especially given the NGR allow for a review of the efficiency of a service providers' past capex. Further, the service standard incentives under the gas regime are less prescriptive than under the electricity regime.[804] Applying additional capex incentives through the operation of the incentive mechanism may result in inappropriate incentives for the service provider to inefficiently reduce capex at the expense of maintaining or improving service standards.

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799 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 211.

800 Productivity Commission, Electricity network regulatory frameworks, Draft report, Volume 1, October 2012, p. 195.

801 NGR, r. 98(1) and (3); NGL, s. 24(6).

802 NGR, r. 98(1) and (3); NGL, s. 24(3).

803 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, p. 8.

804 In the electricity framework there are a number of service standard incentive schemes which are not in the gas framework: service targe performance incentive scheme (STPIS), guaranteed service levels (GSL), demand management and embedded generation connection incentive scheme.

The Victorian Minister for Energy and Resources noted the concerns raised by AER with the incentive arrangements that applied to capex previously. Given these concerns, the Minister considered a capex incentive mechanism should not be included in an access arrangement until the completion of the AER's review of expenditure incentives has been completed and guidelines released.[805] This work will be completed by the end of 2013. The AER notes that its assessment is based on the current NGR and the information before it. The forthcoming review has not been a factor in its consideration of whether to apply a capex incentive mechanism or not in this final decision.

Service standards

The AER considers the proposed capex incentive scheme may provide incentives to inefficiently reduce capex at the expense of maintaining or improving service levels in the absence of any service standard incentive mechanism. Envestra, however, did not agree. It stated it had maintained high levels of service over the past 10 years despite a capital incentive existing in the efficiency carry over mechanism.

It stated that gas, unlike electricity, was a fuel of choice for customers. If it were to provide poor service, customers could shift their energy requirements away from gas to electricity. The potential loss of customers and demand motivates it to provide a safe and reliable service.[806]

However, the AER considers the proposed capex incentive scheme may provide incentives to inefficiently reduce capex at the expense of maintaining or improving service levels. While there is no evidence of a significant decline in service standards over the past two access arrangement periods, the impacts of reduced capex would likely take a number of years to be seen in service levels.

Conclusion

For the above reasons, the AER does not approve Envestra's proposal to include an incentive mechanism applying to capex in the 2013–17 access arrangement period. The AER considers such an incentive scheme would not encourage efficiency in the provision of services as required under r 98(1) of the NGR, nor is it consistent with the RPP and the NGO.[807]

8.5 Revisions

8.5.1 Envestra Victoria

The AER proposes the following revisions to make the access arrangement acceptable:

Revision X.1:	insertion of clause 11.
Revision X.2:	insertion of Table 8.1.
Revision X.3:	deletion of clauses 13 to 17 of Envestra Victoria's access arrangement.

11. For the avoidance of doubt, the forecast expenditure amounts that are used as the basis for measuring efficiencies are equal to the forecast operating cost for that year as shown in Table 8.1, with the following exception:

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805 Hon. Michael Obrian MP, Minister for Energy and Resources, Victorian gas access arrangement review—Victorian Government submission, 14 January 2013, p. 5.

806 Envestra, *Revised access arrangement information*, Attachment 11-1, 9 November 2012, p. 9.

807 NGR, r. 98(3); NGL, s. 24(3); NGL, s. 24(6); NGL, s. 23.

a. the carryover of cost-related efficiency gains will be calculated in a manner that takes account of any change in the scale of the activities which form the basis of the determination of the original benchmarks. The opex benchmarks will be adjusted consistent with the way in which the benchmark was determined. That is, any adjustment will be made according to the following formula:

Adjustment = (forecast number of connections – actual number of connections) × approved opex per connection

Table 8.1 Forecast operating expenditure for incentive mechanism purposes ($'million, 2012)

	2011	2012	2013	2014	2015	2016
Controllable opex	53.98	54.96	58.04	59.80	61.01	61.90

Note: Excludes network management fee.

8.5.2 Envestra Albury

The AER proposes the following revisions to make the access arrangement acceptable:

Revision X.1: insertion of clause 11.

Revision X.2: insertion of Table 8.2.

Revision X.3: deletion of clauses 13 to 17 of Envestra Victoria's access arrangement.

11. For the avoidance of doubt, the forecast expenditure amounts that are used as the basis for measuring efficiencies are equal to the forecast operating cost for that year as shown in Table 8.1, with the following exception:

a. the carryover of cost-related efficiency gains will be calculated in a manner that takes account of any change in the scale of the activities which form the basis of the determination of the original benchmarks. The opex benchmarks will be adjusted consistent with the way in which the benchmark was determined. That is, any adjustment will be made according to the following formula:

Adjustment = (forecast number of connections – actual number of connections) × approved opex per connection

Table 8.2 Forecast operating expenditure for incentive mechanism purposes ($'million, 2012)

	2011	2012	2013	2014	2015	2016
Controllable opex	1.93	1.97	2.01	2.02	2.05	2.07

Note: Excludes network management fee.

9 Corporate income tax

When determining the total revenue for Envestra's Victorian and Albury distribution businesses, the AER must estimate Envestra's cost of corporate income tax.[808] Envestra has adopted the post-tax framework to derive its revenue requirement for the 2013–17 access arrangement period.[809] Under the post-tax framework, a separate corporate income tax allowance is calculated as part of the building blocks assessment.

9.1 Final decision

The AER does not approve Envestra's revised proposed forecast corporate income tax allowances for the 2013–17 access arrangement period of:

- $33.1 million[810] ($nominal) for Envestra Victoria
- $1.9 million ($nominal) for Envestra Albury.

This is because the AER's adjustments to other building block components have had a consequential effect on the forecast corporate income tax allowance. These are discussed in other attachments and include:

- forecast capex (attachment 4)
- forecast opex (attachment 7).

These adjustments result in an estimated cost of corporate income tax allowance of:

- $26.4 million ($nominal) for Envestra Victoria as shown in Table 6.1. This is a reduction of $6.7 million ($nominal) or 20.3 per cent of the revised proposed corporate income tax allowance for Envestra Victoria
- $1.6 million ($nominal) for Envestra Albury as shown in Table 6.2. This is a reduction of $0.3 million ($nominal) or 15.1 per cent of the revised proposed corporate income tax allowance for Envestra Albury.

Based on the approach to modelling the cash flows in the post-tax revenue model (PTRM), the AER has derived effective tax rates of 22.5 per cent and 33.0 per cent for Envestra Victoria and Envestra Albury respectively.

The AER approves Envestra's revised proposed opening tax asset bases as at 1 January 2013 of:

- $382.7 million ($nominal) for Envestra Victoria
- $7.8 million ($nominal) for Envestra Albury.

Envestra's revised proposals adopted all of the AER's decision adjustments to its opening tax asset bases.[811]

808 NGR, r. 76(c).
809 Envestra, *Revised proposal PTRM*, November 2012.
810 All dollar amounts are in nominal dollar terms in this attachment because corporate income tax is an output of the post-tax revenue model (PTRM). The output of the PTRM such as the tax allowance and regulatory depreciation are expressed in nominal dollar terms, whereas the inputs of the PTRM such as forecast opex and capex are expressed in real dollar terms.

The AER accepts Envestra's revised proposed tax depreciation approaches to group 7 tax assets and standard tax asset lives for group 7 tax assets. The group 7 tax assets relate to forecast capex for the 2013–17 access arrangement period. In its draft decision, the AER accepted most of Envestra's proposed tax depreciation approaches and standard tax asset lives for group 7 tax assets (except for the 'Land & buildings' asset class).[812] Due to land being a non-depreciating asset, the AER split the 'Land & buildings' asset class into separate asset classes. Moreover, the AER assigned a standard tax asset life of 40 years to the 'Buildings' asset class and did not assign a standard tax asset life to the 'Land' asset class. Envestra's revised proposals adopted all of the AER's draft decision adjustments.

The AER accepts Envestra's revised proposed standard tax asset life of 15 years for the 'Meters domestic' asset class, which is depreciated using the straight-line method.[813] The AER considers the proposed standard tax asset life is consistent with Tax Ruling 2012/2.[814] Since the same standard tax asset life applies, the AER also accepts Envestra's revised proposal to combine the 'Meters domestic' and 'Meters industrial & commercial' asset classes into a single asset class of 'Meters' for the 2013–17 access arrangement period. This allows the 'Meters' asset class for tax purposes to align with its equivalent 'Meters' asset class in the capital base for regulatory depreciation purposes.

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

	2013	2014	2015	2016	2017	Total
Tax payable	3.2	7.6	6.7	8.2	9.4	35.2
Less: value of imputation credits	0.8	1.9	1.7	2.0	2.4	8.8
Net corporate income tax allowance	2.4	5.7	5.1	6.1	7.1	26.4

Source: AER analysis.

Table 9.2 AER's final decision on corporate income tax allowance for Envestra Albury ($million, nominal)

	2013	2014	2015	2016	2017	Total
Tax payable	0.3	0.4	0.5	0.5	0.5	2.2
Less: value of imputation credits	0.1	0.1	0.1	0.1	0.1	0.5
Net corporate income tax allowance	0.2	0.3	0.3	0.4	0.4	1.6

Source: AER analysis.

9.2 Revised proposal

In its revised proposal, Envestra proposed total corporate income tax allowances for the 2013–17 access arrangement period of:

- $33.1 million ($nominal) for Envestra Victoria as set out in Table 9.3

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811 Envestra Victoria, *Revised proposal PTRM*, November 2012; Envestra Albury, *Revised proposal PTRM*, November 2012.
812 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 226-228.
813 Envestra Victoria, *Revised proposal PTRM*, November 2012.
814 Australian Taxation Office, *Tax Ruling 2012/2- Income tax: effective life of depreciating assets*, 1 July 2012.

- $1.9 million ($nominal) for Envestra Albury as set out in Table 9.4.

In its draft decision, the AER accepted Envestra's approach to using a combination of the Essential Services Commission's (ESC) tax asset base roll forward model and the AER's PTRM to calculate the corporate income tax allowances for the 2013–17 access arrangement period.[815] In estimating its revised proposed corporate income tax allowances, Envestra used:[816]

- an opening tax asset base of $382.7 million ($nominal) as at 1 January 2013 for its Victorian distribution business
- an opening tax asset base of $7.8 million ($nominal) as at 1 January 2013 for its Albury distribution business
- an expected statutory income tax rate of 30 per cent per year
- a value for the assumed utilisation of imputation credits (gamma) of 0.25
- the standard tax asset lives and tax depreciation approaches set out in the AER's draft decision.

Table 9.3 Envestra Victoria's revised proposed corporate income tax allowance ($million, nominal)

	2013	2014	2015	2016	2017	Total
Tax payable	5.1	6.6	9.9	10.6	12.0	44.2
Less: value of imputation credits	1.3	1.6	2.5	2.6	3.0	11.0
Net corporate income tax allowance	3.8	4.9	7.5	7.9	9.0	33.1

Source: Envestra Victoria, *Revised proposal PTRM*, November 2012.
Note: Total may not add up due to rounding.

Table 9.4 Envestra Albury's revised proposed corporate income tax allowance ($million, nominal)

	2013	2014	2015	2016	2017	Total
Tax payable	0.4	0.5	0.5	0.6	0.6	2.6
Less: value of imputation credits	0.1	0.1	0.1	0.1	0.2	0.6
Net corporate income tax allowance	0.3	0.3	0.4	0.4	0.5	1.9

Source: Envestra Albury, *Revised proposal PTRM*, November 2012.
Note: Total may not add up due to rounding.

815 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, pp. 221-222.

816 Envestra Victoria, *Revised proposal PTRM*, November 2012; Envestra Albury, *Revised proposal PTRM*, November 2012.

9.3 Assessment approach

The AER's assessment approach for the corporate income tax allowance is set out in its draft decision. See section 8.3, attachment 8 of the draft decision for a detailed explanation of the assessment approach.

There were no submissions that commented on Envestra's corporate income tax allowance.

9.4 Reasons for decision

The AER’s final decision on Envestra's forecast corporate income tax allowances for the 2013–17 access arrangement period is:

- $26.4 million ($nominal) for Envestra Victoria. This is a reduction of 6.7 million ($nominal) or 20.3 per cent of the revised proposed allowance for Envestra Victoria
- $1.6 million ($nominal) for Envestra Albury. This is a reduction of 0.3 million ($nominal) or 15.1 per cent of the revised proposed allowance for Envestra Albury.

The AER approves Envestra's revised proposed opening tax asset bases for its Victorian and Albury distribution businesses as at 1 January 2013. The AER also accepts Envestra's revised proposed tax depreciation approaches to groups 1–7 tax assets and the standard tax asset lives for group 7 tax assets.[817] In addition, the AER accepts Envestra's revised proposal to apply a standard tax asset life of 15 years to the 'Meters domestic' asset class, and consequently to combine the 'Meters domestic' and 'Meters industrial & commercial' asset classes into a single asset class of 'Meters'.

In this final decision, the AER has adjusted other building block components that impact on forecast revenues. These adjustments will consequently affect the forecast corporate income tax allowances.

9.4.1 Opening tax asset base as at 1 January 2013

The AER approves Envestra's revised proposed opening tax asset bases as at 1 January 2013 of:

- $382.7 million ($nominal) for Envestra Victoria
- $7.8 million ($nominal) for Envestra Albury.

In its draft decision, the AER accepted Envestra's proposed method for establishing the opening tax asset base as at 1 January 2013.[818] However, the AER's draft decision made a number of adjustments to the opening tax asset bases, including proposed tax additions for 2007–12, and corrected some minor errors. Envestra's revised proposals accepted all of these draft decision adjustments.[819]

The AER’s final decision on Envestra's tax asset base roll forward for its Victorian and Albury distribution businesses over the 2008–12 access arrangement period is set out in Table 9.5 and Table 9.6.

[817] Group 7 tax assets relate to forecast capex for the 2013–17 access arrangement period. Groups 1–6 relate to capex from previous periods.
[818] AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, pp. 221-225.
[819] Envestra Victoria, *Revised proposal PTRM*, November 2012; Envestra Albury, *Revised proposal PTRM*, November 2012.

Table 9.5 AER's final decision on Envestra Victoria's tax asset base roll forward for the 2008–12 access arrangement period ($million, nominal)

	2008	2009	2010	2011	2012
Opening tax asset base	245.7	263.9	274.1	294.5	331.5
Tax additions	50.8	43.6	55.1	74.5	95.8
Less: tax depreciation	32.6	33.4	34.6	37.6	44.6
Closing tax asset base	263.9	274.1	294.5	331.5	382.7

Source: AER analysis.

Table 9.6 AER's final decision on Envestra Albury's tax asset base roll forward for the 2008–12 access arrangement period ($million, nominal)

	2008	2009	2010	2011	2012
Opening tax asset base	7.4	7.7	7.8	8.0	8.0
Tax additions	1.3	1.2	1.2	1.0	0.8
Less: tax depreciation	1.1	1.1	1.1	1.0	1.0
Closing tax asset base	7.7	7.8	8.0	8.0	7.8

Source: AER analysis.

9.4.2 Tax depreciation approaches

The AER accepts Envestra's revised proposed tax depreciation approaches to groups 1–7 tax assets. These revised proposed tax depreciation approaches reflect the revisions proposed by the AER in its draft decision.[820]

In the draft decision, the AER accepted Envestra's proposed tax depreciation approaches to groups 1–6 tax assets.[821] These approaches are consistent with the ESC's decision for the 2008–12 access arrangement period. For group 7 tax assets for the 2013–17 access arrangement period, Envestra proposed to change the tax depreciation approaches from the declining balance method to a straight-line method. The AER accepted the proposed tax depreciation approaches (except for the proposed 'Land & buildings' asset class). This was because the taxation law allows both the declining balance method and the straight-line method to be used to depreciate new tax additions (capex) for tax purposes.[822] Due to land being a non-depreciating asset, the AER split the 'Land & buildings' asset class into separate asset classes.

820 Envestra, *Revised access arrangement information*, December 2013, Attachment 10.2, p. 1.
821 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 226.
822 ITAA 1997, s. 40-65.

Envestra's revised proposal adopted all of these draft decision adjustments.[823]

The AER's final decision on Envestra's tax depreciation approaches to group 7 tax assets is set out in Table 9.7.

Table 9.7 AER's final decision on Envestra's tax depreciation approaches to group 7 tax assets

Group 7 tax asset class	Tax depreciation approach (2013–17 tax additions)
Mains and services	Straight-line
Meters [a]	Straight-line
Land [b]	n/a
Buildings [c]	Straight-line
Other assets	Straight-line
Repairs	Fully deductible

Source: AER analysis.
(a) The AER's final decision is to combine the 'Meters domestic' and the 'Meters industry & commercial' meters assets into a single tax asset class of 'Meters'.
(b) This asset class is for any actual tax additions that may be incurred for 2013–17.
(c) This asset class is for depreciating the residual value from 'Land & buildings' as at 1 January 2013, as well as any actual tax additions that may be incurred for 2013–17.
n/a Not applicable.

9.4.3 Standard tax asset lives

The AER accepts Envestra's revised proposed standard tax asset lives for group 7 tax assets. In addition, the AER accepts Envestra's revised proposal for a standard tax asset life of 15 years to apply to the 'Meters domestic' asset class, which is the same as that for the 'Meters industrial & commercial' asset class.[824] Consequently, the AER accepts Envestra's revised proposal to combine the 'Meters domestic' and the 'Meters industrial & commercial' asset classes into a single asset class of 'Meters'.[825]

In the draft decision, the AER accepted most of Envestra's proposed standard tax asset lives for group 7 tax assets (except for the 'Land & buildings' asset class).[826] The AER considered that these lives are consistent with Tax Ruling 2012/2[827] and the standard tax asset lives approved by the ESC in earlier access arrangement periods. However, as a result of the AER's draft decision to split the 'Land & buildings' asset class into two separate asset classes to apply from 1 January 2013, the AER assigned a standard tax asset life of 40 years to the 'Buildings' asset class. The AER did not assign a standard tax asset life to the 'Land' asset class.[828] Envestra's revised proposals adopted the AER's draft decision on the separation of the 'Land & buildings' asset class.[829]

823 Envestra, *Revised access arrangement information*, December 2013, Attachment 10.2, p. 1.
824 Envestra, *Response to AER information request FD6a*, 6 December 2012, pp. 1-2.
825 Envestra, *Response to AER information request FD6a*, 6 December 2012, pp. 1-2.
826 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 227.
827 Australian Taxation Office, *Tax Ruling 2012/2- Income tax: effective life of depreciating assets*, 1 July 2012.
828 Because land is a non-depreciating asset, for modelling purposes, the AER used a term of 'n/a' as the standard tax asset life input for the 'Land' asset class to apply from 2013.
829 Envestra, *Revised access arrangement information*, December 2013, Attachment 10.2, p. 1.

Envestra's revised proposed standard tax asset life for the 'Meters domestic' asset class is 15 years.[830] This is the same as that for the 'Meters industrial & commercial' asset class, which the AER accepted in its draft decision.

For this final decision, the AER accepts that it is appropriate to assign a standard tax asset life of 15 years to the 'Meters domestic' asset class. This is because the AER accepted Envestra's use of the straight-line depreciation method for this asset class (discussed in section 9.2.2). Moreover, a standard tax asset life of 15 years for the 'Meters domestic' asset class is consistent with Tax Ruling 2012/2.[831] Further, the proposed increase in the standard tax asset life of this asset class does not have a material impact on the total revenue over the 2013–17 access arrangement period. Since the same standard tax asset life applies, the AER also accepts Envestra's revised proposal to combine the 'Meters domestic' and 'Meters industrial & commercial' asset classes into a single asset class of 'Meters' for tax depreciation purposes over the 2013–17 access arrangement period. This allows the 'Meters' asset class to align, for tax purposes, with its equivalent 'Meters' asset class in the capital base for regulatory depreciation purposes.

The AER's final decision on Envestra's standard tax asset lives for group 7 tax assets is set out in Table 9.8.

Table 9.8 AER's final decision on Envestra's standard tax asset lives for group 7 tax assets (years)

Group 7 tax asset class	Standard tax asset lives
Mains and services	20
Meters [a]	15
Land	n/a
Buildings	40
Other assets	10
Repairs	Fully deductible [b]

Source: AER analysis.
(a) The AER's final decision is to combine the 'Meters domestic' and the 'Meters industry & commercial' meters assets into a single tax asset class of 'Meters'.
(b) 'Repairs' is a deduction under s. 25-10 of the ITAA. For modelling purposes, the tax depreciation rate used to depreciate expenditure associated with repairs is 100 per cent.
n/a Not applicable.

9.4.4 Remaining tax asset lives

Envestra did not propose any remaining tax asset lives in its original proposal as a result of the approach it took to calculating tax depreciation. The AER in its draft decision accepted that remaining tax asset lives were not necessary for calculating Envestra's tax depreciation.[832] The AER noted that Envestra's assets have been depreciated under separate tax groups reflecting the different historical tax depreciation approaches that have been applied.

830 Envestra Victoria, *Revised proposal PTRM*, November 2012; Envestra Albury, *Revised proposal PTRM*, November 2012.
831 Australian Taxation Office, *Tax Ruling 2012/2- Income tax: effective life of depreciating assets*, 1 July 2012, p. 143.
832 AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 228.

9.4.5 Utilisation of imputation credits (gamma)

Consistent with its draft decision, the AER accepts Envestra's proposed value for the utilisation of imputation credits (gamma) for this final decision.

In the draft decision, the AER accepted Envestra's proposals to adopt the value of 0.25 for gamma.[833] As part of the post-tax nominal framework, the value of gamma must be applied to calculate the net corporate income tax allowance.

9.5 Revisions

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision 9.1: Make all necessary amendments to reflect the AER's final decision on the corporate income tax allowances for the 2013–17 access arrangement period, as set out in Table 9.1 and Table 9.2.

[833] AER, *Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017*, September 2012, p. 228.

10 Demand

This attachment sets out the AER's assessment of the demand forecasts proposed by Envestra for the 2013–17 access arrangement period. Demand is an important input into the derivation of Envestra's reference tariffs. It also affects opex and capex linked to network growth.

10.1 Final decision

The AER accepts Envestra's revised demand forecasts because it considers the proposed demand forecasts are arrived at on a reasonable basis and represent the best forecasts possible in the circumstances.[834]

The reasoning for the AER's final decision is set out below.

10.2 Revised proposal

Envestra did not adopt some elements of the AER's draft decision on its proposed demand forecasts.[835] Specifically, Envestra did not accept the draft decision adjustments in respect of the proposed network development program or extension of the network to Merrifield and one of the proposed new towns.[836]

Envestra also proposed an incremental demand forecast related to another extension project which was submitted after the revised proposal.[837]

10.3 Assessment approach

The AER's approach to assessing Envestra's proposed demand forecasts is set out in Attachment 9 of the AER's draft decision.[838]

The AER did not receive submissions on Envestra's revised demand forecasts but has considered a submission made by SP AusNet that is relevant to the choice of EDD inputs for Envestra's Victorian network.

10.4 Reasons for decision

The AER considers that Envestra's revised demand forecasts are arrived at on a reasonable basis and represent the best forecasts possible in the circumstances.[839] This section sets out the reasons for the AER's decision.

10.4.1 Normal Weather – the choice of EDD inputs (Victorian network)

In its access arrangement proposal of March 2012, Envestra proposed to generate the weather–sensitive gas demand forecasts by applying a forecast of EDD for the years 2012 to 2017

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834 NGR, r. 74(2).

835 The AER's draft decision on Envestra's proposed demand forecasts are set out in: AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 –17, 31 December 2017, September 2012, pp.236–241; The elements of the draft decision that Envestra adopted are set out in: Envestra, Revised proposal, Attachment 13.6: Demand forecasts, 9 November 2012, pp.1–2.

836 Envestra, Revised proposal, Attachment 13.6: Demand forecasts, 9 November 2012, p.1 and p.3.

837 Envestra, AER information request - FD3b to Envestra - Final Draft Response for Review, 17 January 2013.

838 AER, Access arrangement draft decision Envestra Ltd, 2013–17, Part 2 Attachments, September 2012, pp.234–235.

839 NGR, r. 74(2).

sourced from a 2012 CSIRO report.[840] This forecast is a brief update of an earlier forecast prepared by the CSIRO in a 2007 report.[841] In its 2012 report, the CSIRO provided four scenarios of EDD trend between 2006 and 2017 from which Envestra selected the average greenhouse warming scenario to generate the proposed weather–sensitive gas demand forecasts.[842]

In its draft decision, the AER did not accept Envestra's choice of EDD inputs to forecast future ‘normal’ weather condition because its choice of EDD inputs resulted in weather–sensitive gas demand forecasts that do not represent the best estimate possible in the circumstances.[843] The AER required Envestra to use the EDD forecasts published by AEMO (rather than the CSIRO forecasts) as inputs to generate its proposed weather–sensitive gas demand forecasts for the 2013-17 access arrangement.[844]

The AER's draft decision considered that the forecast of EDD used by Envestra is not the best estimate possible in the circumstances. This is because the CSIRO projected all its scenarios from a common base value of EDD in 2006 and it did not update this base value in its 2012 report.[845] In other words, in its 2012 report, the CSIRO did not re-estimate the baseline EDD using actual EDD between 2007 and 2011. It simply extrapolated the scenarios from the 2006 baseline EDD as in the 2007 report.[846]

The AEMO's EDD projection referred to in the AER draft decision was based on fitting a regression line to actual data from 1970 to 2011 and establishing a baseline EDD of 1309 in 2012.[847] Similarly, the CSIRO EDD projection was based on fitting a regression line to data from 1950 to 2011, of which data points from 2007 are a projection.[848] The CSIRO's projection of average greenhouse warming scenario, which Envestra selected, establishes a baseline EDD of 1278 in 2012 (31 EDD lower than AEMO's baseline for 2012). This outcome shows that by choosing to use the baseline EDD projected by the CSIRO to generate the proposed weather–sensitive gas demand forecasts, Envestra implicitly introduced a downward bias in the resulting forecasts. On this basis, the AER draft decision considered that the proposed demand forecasts did not represent the best estimates possible in the circumstances.

In its revised proposal, Envestra adopted the AER's draft decision in regard to the choice of EDD inputs. Envestra stated that it is required to use the revised forecasts set out in the AER draft decision that incorporate the AEMO weather normalisation approach.[849] In making this final decision, the AER also considered information submitted by SP AusNet as part of its revised proposal regarding the CSIRO EDD forecasts.[850] Like Envestra, SP AusNet used the CSIRO's EDD projection as inputs to

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840 Envestra, Access arrangement information, 30 March 2012, Attachment 13.1: Core Energy demand forecast report p.12; and Attachment 13.2: CSIRO – Projected changes in temperature 2012-2017.

841 Envestra, Access arrangement information, 30 March 2012 Attachment 13.3: CSIRO – Projected changes in temperature 2008-2012.

842 Envestra, Access arrangement information, 30 March 2012, Attachment 13.2: CSIRO – Projected changes in temperature 2012-2017, p.7.

843 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2, September 2012, pp.238–239.

844 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2, September 2012, p.241.

845 Envestra, Access arrangement information, 30 March 2012, Attachment 13.2: CSIRO – Projected changes in temperature 2012-2017, p.6.

846 Envestra, Access arrangement information, 30 March 2012, Attachment 13.2: CSIRO – Projected changes in temperature 2012-2017, p.6.

847 In contrast the CSIRO EDD projection was based on data for the period 1950 to 2011, of which data points between 2006 and 2010 are based on a projection. In contrast, AEMO data cover the period 1970 to 2011 – all data points are based on actual observations. For more details on AEMO's data, refer to: AEMO, Review of weather standards for gas forecasting Part 1 – Victorian EDD review, April 2012.

848 See tables E3 of the CSIRO's 2007 report and table 3 (Annual), p. 14 of the 2012 CSIRO report.

849 Envestra, Revised proposal, Attachment 13.6: Demand forecasts, 9 November 2012, p.2.

850 SP AusNet, Revised access arrangement proposal, RAAP Chapter 1, Demand forecasts, 9 November 2012.

generate its proposed weather–sensitive gas demand forecasts for the 2013–17 access arrangement period.

SP AusNet submitted that the AER's draft decision and the AER’s consultant report from ACIL Tasman appear to reflect a misunderstanding about how the CSIRO EDD forecast was utilised in demand forecasting.[851] It added that both the draft decision and the ACIL Tasman's report seem to indicate that the AER and ACIL Tasman believe that the ‘weather normalisation’ conducted by SP AusNet's consultant (CIE) used CSIRO’s forecast EDD for 2005 to 2010 rather than the actual EDDs for those years.[852]

The AER agrees with SP AusNet that the use of a forecast of future ‘normal’ weather conditions measured in terms of EDD is not to be confused with the analysis of historical gas consumption and weather conditions to determine the effects of the weather on gas consumption (weather normalization). The AER's understanding of how Envestra used the CSIRO's forecast of EDD to generate weather–sensitive gas demand forecasts is outlined in the above section. This reasoning is consistent with the analysis in ACIL Tasman's report to the AER.[853] ACIL Tasman's report presents a comparison of CSIRO EDD projection and AEMO EDD trended values.[854]

The AER has reviewed Envestra's revised demand forecasts for the Victorian distribution network and is satisfied that the revised demand forecasts comply with the requirements of the NGR.[855]

10.4.2 Normal Weather – the choice of HDD inputs (Albury network)

The AER draft decision did not accept Envestra's proposed demand forecasts for the Albury network because the proposed forecasts did not represent the best forecasts possible in the circumstances.[856] The AER accepted the choice of HDD instead of EDD as inputs to generate the proposed weather–sensitive gas demand forecasts for the Albury network. However, the AER considered that Envestra should adjust its proposed demand forecasts to account for the HDD data in 2011. The reasons for the AER decision are set out in Attachment 9 of the draft decision.[857]

Envestra adopted the AER's draft decision in its revised proposal.[858] The AER reviewed Envestra's revised demand forecasts for the Albury distribution network and is satisfied that the revised demand forecasts comply with the requirements of the NGR.[859]

10.4.3 Other issues

Impact of network development and extensions on demand forecasts

Envestra did not adopt the AER's draft decision regarding network development and certain network extensions. Envestra resubmitted its capex for network extensions to Merrifield and another extension project.[860] It also proposed a new capex item for another proposed extension.[861] The AER's final decision is to approve these extensions (Attachment 4 of this final decision). Further, Envestra also

[851] SP AusNet, Revised access arrangement proposal, RAAP Chapter 1, Demand forecasts, 9 November 2012, p. 5.
[852] SP AusNet, Revised access arrangement proposal, RAAP Chapter 1, Demand forecasts, 9 November 2012, p. 5.
[853] ACIL Tasman, Review of demand forecast for Envestra Victoria, 9 July 2012, pp.27–32.
[854] ACIL Tasman, Review of demand forecast for Envestra Victoria, 9 July 2012, pp.28–29.
[855] NGR, r.74(2).
[856] AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2, September 2012, p.240.
[857] AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2, September 2012, p.240.
[858] Envestra Albury, Response to AER: Information request 9, 16 June 2012.
[859] Envestra, Revised proposal, Attachment 13.7: Albury demand model, 9 November 2012.
[860] Envestra, Revised proposal, Attachment 13.6: Demand forecasts, 9 November 2012, p.1 and p.3.
[861] Envestra, AER information request - FD3b to Envestra - Final Draft Response for Review, 17 January 2013.

resubmitted its network development program to address the decline in gas usage.[862] The AER's final decision is to approve the payment of incentive payments for the connection of new gas appliances (Attachment 4 of this final decision). The AER accepts the inclusion of the incremental demand arising from these projects into Envestra's demand forecasts because the AER accepted the proposed extensions and network development plan.

10.4.4 Conclusion

For the above reasons, the AER accepts that Envestra's revised demand forecasts are arrived at on a reasonable basis and represent the best forecasts possible in the circumstances.[863] Table 10.1 and Table 10.2 set out the AER's final decision on Envestra's demand forecasts for the 2013–17 access arrangement period.

Table 10.1 AER final decision for Envestra's demand forecasts 2013–17 (Victorian Network)

	2013	2014	2015	2016	2017
Residential tariff V					
Customer numbers	565 983	578 210	590 315	602 208	614 365
Demand (TJ)	26 854	26 575	26 324	26 060	25 873
Non–residential tariff V					
Customer numbers	22 950	23 141	23 329	23 454	23 658
Demand (TJ)	6 234	6 063	5 917	5 802	5 716
Tariff D					
Customer numbers	281	283	285	288	290
Demand - MHQ (GJ)	5 721	5 420	5 176	4 983	4 808

Source: AER analysis

Table 10.2 AER final decision for Envestra's demand forecasts 2013–17 (Albury Network)

	2013	2014	2015	2016	2017
Residential tariff V					
Customer numbers	19 702	20 024	20 350	20 682	21 020

862 See Attachment 4 of this final decision.
863 NGR, r. 74(2).

Demand (TJ)	849	847	848	850	853
Non–residential tariff V					
Customer numbers	889	892	895	897	900
Demand (TJ)	230	223	218	214	211
Tariff D					
Customer numbers	10	9	9	9	9
Demand - MHQ (GJ)	355	336	321	308	297

Source: AER analysis

10.5 Revisions

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision 10.1: All necessary amendments to reflect the AER's final decision on demand forecasts as set out in Table 10.1 and Table 10.2 above.

11 Tariff setting

This attachment outlines the AER’s assessment of the reference tariffs proposed by Envestra against the requirements of the NGR, specifically rr. 93 and 94. The AER's assessment takes into account the revenue and pricing principles, including ss. 24(2) and 24(5) of the NGL, and the NGO.

11.1 Final decision

The AER does not accept the reference tariffs proposed by Envestra for the 2013–17 access arrangement period. Consistent with r 93, the revenue and pricing principles and the NGO, the AER considers that Envestra must amend the quantum (level) of the proposed reference tariffs to reflect the forecast total revenue approved in this final decision. The AER's final decision on Envestra's revised forecast total revenue is set out in chapter 2 of this final decision (Part 1).

The AER accepts that the proposed structure of Envestra reference tariffs complies with the requirements under rr. 93 and 94 of the NGR.[864]

The reasons for the AER's decision are set out in detail below.

11.2 Revised proposal

Envestra adopted the AER's draft decision in relation to the structure of its proposed reference tariffs.[865] However, Envestra did not accept the draft decision in relation to the level of its proposed reference tariffs. This is because Envestra did not accept other elements of the AER's draft decision, such as on opex, capex and the rate of return.

11.3 Assessment approach

The AER's approach to assessing Envestra's proposed reference tariffs is set out in Attachment 10 of the AER's draft decision.[866]

The AER did not receive submissions on Envestra's revised reference tariffs.

11.4 Reasons for decision

The AER does not accept the reference tariffs proposed by Envestra for the 2013–17 access arrangement period. Consistent with r 93, the revenue and pricing principles and the NGO, the AER considers that the quantum of the proposed reference tariffs do not reflect the forecast total revenue approved in this final decision.

In its draft decision, the AER determined that the structure of Envestra's proposed reference tariffs complies with the requirements of the NGR. However, the AER required Envestra to amend the level of its proposed reference tariffs to reflect the AER's draft decision on forecast total revenue and

864 AER, Access arrangement draft decision Envestra Ltd, 2013–17, Part 2 Attachments, September 2012, pp.244–255.
865 Envestra, Response to the AER's information request FD7a of 10 December 2012, 17 December 2012.
866 AER, Access arrangement draft decision Envestra Ltd, 2013–17, Part 2 Attachments, September 2012, pp.246–248.

forecast demand.[867] Envestra, instead, revised its proposed reference tariffs in line with the forecast total revenue and forecast demand in its revised access arrangement.[868]

While the AER has accepted Envestra's revised demand forecasts, it has not accepted Envestra's revised forecast total revenue (see chapter 2 of this final decision, Part 1).

The AER has reviewed the structure of Envestra's revised reference tariffs and is satisfied that the structure of the revised reference tariffs complies with the requirements of the NGR and the AER's draft decision.[869] The reasons for the AER's decision on Envestra's reference tariff structure are outlined in Attachment 10 of its draft decision.[870]

11.5 Revisions

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision 11.1: All necessary amendments to reference tariffs to reflect the AER's final decision on forecast total revenue as set out in the revisions section of Attachment 12 of this final decision.

[867] This issue is discussed in details in the AER draft decision: AER, Access arrangement draft decision Envestra Ltd, 2013–17, Part 2 Attachments, September 2012, pp.244–255.

[868] Envestra, Access arrangement for Envestra's Victorian gas distribution system 2013–2017, November 2012, pp.31–33 and Access arrangement for Envestra's Albury gas distribution system 2013–2017, November 2012, p.31.

[869] Envestra, Access arrangement for Envestra's Victorian gas distribution system 2013–2017, November 2012, pp.31–33 and Access arrangement for Envestra's Albury gas distribution system 2013–2017, November 2012, p.31.

[870] AER, Access arrangement draft decision Envestra Ltd, 2013–17, Part 2 Attachments, September 2012, pp.244–255.

12 Tariff variation mechanism

This attachment sets out the AER's consideration of Envestra's proposed reference tariff variation mechanism. The reference tariff variation mechanism:

- permits building block revenues to be recovered smoothly over the access arrangement period, subject to any differences between forecast and actual demand
- 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.

12.1 Final decision

The AER does not approve the tariff variation mechanism proposed by Envestra for the 2013–17 access arrangement period. The AER considers that some elements of Envestra's proposed tariff variation mechanism are not consistent with the NGL and the NGR or there are preferable alternatives to some elements of Envestra's proposal. In particular, the AER proposes to amend the following elements as set out in section 12.5 of this attachment:

- the initial reference tariffs
- the x factors
- the annual tariff variation formula for ancillary reference services
- carbon tax tariff true up formula
- the timeframe for notifying the AER in respect of any variation of reference tariffs
- the definition of the access arrangement revisions commencement date
- certain aspects of the proposed cost pass through mechanism, to achieve a consistent approach to assessment of pass through applications.
- the following cost pass through events:
    - Insurance cap event
    - Network user failure event (to be replaced with a retailer insolvancy event)
    - Mains replacement event
    - National energy customer framework event
- procedures for approving cost pass through event adjustments

Further, the AER does not approve the UAFG event and proposes that it be deleted.

The reasons for the AER's decision are set out below.

12.2 Revised proposal

In its revised proposal, Envestra adopted most elements of the AER's draft decision. These included the following: a reduction from 10 to two per cent for the rebalancing constraint; the inclusion of a pass through adjustment factor in its tariff variation formula for haulage reference services and the inclusion of an Energy Safe Victoria (ESV) levy factor.[871] Envestra did not adopt some elements of the AER's proposed revisions. Instead, Envestra:

- revised its proposed initial reference tariffs in line with its revised access arrangement proposal rather than the AER's draft decision[872]
- revised the x factors in line with its revised access arrangement proposal rather than the AER's draft decision[873]
- proposed a new pass through event – Envestra included a UAFG benchmark event that was not included in its original proposal
- proposed changes to the AER required pass through events – Envestra has included changes to the definitions of an insurance cap event and the mains replacement event
- proposed changes to procedures for a relevant pass through event
- retained its timeframes for tariff variation process as initially proposed[874]
    - 35 business days to notify the AER in respect of an annual tariff variation
    - 30 business days for the cost pass through mechanism.

In addition, Envestra proposed a four decimal places rounding convention for its reference tariffs.[875]

12.3 Assessment approach

The AER's approach to assessing Envestra's proposed tariff variation mechanism is set out in attachment 11 of the AER's draft decision.[876]

The AER also took into account submissions received from Origin and AGL in relation to its draft decision in forming its final decision on Envestra's proposed tariff variation mechanism.[877] It has also considered information provided by SP AusNet and Multinet as part of their revised proposals that is relevant to the annual tariff variation process for Envestra.[878] Where relevant the AER's consideration of submissions is set out below in its reasons for the decision.

871 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
872 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
873 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
874 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
875 Envestra, Response to draft decision, Attachment 15.2, section 5, 9 November 2012.
876 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, pp.259–261.
877 Origin Energy Victoria Pty Ltd, Submission to the Victorian gas access arrangement review, 7 January 2013; AGL Energy Limited, Submission to Review of the Victorian gas access arrangment, 7 January 2013.
878 SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 25; Multinet, Response to AER information request to Multinet FD12b – Follow up of 18 December 2012, 28 December 2012.

12.4 Reasons for decision

The AER does not approve Envestra's revised tariff variation mechanism for the 2013–17 access arrangement period. The AER considers that some elements of Envestra's proposed tariff variation mechanism are not consistent with the NGL and the NGR or there are preferable alternatives to some elements of Envestra's proposal.[879]

This section sets out the reasons behind the AER's decision under the following headings:

- annual tariff variation mechanism
- cost pass through tariff variation mechanism
- procedures for oversight and approval of tariff variation.

12.4.1 Annual tariff variation mechanism

Revenue equalisation

In its draft decision, the AER determined that Envestra's proposed annual tariff variation formula complies in principle with r. 92(2) of the NGR.[880] However, the AER requested Envestra to amend the level of its proposed reference tariffs to reflect changes to forecast total revenue and demand forecasts.

Envestra did not amend its proposed level of reference tariffs in line with the AER's draft decision.[881] Rather, Envestra revised the level of its proposed reference tariffs in line with its revised access arrangement.[882]

The AER's final decision is that Envestra's revised annual tariff variation formula complies in principle with r. 92(2) of the NGR. However, the AER considers that the level of reference tariffs must be amended to reflect changes to the revised forecast total revenue as set out in section 12.5.[883] The changes to the revised forecast total revenue are outlined in chapter 2 (Part 1) of this final decision.

Annual tariff variation formula

In its draft decision, the AER accepted the structure of Envestra's proposed formula for the annual variation of reference service tariffs.[884] However, the AER did not accept some elements of that formula, particularly:[885]

- the magnitude of the rebalancing constraint
- the x factors
- the definition of CPI
- other technical issues.

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879 NGR, rules 92(2) and 97(3).
880 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.261.
881 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
882 Envestra Victoria, Revised access arrangement, Annexure B, 9 November 2012 and Envestra Albury, Revised access arrangement, Annexure B, 9 November 2012.
883 The AER has accepted Envestra's revised demand forecasts in this final decision.
884 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.261.
885 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, pp.261–266.

The rebalancing constraint

In its revised proposal, Envestra adopted the AER's draft decision on the magnitude of the rebalancing constraint.[886] Envestra revised the proposed rebalancing constraint to be two per cent.[887]

Origin Energy (Origin) in its submission supported the AER's draft decision to not accept Envestra's proposal to increase the rebalancing constraint from two to 10 per cent over the 2013–17 access arrangement period.[888] Origin stated that changes to the rebalancing constraint can have significant and unpredictable impacts on end prices, a risk that is faced primarily by the retailer.[889] Origin's submission is in line with the AER's reasoning, which is set out in attachment 11 of the draft decision.[890]

The AER's final decision is to accept Envestra's revised rebalancing constraint of two per cent over the 2013–17 access arrangement period for the reasons set out in its draft decision.

The x factors

In its revised proposal, Envestra did not adopt the AER's draft decision on x factors.[891] Specifically, Envestra amended the proposed x factors in line with its revised access arrangement, which did not accept certain elements of the AER's draft decision that impact the x factors (e.g. capex, opex and forecast total revenue). In this final decision, the AER has not accepted some of these elements of Envestra's revised access arrangement.

The AER proposes to amend the x factors in line with all the changes to the revised access arrangement proposed in this final decision as shown in section 12.5.

Definition of CPI

Envestra adopted the AER's draft decision on the definition of CPI. In Envestra's revised proposal CPI is calculated as the September quarter CPI for the year immediately preceding year t, divided by the September quarter CPI for the year immediately preceding year t-1, less one.[892]

The AER accepts Envestra's revised definition of CPI.

Other technical issues

Cost pass through adjustment factor

In its proposal of March 2012, Envestra outlined its proposed approach to cost pass through. However, it did not include a cost pass through adjustment factor in its proposed tariff variation formula for the haulage reference services. In its draft decision, the AER considered it preferable for Envestra to show to all stakeholders how the cost pass through will operate within the formula for

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886 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
887 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
888 Origin Energy Victoria Pty Ltd, Submission to the Victorian gas access arrangement review, 7 January 2013, p.2.
889 Origin Energy Victoria Pty Ltd, Submission to the Victorian gas access arrangement review, 7 January 2013, p.2.
890 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, pp.262–264
891 Envestra Victoria, Revised access arrangement, Annexure B, 9 November 2012 and Envestra Albury, Revised access arrangement, Annexure B, 9 November 2012.
892 Envestra Victoria, Revised access arrangement, Annexure B, 9 November 2012, p.39 and Envestra Albury, Revised access arrangement, 9 November 2012, p.9.

annual variation of the reference tariff.[893] The AER required Envestra to include a pass through adjustment factor in its formula for the annual variation of haulage reference services.[894]

Envestra adopted the AER's draft decision on the cost pass through adjustment factor in its formula for the annual variation of haulage reference services.[895] The AER has reviewed the revised proposal and is satisfied that Envestra has correctly represented the technical expression of the proposed cost pass through adjustment factor.

The AER accepts Envestra's revised formula.

Control formula for ancillary services

Due to the expected date of the AER’s final decision in March 2013, and taking r. 92(3) of the NGR into account, the AER’s draft decision considered that the 2013 reference tariffs under the 2013–17 access arrangement should take effect from 1 July 2013 until 31 December 2013.

To account for this delay, the AER, in its draft decision, made the relevant revenue adjustment for haulage reference service tariffs via the revenue smoothing mechanism in the revenue model. However, for the 2013 ancillary reference service tariffs, the AER proposed that the relevant revenue adjustment be given effect via an additional element in the tariff adjustment formula as this approach is less complex than an adjustment through the PTRM.[896] Thus, Envestra was to include an additional element in its revised tariff adjustment formula to make the access arrangement acceptable.

In its revised proposal, Envestra did not address this issue. The AER sought clarification.[897] In response, Envestra proposed to calculate the adjustment factor in the PTRM for Victoria and for Albury.[898]

The AER reviewed Envestra's proposal and identified minor technical errors.

Given these errors, and having regard to the desirability for consistency between regulatory arrangements, the AER proposes to apply a consistent approach to all Victorian gas distribution businesses for the 2013 tariff variation for ancillary reference services through an additional element in the variation formula.[899] For the reasons noted above, the AER considers that this is preferable. This decision reflects the AER's decisions for Multinet and SP AusNet both of which did include in their revised proposals an additional element in their annual tariff variation formulas.

The AER does not accept Envestra's proposal to account for the six month delay in the implementation of 2013 tariffs for ancillary services through an adjustment in the PTRM. The AER proposes the following formula for the variation of ancillary reference tariffs:

The ancillary reference tariff to apply for the six month period from 1 July 2013 is based on the following formula:

$$ART_t = ART_{t-1} + (ART_{t-1} * CPI)*2$$

893 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.265.
894 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.265.
895 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
896 AER’s email to Envestra in response to Envestra’s email to the AER of 31 August 2012 – Envestra tariffs from 1 January 2013 - carbon cost recovery, sent on 25 September 2012.
897 AER, Information request to Envestra FD7a, 10 December 2012.
898 Envestra, Response to AER information request to Envestra FD7a of 10 December 2012, 17 December 2012.
899 NGR, r. 97(3)(d).

The ancillary reference tariff control formula for the calendar year 2014 is:

$$ART_t = ART_{t-2} * (1+CPI_{t-1}) * (1+CPI_t)$$

The ancillary reference tariff control formula for the calendar year 2015 to 2017 is:

$$ART_t = ART_{t-1} * (1 + CPI)$$

where:

ART_t is the ancillary reference tariff that applies in calendar Year t;

ART_{t-1} is the ancillary reference tariff that applies in calendar Year t-1;

CPI_t is the CPI for calendar year t, as defined in the access arrangement.

CPI_{t-1} is the CPI for calendar year t-1, as defined in the access arrangement.

Energy Safe Victoria levy

In its draft decision, the AER proposed that the Victorian gas distribution businesses include an additional element in the annual tariff variation mechanism to recover the incremental amount of the Energy Safe Victoria (ESV) levy. This is because during the AER's draft decision process, the ESV was consulting on a proposal to change the level of gas industry levies that it charges to the Victorian gas distribution businesses.

In its revised proposal, Envestra proposed to account for the incremental increase in the ESV levy through a step increase in forecast opex and by including an additional element in the reference tariff control formula.[900] The AER has confirmed the incremental amount of the levy with the ESV. The AER considers that it is reasonable to account for this increase in the ESV levy through a step change in forecast opex rather than including an additional element in the reference tariff control formula mechanism as indicated in the draft decision. The AER decision on forecast opex is set out in attachment 7 of this final decision.

The AER proposes to remove the ESV levy factor in the proposed reference tariff control formula.

Carbon tax tariff true up

In its access arrangement submission of March 2012, Envestra proposed to recover its carbon tax costs for the 2013–17 regulatory period for its Victorian network (but not for its Albury network) by:[901]

- including an opex allowance made up of the costs of administering the carbon tax scheme
- setting a separate carbon tax tariff intended to recover its carbon tax liability costs with a true up mechanism each year.

900 Envestra, Revised access arrangement proposal, Attachment 6.7, 9 November 2013, p. 21.
901 Envestra, *Access arrangement information,* 30 March 2012, p.230.

During the AER's draft decision process, Envestra submitted an amended carbon tax tariff formula which reflected the formula approved by the AER in its final decision on Envestra's carbon tax cost pass through application for its Queensland and South Australian distribution networks.[902]

In its draft decision, the AER accepted Envestra's amended carbon tax tariff true up mechanism.[903] This amended formula included a single stage true up mechanism that is undertaken in the second regulatory year after the year in which carbon costs are incurred. The amended formula as proposed by Envestra, and accepted by the AER in its draft decision, did not include the time value of money.[904]

In its revised proposal, Envestra adopted the AER's draft decision on the carbon tax tariff true up mechanism.

In making its final decision for Envestra on this matter, the AER considered information submitted by Multinet and SP AusNet as part of their revised proposals.[905] The AER also engaged with these businesses regarding the design and implementation of the carbon tax tariff true up mechanism given the uncertainty surrounding the clean energy legislation. Further, the AER considered a policy change recently announced by the Australian government. The Australian government outlined its plan to remove the carbon price floor of $15 per tonne when the carbon trading scheme starts from 2015 and to link the Australian carbon market to the European Union carbon market.[906] Initially, the government intended this price floor to apply from 2015 to 2018, fixing a lower bound to price movements over that period. The removal of the price floor is likely to result in substantial carbon price volatility in the last two years of the access arrangement period. Such volatility could translate into larger variations in the difference between forecast and actual carbon costs.

Given this change in policy and the resulting uncertainty for liable entities, the AER considers that the implementation of a single–stage true up mechanism lagged by two years could result in outcomes that are not consistent with the NGO. If the difference between estimated carbon costs and actual costs is large, it implies that the true up would apply to a larger amount of money, leading to additional price volatility particularly in the last two years of the access arrangement period.

For the above reasons, the AER's final decision is to not approve the carbon tax tariff true up mechanism as proposed by Envestra in its proposal of March 2012 for the 2013–17 access arrangement period. This change in the AER's draft decision was discussed and agreed to by Envestra[907]. The AER proposes to amend the carbon tax tariff true up formula to be amended as set out in revision 12.5 of this attachment.

The AER acknowledges that this approach is different from that of its carbon tax cost pass through decision for AllGas Energy and Envestra for its Queensland and South Australian distribution networks. The AER made its decision for these businesses prior to the change in Australian government policy.

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[902] AER, Decision on Envestra - Pass through application - change in taxes event - 2012. This document can be accessed via the link: http://www.aer.gov.au/node/15351

[903] AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, pp.266–267.

[904] AER, Decision on Envestra - Pass through application - change in taxes event - 2012. This document can be accessed via the link: http://www.aer.gov.au/node/15351

[905] SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 25; Multinet, Response to AER information request to Multinet FD12b – Follow up of 18 December 2012, 28 December 2012.

1 [906] Department of Climate Change and energy Efficiency, Price floor for Australia's carbon pricing mechanism, http://www.climatechange.gov.au/government/submissions/closed-consultations/price-floor-carbon-pricing.aspx (accessed on 26 February 2013).

[907] AER, Email to Envestra: Carbon tax tariff true up, 19 February 2013.

In its submission, AGL Energy Limited (AGL) queried why Envestra did not include the carbon tax pass through amount for its Albury tariff V network.[908] The AER sought to clarify this matter with Envestra during the draft decision process.[909] In response, Envestra submitted that it is not required to purchase carbon permits for the Albury network because it falls below the carbon emissions threshold of 25,000 tonnes CO2eq per annum.[910] Under the Clean Energy Act 2011, an entity is liable for carbon tax if it owns or operates a facility that emits more than 25,000 tonnes CO2eq per annum. Based on this information, the AER is satisfied that Envestra did not need to include a carbon tax pass through amount for its Albury distribution network.

12.4.2 Costs pass through mechanism

The AER does not accept Envestra's revised cost pass through mechanism. The reasons for the AER's final decision are set out below.

Cost pass through events

Insurance cap event

The AER does not approve Envestra's amendments to the insurance cap event as they are not consistent with the NGO. The AER proposes amendments to the insurance cap event to reflect the definition proposed in the AER's draft decision,[911] to make Envestra's access arrangement acceptable.

In its revised proposal, Envestra largely adopted the AER's proposed definition of an insurance cap event. However, Envestra has made two amendments to that definition:

1. The first amendment applies the insurance cap event to not only costs beyond the relevant policy limit (as in the AER's draft decision) but also to losses (amendment to factor (b)).
2. The second amendment applies the insurance cap event not only to reference services (as in the AER's draft decision) but also to non-reference services (amendment to factor (c)).

In relation to Envestra's first proposed amendment, the AER considers that the impact on revenue is not a relevant consideration. The purpose of a cost pass through mechanism is to protect Service Providers from uncontrollable events that impact on the costs to the business. The rationale focuses on increased or decreased costs not on revenue or losses. Allowing Envestra to pass through losses in the occurrence of an insurance cap event may allow it to pass through lost revenues and other non-financial losses. This would not be consistent with the rationale for cost pass throughs.

In relation to Envestra's proposed second amendment, the AER notes that the purpose of a cost pass through mechanism is to provide for unforeseen costs to be passed through to reference tariffs. Reference tariffs are the charges for reference services.[912] An access arrangement applies to reference services.[913] Any increase in costs in relation to services that are not reference services are

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908 AGL Energy Limited, Submission to Review of the Victorian gas access arrangement, Attachment B, 7 January 2013.
909 AER, Information request 12 to Envestra, 15 June 2012.
910 Envestra, Response to the AER information request 12 to Envestra of 15 June 2012, 20 June 2012.
911 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.174.
912 NGL s. 2.
913 NGR r. 48(1)(c).

not relevant to reference tariffs.[914] Accordingly, the only services that should be referred to in a cost pass through event are reference services.

As set out in the draft decision, the insurance cap event provides that:

- the policy limit is defined with reference to the forecast operating expenditure allowance for the 2013-17 access arrangement period, approved by the AER in its final decision. This is to address the risk that Envestra might under-insure by obtaining a level of insurance cover lower than that contemplated in the forecast operating expenditure allowance determined in the AER's access arrangement final decision, and then pass through any costs to consumers that exceed its insurance cap. In these circumstances, customers are effectively paying twice—for the premiums of an efficient level of insurance as reflected in the forecast operating expenditure allowance, and through the cost pass through mechanism for costs that should have otherwise been covered by that efficient level of insurance. As Envestra's base forecast operating expenditure allowance includes a component for insurance coverage, in acting efficiently and prudently in managing its risks, it is expected to take out an insurance policy that provides an efficient level of insurance coverage.

- an assessment of Envestra's decisions and actions in relation to the pass through event—including whether the event which was the subject of the relevant insurance claim was within Envestra's control—is relevant to the AER's decision whether or not to approve the Relevant Pass Through Event. For this reason, the pass through event includes an additional factor which the AER must consider when assessing whether to approve a proposed Relevant Pass Through Event. This factor would require the AER to consider the efficiency of Envestra's decisions, actions and omissions in relation to the risk of a pass through event, including whether Envestra has taken action to mitigate the risk of the pass through event occurring or the magnitude of the costs of the event. This assessment is not limited to those actions that concern the taking out of an appropriate insurance policy to cover particular risks, but also extends to the actions taken by Envestra, or not taken, to mitigate the risk of the event which is the subject of the relevant insurance claim and which has resulted in the pass through event application being made. The AER will assess the extent to which this was within Envestra's control. The AER considers that this will incentivise Envestra to take mitigating action to reduce the likelihood of the risk of an Insurance Event eventuating and the extent of costs associated with the occurrence of this pass through event. These circumstances will inform the AER's assessment of what was within the service provider's control. This is both with respect to the insurance that it obtained and the cause of the claim that led to incurring the excess above the insurance cap.

- under the additional factor, the AER considers that its enquiry will necessarily encompass any claims or findings of negligence in the context of the specific regulatory framework which empowers the AER to make a pass through determination. Information concerning the circumstances of the event may include negligence as determined by a court of law. As part of its broad enquiry, the AER may also consider claims of negligence that have not been proved or made in a court of law. For example, there may be claims of negligence but no public admission of negligence, or a confidential settlement that prevents public disclosure. It is also possible that what constitutes negligence may not be settled. The NGL and NGR do not limit the AER in taking such information into account. The AER will consider all such information available to it. Such information may or may not be determinative of whether the event was in the service provider's control for the purposes of the AER's decision on the pass through application. The AER further notes that unlawful conduct and gross negligence would not be covered by an insurer and that

[914] NGR r. 93(2)

acts or omissions resulting from such unlawful conduct or gross negligence could not trigger this pass through event.

Network user failure event

The AER approves Envestra's network user failure event.

In its revised proposal, Envestra did not make any amendments to its network user failure event, other than adopting the amendment proposed in the AER's draft decision.

Following the draft decision, the AER considered amending the event so that it would cease to apply upon the commencement of NECF in Victoria. The AER sought comments on this proposal from the distributors. Following an assessment of the distributors' responses, and the relevant provisions of the NECF, namely Part 6, Division 9 and r 531, the AER considers that it is appropriate for the Network User Failure Event to continue to apply following the commencement of NECF in Victoria. The AER has reached this conclusion based on the following analysis.

When a gas retailer fails, a distributor could incur costs when customers of the failed retailer are transferred to the declared retailer of last resort (RoLR). This is the circumstance dealt with by Envestra's proposed Network User Failure Event. The AER approved an analogous event–Network User Failure Event–for Envestra's South Australian and Queensland businesses.

Subsequently, however, a new National Energy Customer Framework (NECF) is being implemented through the National Energy Retail Law (South Australia) Act 2011 (Retail Law). Under the Retail Law, upon application by a RoLR, the AER must make a RoLR cost recovery scheme determination.[915] This scheme is designed for the RoLR to recover its applicable RoLR scheme costs. As part of the RoLR cost recovery scheme determination, the AER must make a distributor payment determination that one or more distributors are to make payments towards the cost of the scheme.[916] A distributor payment determination allows the RoLR to recover its RoLR scheme costs through payments by the distributor.

Distributors are required to make payments to a RoLR in accordance with their liability under a distributor payment determination. The Retail Law provides that such payments are approved cost

Moreover, as part of the NECF a new pass through event, a 'retailer insolvency event' is introduced under r. 531 of the National Gas (Retail Support) Amendment Rules 2010, as referred to above. This event broadly provides for the recovery of an amount "that reflects the increase in the costs of providing reference services that the distributor has incurred and is likely to incur until the end of the applicable access arrangement" due to a retailer's insolvency.

It is possible that other costs a distributor incurs in relation to a RoLR event, such as preparing for or responding to the event, may not be covered by r 167 and r 531. To the extent that a distributor's RoLR costs are not recoverable under either of the above mechanisms, the AER considers such costs may be recoverable under the distributors' revenue allowances and existing cost pass through provisions, subject to the materiality threshold.[917]

915 *National Energy Retail Law (South Australia) Act 2011*, s. 166.
916 *National Energy Retail Law (South Australia) Act 2011*, s. 167.
917 AER, Aurora 2012–17 draft distribution determination, November 2011, p. 289.
AER, Retailer of Last Resort (RoLR) guidelines, RoLR statement of approach, July 2011, pp. 46–47.

The AER sought comment from Envestra on the need for the Network User Failure Event to cease once NECF commences. Envestra responded that the issuing of a RoLR notice will not trigger a regulatory change event or a service standard event. Envestra submitted that the revenue and pricing principles under s. 24 of the NGL require the retention of the network user failure event.[918] Both SP AusNet and Multinet submitted that they could accept the removal of the RoLR event on commencement of NECF if it was made clear in the access arrangement that it was entitled to recover its material costs of a RoLR event (otherwise not recoverable under the NECF provisions) under a Regulatory Change Event or a Service Standard Event.[919]

The AER notes that disconnections, reconnections and meter reading are ancillary reference services under Envestra's access arrangement. As such, the costs of transferring a customer to a RoLR would ordinarily be recovered from the RoLR. If a RoLR event occurs under the NECF provisions, these costs may possibly be recovered via the r. 167 pass through. The AER also notes that the retailer insolvency event broadly covers costs associated with the insolvency of a retailer.

However, these provisions have not yet been implemented. Given this, the AER acknowledges that there is some uncertainty.

The AER cannot conclusively determine at this stage, in the absence of a specific cost pass through application, whether a distributor's RoLR costs that are not recovered under rr 167 or 531 will be recoverable under the existing cost pass through provisions.

Taking this uncertainty into account as a relevant factor, the AER considers that it is appropriate for the Network User Failure Event, as approved by the AER in its draft decision, to continue to apply for the duration of this access arrangement, including for the period following the commencement of NECF in Victoria.[920]

In correspondence with Envestra on the operation of this provision, Envestra submitted that the Network User Failure Event should continue in part because it is broader than the events that will be covered by NECF, in particular the retailer insolvency event in rule 531. It submitted that the event:[921]

- applies to all network users, including those that are not gas retailers (i.e., self-contracting end-users, such as large industrial consumers that contract for their own supply of gas).
- covers any event whereby a network user is unable to continue to supply gas to its customers, including insolvency. This would allow a pass-through, for example, where a retailer is unable to supply gas because its retail authorisation is revoked or withdrawn and Envestra incurs costs that are not recoverable from the retailer.

Although the AER has approved the event to continue beyond NECF, for the following reasons the AER considers that the event is not as broad as Envestra considers it is. Further, the AER considers that it is not appropriate for the event to be as broad as Envestra considers it should it be.

In relation to Envestra's first point, the AER notes that the event as proposed by Envestra does not cover self contracting end users as these users do not supply gas to customers.

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918 Envestra, email dated 5 March 2013.
919 SP AusNet, email dated 4 March 2013; Multinet, email dated 5 March 2013.
920 NGR, r. 97(3)(e)
921 Envestra, response to information request Fd17a, 27 February 2013.

In later correspondence, Envestra submitted that the AER’s required amendment, set out in its draft decision, to the definition of a Network User Failure Event had the unintended consequence that the provision no longer applied to non retailers. Envestra therefore sought reinstatement of those words. Envestra submitted that this was the same clause as the one it proposed and which was approved by the AER in South Australia and Queensland.[922]

The AER has reviewed those decisions and notes that the definition of this event approved by the AER in South Australia[923] and Queensland[924] is the same as the revised definition proposed by the AER in its draft decision.[925]

In relation to Envestra’s second point that the event covers more than insolvency (including more than the insolvency circumstance that will be covered in r 531 under NECF), the AER notes that clause 2.7 of Envestra's terms and conditions provides that the Network User will ensure (or exercise its best endeavours to ensure) that it holds whatever licences or authorisations it requires to sell or consume gas. It is likely that the revocation of a retail authorisation would amount to a breach of this clause. Under clause 33.1 of Envestra's terms and conditions, the Network User indemnifies Envestra against all loss, cost, expense, or damage it might suffer as a result of a Network user's breach of the Agreement. Accordingly, Envestra would most likely be indemnified against any loss it suffers as a result of a Network user having its retail authorisation revoked or withdrawn. The AER considers that to allow the pass through of costs in these circumstances would act as a disincentive to Envestra exercising its options available under contract. This would be likely to increase costs for consumers, which would not be in their long term interests with respect to price.

Further, the AER notes that r. 515 (credit support) and r. 531 (retailer insolvent event) will not apply to non-retailers. As such, post-NECF, Envestra may negotiate commercially appropriate prudential requirements for non-retailers on the same basis that it can do so now.

Unaccounted for gas (UAFG) benchmark event

The AER does not approve Envestra's proposed UAFG benchmark event.

It is outside the jurisdiction of the AER to set UAFG benchmarks in Victoria. There is a Victorian specific approach set out in the gas Distribution System Code (Code). Allowing the pass through of UAFG costs would be inconsistent with that approach. Therefore the AER proposes to remove the UAFG benchmark event to make Envestra's access arrangement acceptable.

In its draft decision, the AER stated that it considered that it could not set unaccounted for gas (UAFG) benchmarks as proposed by Envestra.[926]

In its revised proposal Envestra submitted that the purpose of the pass through was to prevent windfall gains or losses to service providers and consumers due to interim changes to the UAFG benchmark.[927] The AER considers that the ESC's benchmarking scheme already functions to allocate the costs associated with UAFG between service providers and consumers.

[922] Envestra, email dated 5 March 2013, p.3.
[923] Envestra Ltd Access arrangement proposal for the SA gas network 2011–16, p.133.
[924] Envestra Ltd Access arrangement proposal for the Quensland gas network 2011–16, p.118.
[925] AER, Access arrangement draft decision, Envestra, 2013–17, Part 2, September 2012, p. 287.
[926] AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.173.
[927] Envestra, Response to draft decision, Attachment 6.7, 9 November 2012, p. 25.

On 24 December 2012, a ministerial order made by the Victorian Minister for Energy and Resources was gazetted.[928] The ministerial order amends the Code to set UAFG benchmarks for the 2013–17 period. These benchmarks follow the existing 2012 benchmarks.

The Essential Service Commission (ESC) is currently in the process of establishing new UAFG benchmarks to apply for the 1 July 2013–17 period.[929] The AER understands that the ESC will amend the Code to reflect the benchmarks.

The AER considers that allowing a cost pass through for UAFG benchmark costs would be inconsistent with the regulation of UAFG under the current Victorian framework. The AER therefore does not approve this proposed unaccounted for gas approach.

Mains replacement volume event

In the draft decision the AER proposed a pass through to address any change in circumstances which requires the distribution business to undertake mains replacement beyond the volume considered to be conforming capex by the AER in its decision. Origin Energy made a submission in support of the AER's draft decision on the mains replacement volume event.[930]

The AER considers the merits of a proposed pass through on a case by case basis.

The AER considers that the capex mains replacement pass through reflects the AER’s conceptual criteria. Furthermore, the AER considers that, given the specific circumstances, the pass through promotes the NGO.

The mains replacement program accounts for a significant proportion of the total capex allowance. The key driver for the program is to address longer term safety and this is undertaken through a proactive program where the distributions businesses have some discretion around the timing of volumes replaced.

All distribution businesses have a statutory general obligation under s.32 of the *Gas Safety Act* to "manage and operate each of its facilities to minimise as far as practicable" the hazards and risks to the safety of the public and customers arising from gas, interruptions to the conveyance or supply of gas and the reinstatement of an interrupted gas supply. The obligation also includes minimising hazards and risks of damage to public property and the property of customers arising from gas. The *Gas Safety Act* requires a distributor in deciding what is “practicable” to have regard to a number of factors: the severity of the hazard or risk in question; the state of knowledge about the hazard or risk and any ways of removing or mitigating the hazard or risk; the availability and suitability of ways to remove or mitigate the hazard or risk; and the cost of removing or mitigating the hazard or risk.

Therefore, the distributions businesses have a high level safety obligation. Furthermore, the distributions businesses have discretion in how they meet this high level safety obligation. As discussed in attachment 4, the distribution businesses, in practice, have number of different processes and mechanisms by which to mitigate safety risk, including proactive mains replacement. The optimal mix of processes and mechanisms may change over time given the above factors recognised in the *Gas Safety Act*.

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928 http://www.gazette.vic.gov.au/gazette/Gazettes2012/GG2012S460.pdf
929 http://www.esc.vic.gov.au/Energy/Review-of-Unaccounted-for-Gas-Benchmarks/publications
930 Origin, Submission to Envestra's revised access arrangement proposal, 7 January 2013, p. 1.

The mains replacement pass through has been introduced by the AER to balance the risks which are borne by the distribution business and gas consumers under these circumstances:

- Where there is a change in circumstances which requires the distribution business to undertake greater than historical volumes of mains replacement, the distribution business should be provided with the opportunity to recover the cost of meeting its safety and regulatory obligations through efficient investment in gas infrastructure, and

- Where undertaking mains replacement greater than historical volumes is prudent and efficient and necessary to meet safety and reliability obligations, it is in the long term interests of consumers to pay higher tariffs; and conversely, where circumstances do not warrant such expenditure, consumers should not pay higher tariffs than necessary.

The AER considers that the mains replacement pass through enables these risks to be balanced.

The AER has revised the operation of the pass through. The pass through differs to that proposed by the AER in its draft decision. It takes into account consultation with and information provided by Envestra and the other distribution businesses following the draft decision.

The pass through will apply only to low pressure to high pressure block rollout mains replacement and medium pressure supply mains replacement that is necessary for carrying out of the proposed low pressure to high pressure block rollout in the 2013-17 access arrangement period.

Only one pass through application will be accepted during the 2013-17 access arrangement period.

No materiality threshold will apply. No volume cap will apply to the pass through. For the suburb/postcode areas where mains replacement was initially proposed, the AER will assess and pre-approve the unit rate in the AER's final decision (see further discussion below).

The trigger event for the pass through is completion of 207 kilometres of mains replacement. The 207 kilometres has been calculated by deducting 9 months worth of mains replacement from the historical volume over the 2008-12 period. This is calculated using the mains replacement schedule provided by the distribution business in its revised proposal.

Where volumes are undertaken in suburbs where unit rates have not been approved in the AER's final decision, the distribution business will be required to submit a proposal to the AER for those unit rates as part of its pass through application. The evidence that the AER will consider in assessing the efficiency of the proposed unit rates may include but shall not be limited to whether the unit rate is an awarded tender rate and whether the rates were determined through a competitive tender process.

In the instance where the approved volumes of mains replacement for a particular suburb or suburbs have not been carried out, and are resubmitted as part of the pass through application, the expenditure differential only will be approved. This will be calculated by:

- Calculating the difference between the total capex for mains replacement approved by the AER in its final decision, and the total area adjusted actual expenditure[931] undertaken by Envestra to complete the approved volumes.

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931 This is the sum of the volume multiplied by pre-approved unit rate for suburbs/postcodes where the AER has approved a unit rate plus the volume multiplied by the actual unit rate for suburbs/postcodes where the AER has not approved a unit rate (subject to the AER assessing that the unit rate actually incurred was prudent and efficient).

- Subtracting this difference from the total approved pass through expenditure.

If approved, the pass through expenditure will consist of:

- The expenditure incurred or to be incurred in order to undertake the approved volumes, less any adjustment amount.
- An adjustment for the difference between:
  - the time value of money allowed for the expenditure approved in the AER's final decision for completion of historical volumes (as per the blue hatched area in Figure 1-4), and
  - the time value of money for the expenditure approved in the AER's final decision but undertaken in the timeframe that the volume was actually completed (as per the orange shaded area)[932]. This ensures that from a time value of money perspective the business is neutral as to whether the volume of mains replacement was approved entirely upfront (as per the orange shaded area in Figure 1-4) or via a combination of upfront funding plus the pass through.

For the purposes of assessing a cost pass through application under this event under clause 4.5 of Envestra's access arrangement, the AER will consider these factors to be other factors that the AER considers relevant (factor (f)).

National Energy Customer Framework Event

The AER does not approve the National Energy Customer Framework Event (NECF Event). The AER proposes that the NECF Event be amended to include the amendment proposed by SP AusNet and Multinet in their revised access arrangement proposals.

Envestra adopted the NECF Event as proposed by the AER.

However, Multinet and SP AusNet each proposed the same amendment to this definition.[933] They each proposed that the definition end with the phrase 'including any amendment, withdrawal or introduction of any associated Victorian legislation, regulations or rules' be included at the end of the definition. The AER considers that this amendment acts to clarify the event.

SP AusNet submitted that, as well as the enabling legislation referred to in the definition required by the AER, there will also be associated state legislation, regulations or rules that will accompany and support the introduction of NECF. The definition should be broadened to include any such changes. SP AusNet submitted that this approach reflects the intention of Part 4 of Schedule 3 of the NGR, which refers to the pass through of costs arising from the commencement of NECF.[934]

Multinet submitted that, when NECF was considered for adoption in Victoria in 2012, the Victorian government was preparing specific Victorian derogations and energy rules to govern the

932 Where volumes have been undertaken in suburbs/postcodes where the AER has not pre-approved a unit rate, the AER will apply a residual unit rate to these volumes. The residual unit rate will be calculated as the total approved expenditure for historical volumes less the expenditure incurred for mains replacement actually undertaken in the suburbs/postcodes included in the AER's approved historical expenditure, divided by, the total approved historical volume less the volume undertaken in the suburbs/postcodes included in the AER's approved historical expenditure.

933 Multinet, Revised proposal and response to draft decision, 9 November 2012, Appendix 13.1, p. 10; SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 7.

934 SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 7.

implementation of NECF in Victoria. These derogations and energy rules should also be reflected in the definition.[935]

The AER proposed the NECF Event because it considered that it was appropriate for SP AusNet to recover any expenditure it incurs in implementing NECF.[936] The implementation of NECF will involve new legislation, regulations or rules that adopt and give effect to the national Energy Retail Law (South Australia) Act 2011, the National Energy Retail Regulations (South Australia) and the National Energy Retail Rules (South Australia). However, the implementation of NECF may also involve the withdrawal or amendment of existing Victorian legislation, regulations or rules. This may particularly be the case if any of these instruments are inconsistent with NECF.

The amendment proposed by SP AusNet and Multinet acts to make it clear that where the withdrawal or amendment of legislation, regulations or rules occurs in order to give effect to the relevant NECF instruments, the NECF event will cover it. The AER considers that this proposed amendment acts to clarify the meaning of the types of instruments that may give effect to NECF. This adds greater clarity and reduces the risk of disputes. The AER considers that this is in the long term interests of consumers with respect to price.

The AER considers that Envestra's definition of the NECF Event should be amended to include the amendment proposed by SP AusNet and Multinet.

12.4.3 Procedure for oversight and approval of tariff variation

Part year tariffs

The AER’s final decision on the 2013-17 access arrangements for the Victorian gas service providers is due to be made in March 2013. This is after the 1 January 2013 revision commencement date specified in the 2008-12 access arrangements for these service providers. Taking into account r. 92(3), the AER considered that the 2013 reference tariffs under the 2013-17 access arrangements should take effect from 1 July 2013 until 31 December 2013.[937]

In its revised proposal, Envestra did not respond to this issue. The AER sought clarification.[938] In response, Envestra submitted that it adopts the AER's adjustment of reference tariffs to account for the six month delay.[939]

The AER's final decision is to accept the timing of the implementation of Envestra's reference tariffs for 2013. As a result, Envestra's reference tariffs for 2013 will take effect on 1 July 2013.

Annual and within year variations

In its access arrangement submission of March 2012, Envestra proposed to notify the AER in respect of any reference tariff variations at least 35 business days prior to the next calendar year.[940] In its draft decision, the AER did not accept Envestra's proposal.[941] The AER's draft decision established a 50 business day requirement. The AER considered that Envestra's proposed timeframe does not provide the AER adequate oversight over the annual tariff variation process, and accordingly considers its 50

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935 Multinet, Revised proposal and response to draft decision, 9 November 2012, Appendix 13.1, p. 10.
936 AER, Draft decision, SP AusNet access arrnangement proposal 2013–18, p. 224.
937 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.277.
938 AER, Information request to Envestra FD7a, 10 December 2012.
939 Envestra, Response to AER information request to Envestra FD7a of 10 December 2012, 17 December 2012.
940 Envestra, Response to the AER's information request 19 of 26 June 2012, 27 June 2012.
941 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.278–279.

business day requirement preferable.[942] The reasons for the AER's decision are set out in attachment 11 of the draft decision.[943]

In its revised proposal, Envestra did not accept the AER's draft decision.[944] However, Envestra did not provide any reason apart from stating that it is unaware of any concerns that the AER has had with this process to date. In making its final decision for Multinet, the AER took into account information submitted by SP AusNet as part of its revised proposal.[945] SP AusNet submitted that a 35 business day notice is preferable, because this shorter period will allow for use of the most recent inputs and minimises its own administrative costs. SP AusNet also submitted that a 50 business day requirement creates risk of the AER setting rather than approving tariffs.[946]

The AER's final decision is to not accept Envestra's revised proposal for a 35 business day notice. The AER's preferred 50 business day requirement facilitates earlier market notification of approved tariffs, providing greater certainty to retailers and consumers. This is a material benefit to market participants. Origin Energy Victoria (Origin) submitted that from a retailer's perspective, at least 20 business days should be allowed for retailers to prepare for implementation.[947] Origin's submission is consistent with the AER's approach to implementing an adequate period for oversight in the reference tariff variation mechanism which allows 30 business days for the AER's approval and 20 business days for retailers to prepare for implementation.

The AER considers SP AusNet's objections to the 50 business day requirement, raised in its access arrangement proposal, to be relatively minor or easily overcome. To facilitate use of the most recent inputs in reference tariff variation determinations the AER will accept updates for incorporation in Envestra's tariff model where specific inputs become available after submission. Such updates do not change tariff structures. A specific input update generally requires manual change to a single spreadsheet input value where models are well designed.

SP AusNet submitted that some gas network service providers also operate electricity networks and are subject to a 50 day requirement for electricity tariff variations.[948] It also submitted that staggering required submission dates across sectors would mitigate service provider workload related costs.[949] The AER considers, however, that the rationale for earlier tariff submission for both sectors is equally strong. Earlier provision to the market of approved tariffs is a significant benefit, outweighing potential marginal workload management issues for network service providers.

In response to SP AusNet's suggestion that the AER may become a tariff setter and therefore act beyond its scope, the AER considers that tariff models will be constructed by the gas network service provider, and submitted by the gas network service provider to the AER. The structure of the tariff will, therefore, also remain the responsibility of gas network service provider. Acceptance by the AER of updated tariff model inputs does not change the respective roles of network service providers and the AER.

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942 NGR, r. 97(4).
943 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.278–279.
944 Envestra, Response to draft decision, Attachment 15.2, section 1, 9 November 2012.
945 NGR, r. 62(1) and r. 97(3)(d).
946 SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 6.
947 Origin Energy Victoria Pty Ltd, Submission to the Victorian gas access arrangement review, 7 January 2013, p.3.
948 SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 5.
949 SP AusNet, Revised access arrangement proposal, RAAP Chapter 8, Tariffs and Tariff Variation Mechanism, 9 November 2012, p. 5.

The AER does not approve Envestra's proposed procedures on the timeframe of the assessment by the regulator. Envestra submitted that the AER should inform Envestra in writing whether or not it has verified the proposed tariff variation within 20 business days of receiving Envestra's notice.[950] Based on the above reasoning, the AER considers that 30 business days will provide the AER adequate oversight over the annual tariff variation process.

Data requirement

In its draft decision, the AER required that Envestra include in its annual tariff submission audited quarterly and annual gas quantities.[951] This is because such data is an important input in the proposed annual tariff variation mechanism and it allows the AER to verify the weight applied to each tariff component.[952]

Envestra adopted the AER's draft decision regarding the annual quantities but did not accept the AER's requirement for quarterly gas quantities.[953]

Envestra submitted that the AER's requirement for quarterly gas quantities is not consistent with r. 97(3)(b).[954] This rule requires the AER to have regard for the possible effects of the reference tariff variation mechanism on administrative costs of the AER, the service provider, and users and potential users. On review, the AER agrees that quarterly gas quantities data is not necessary for pricing purposes. Such information may be required if a better understanding were required of seasonal variations in demand. However, consistent with its final decision for Envestra South Australia, having regard to rr. 97(3)(b) and (d),[955] the AER considers that annual reporting will provide the AER with adequate oversight to verify the weight applied to each tariff component.

Rounding convention

The AER accepts Envestra’s proposed rounding convention as being consistent with r. 97(3) of the NGR.

Procedures for cost pass through variation in reference tariffs

The AER does not approve Envestra's procedure for pass through event variations. The AER proposes that the procedure be amended to make Envestra's access arrangement acceptable.

In its revised proposal, Envestra has largely adopted the AER's proposed procedures, set out in the draft decision, for approving cost pass through event variations to reference tariffs. However, it has made a number of changes.

The AER stated in its draft decision that it considered that a consistent approval process is desirable from the perspective of transparency and administrative efficiency.[956] In setting out the proposed approval process the AER had regard to its recent decisions and sought to achieve consistency with them.

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950 Envestra, Response to draft decision, Access arrangement section 4.6.1, 9 November 2012, p. 13.
951 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, pp.277–278.
952 NGR, r. 97(4).
953 Envestra, Response to draft decision, Attachment 15.2, section 2.1, 9 November 2012.
954 Envestra, Response to draft decision, Attachment 15.2, section 2.1, 9 November 2012.
955 AER, Final decision: Access arrangement proposal for Envestra South Australian gas network, June 2011, p.130.
956 AER, Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, pp.279.

The AER remains of the view that a consistent approach for approving pass through applications for all gas distributors is desirable and will be beneficial.[957] As discussed in its draft decision[958] the AER considers that a consistent approach will lead to administrative efficiency.[959]

The AER's proposed approach aligns with the approach it has approved in recent gas decisions.[960] The AER considers that this approach is preferable to following the NER. This is because aligning the process across the gas industry creates a level playing field where each business is assessed against the same criteria. It also allows entities with multiple gas businesses greater certainty of outcomes in like for like circumstances and reduces the risk of such entities following the incorrect process. These factors promote the efficient operation and use of natural gas services.

The following sets out the AER's consideration of Envestra's particular amendments to the drafting of the event.

60 business days

In its draft decision, the AER required a procedure that gave it 90 business days to approve or reject the pass through application.[961] Envestra has not adopted this time frame and has proposed 60 business days.[962]

The AER does not approve this timeframe. Each of the Victorian businesses has proposed different timeframes.[963] The AER considers that having separate timeframes may cause confusion. Such an outcome would not promote the efficient operation and use of natural gas services.

In its two most recent gas access arrangement decisions[964] the AER approved mechanisms providing for a 90 day review period. Consistency with these decisions will not advantage or disadvantage any particular stakeholder. For these reasons, the AER considers that 90 business days is a preferable alternative.

Events 'scheduled to occur'

The AER proposes to delete the phrase 'or scheduled to occur' in section 4.6.2 of Envestra's revised access arrangements. The AER considers the inclusion of this phrase does not meet the requirements of the NGR[965] nor the NGO.

Envestra proposed an amendment to allow it to give notice of a cost pass through event within 90 days of when the cost pass through event is scheduled to occur.

Allowing Envestra to notify the AER of a cost pass through event within 90 days of the events scheduled occurrence may allow Envestra to notify the AER of the event before it has occurred. At that point costs are unlikely to have been incurred and are unlikely to be known with any certainty. Moreover, there is a real risk that the expected event which would trigger the event may not actually

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957 NGR r. 97(3)(d)
958 AER, Access arrangement draft decision, SPI Networks (Gas)Pty Ltd, 2013–17, Part 2, September 2012, p.233.
958 AER, Access arrangement draft decision, SPI Networks (Gas)Pty Ltd, 2013–17, Part 2, September 2012, p.233.
959 NGR r. 97(3)(b)
960 Amadeus Gas Pipeline: Roma to Brisbane pipeline 2012–2017.
961 AER , Access arrangement draft decision Envestra Ltd 2013 –17, Part 2 Attachments, September 2012, p.286.
962 Envestra, *Revised access arrangement proposal,,9* November 2012, p.15.
963 SP AusNet has proposed 40 business days, Multinet has proposed 60 business days.
964 Roma to Briabane, Amadeus.
965 NGR r. 97(3)b and r. 97(4)

occur at all. Such an approach would not provide for administrative efficiency and would not be in the long term interests of consumers with respect to price.

Network User notification

AGL submitted that Envestra should inform network users of a cost pass through application at the same time that it informs the AER.

The AER considers that this will unnecessarily increase Envestra's administrative costs and add a further step to the process, which could lead to delays. The AER notes also that while there is no obligation under the NGL or NGR for the AER to publish cost pass through applications, the AER may invite submissions in which case the application would be published on the AER's website.

Materiality

The AER proposes to remove the references to materiality in the first paragraph of section 4.5 of Envestra's access arrangement to make Envestra's access arrangement acceptable.

The AER has proposed a national energy customer framework event which does not contain a materiality threshold. If the approval procedures contained a materiality element, this would effectively imply a materiality threshold into that event.

The remaining cost pass through events each contain a materiality threshold in the event definition. Therefore, it is not necessary to duplicate materiality in the approval mechanism. The removal of the materiality factor from the approval mechanism means that the national energy customer framework event will operate to allow the pass through applications to be made and approved where the costs do not meet the materiality threshold. It will have no impact on the remaining events because they each have materiality as an element of the event.

12.5 Revisions

The AER proposes the following revisions to make the revised access arrangement proposal acceptable:

Revision 12.1: Make all necessary amendments to reflect the AER’s final decision on the reference tariffs for 2013. The AER's final decision on reference tariffs for 2013 is set out in to Table 12.4.

Table 12.1: AER final decision: Envestra Victoria -Tariff V - Tariff Schedule 2013

Central Zone	
Residential	
Base Charge ($/day)	0.1456
Charge for the first 0.0274GJ of gas delivered ($/GJ)	8.3198
Charge for the next 0.0219GJ of gas delivered ($/GJ)	6.2398

Charge for additional gas delivered ($/GJ)	3.4256
Non-residential	
Base Charge ($/day)	0.1456
Charge for the first 0.05GJ of gas delivered ($/GJ)	6.4449
Charge for the next 0.50GJ of gas delivered ($/GJ)	3.5922
Charge for the next 0.82GJ of gas delivered ($/GJ)	2.6836
Charge for additional gas delivered ($/GJ)	1.0882

North Zone	
Residential	
Base Charge ($/day)	0.1456
Charge for the first 0.0274GJ of gas delivered ($/GJ)	7.2392
Charge for the next 0.0219GJ of gas delivered ($/GJ)	5.4294
Charge for additional gas delivered ($/GJ)	2.9806
Non-residential	
Base Charge ($/day)	0.1456
Charge for the first 0.05GJ of gas delivered ($/GJ)	5.6714
Charge for the next 0.50GJ of gas delivered ($/GJ)	3.1611
Charge for the next 0.82GJ of gas delivered ($/GJ)	2.3615

Charge for additional gas delivered ($/GJ)	0.9576

Murray Valley Zone	
Residential	
Base Charge ($/day)	0.2020
Charge for the first 0.0274GJ of gas delivered ($/GJ)	6.3084
Charge for the next 0.0219GJ of gas delivered ($/GJ)	4.7313
Charge for additional gas delivered ($/GJ)	3.0768
Non-residential	
Base Charge ($/day)	0.2020
Charge for the first 0.05GJ of gas delivered ($/GJ)	5.0728
Charge for the next 0.50GJ of gas delivered ($/GJ)	3.6085
Charge for the next 0.82GJ of gas delivered ($/GJ)	2.6958
Charge for additional gas delivered ($/GJ)	1.2769

Bairnsdale Zone	
Residential	
Base Charge ($/day)	0.2397
Charge for the first 0.0274GJ of gas delivered ($/GJ)	13.6958
Charge for the next 0.0219GJ of gas delivered ($/GJ)	10.2719

Charge for additional gas delivered ($/GJ)	5.6391
Non-residential	
Base Charge ($/day)	0.2397
Charge for the first 0.05GJ of gas delivered ($/GJ)	10.9171
Charge for the next 0.50GJ of gas delivered ($/GJ)	6.0850
Charge for the next 0.82GJ of gas delivered ($/GJ)	4.5458
Charge for additional gas delivered ($/GJ)	1.8434

Table 12.2: AER final decision: Envestra Victoria - Tariff D - Tariff Schedule 2013

	Central Zone	North Zone	Murray Valley	Bairnsdale
10 GJ or less ($/GJ)	1,195.0358	1,195.0358	1,392.8753	1,976.6325
Next 40GJ ($/GJ)	730.5251	730.5251	859.4919	1,224.5321
Additional GJ ($/GJ)	133.4089	133.4089	146.3866	223.3269

Table 12.3: AER final decision: Envestra Albury -Tariff V - Tariff Schedule 2013

Residential	
Base Charge ($/day)	0.2406
Charge for the first 0.0274GJ of gas delivered ($/GJ)	6.7770
Charge for the next 0.0219GJ of gas delivered ($/GJ)	5.0828
Charge for additional gas delivered ($/GJ)	2.7904
Non-residential	
Base Charge ($/day)	0.2406
Charge for the first 0.05GJ of gas delivered ($/GJ)	5.2346
Charge for the next 0.50GJ of gas delivered ($/GJ)	2.9177
Charge for the next 0.82GJ of gas delivered ($/GJ)	2.1797
Charge for additional gas delivered ($/GJ)	0.8839

Table 12.4: AER final decision: Envestra Albury - Tariff D - Tariff Schedule 2013

10 GJ or less ($/GJ)	1147.0679
Next 40GJ ($/GJ)	712.4285
Additional GJ ($/GJ)	172.1633

Revision 12.2: Make all necessary amendments to reflect the AER's final decision on the x factors for the 2013–17 access arrangement period as set out below:

For Envestra Victoria:

Xt = 0.2% for the calendar year 2013

Xt = -1.5% for the calendar year 2014

Xt = -2.0% for the calendar year 2015

Xt = -3.0% for the calendar year 2016

Xt = -3.0% for the calendar year 2017

For Envestra Albury:

Xt = 3.5% for the calendar year 2013

Xt = 0.0% for the calendar years 2014 to 2017

Revision 12.3: Make all necessary amendments to reflect the AER's final decision on the value of pre–tax WACC as set out below:

For Envestra Victoria: real pre–tax WACC = 5.43

For Envestra Albury: real pre–tax WACC = 5.84

Revision 12.4: Make all the necessary amendments to reflect the AER's final decision on the application of the initial reference tariffs. In particular:

Replace paragraph two of section 3.1 of the Access arrangement with the following:

The initial Reference Tariffs will apply from 1 July 2013, until those Reference Tariffs are varied in accordance with section 4 of this Access Arrangement.

Revision 12.5: Make all the necessary amendments to reflect the AER's final decision on the revisions commencement date. In particular:

Replace section 9.2 with the following:

The revisions to this Access Arrangement referred to in section 9.1 will commence on 1 January 2018.

Revision 12.6: Replace section 4.4.2 of the proposed access arrangement with the following:

For the calendar year 2013, the reference tariffs for ancillary reference services for the period 1 January 2013 to 30 June 2013 remain unchanged from 2012. Initial variation of reference tariffs for Ancillary reference services that will occur on 1 July 2013 for the period 1 July to 31 December 2013 based on the following formula:

$$ART_t = ART_{t-1} + (ART_{t-1} * CPI)*2$$

The ancillary reference tariff control formula for the calendar year 2014 is:

$$ART_t = ART_{t-2} * (1+CPI_{t-1}) * (1+CPI_t)$$

The ancillary reference tariff control formula for the calendar years 2015 to 2017 is:

$$ART_t = ART_{t-1} * (1 + CPI)$$

where:

ART_t is the ancillary reference tariff that applies in calendar Year t;

ART_{t-1} is the ancillary reference tariff that applies in calendar Year t-1;

CPI_t is the CPI for calendar year t, is calculated as the CPI for the September quarter immediately preceding the start of year t, divided by the CPI for the September quarter immediately preceding the start of year t-1.

CPI_{t-1} is the CPI for calendar year t-1, is calculated as the CPI for the September quarter immediately preceding the start of year t-1, divided by the CPI for the September quarter immediately preceding the start of year t-2.

Revision 12.7: Make all necessary amendments to reflect the AER's final decision on the carbon tax tariff true up mechanism. Specifically, replace the content of Box 4, Annexure D of the Victorian access arrangement with the following:

When assessing Envestra's proposed tariffs, submitted in accordance with this Access Arrangement, the AER will assess whether the Carbon Payment Revenue (CPRt), is less than or equal to the Maximum Carbon Payment Revenue allowed (MCPRt) as follows:

$$CPR_t \leq MCPR_t$$

where:

CPRt is the total of Envestra's proposed Carbon Payment Revenue charges multiplied by the corresponding forecast quantities to be distributed for each tariff component of each tariff, in calendar year t.

MCPRt is the maximum revenue that Envestra is allowed to receive from its Carbon Payment Revenue tariffs from all consumers for the calendar year t and is expressed as:

$$MCPR_t = CPP_t - K_t$$

where:

CPP_t is the aggregate of all charges that Envestra forecasts it will be required to pay in Carbon Payments in respect of calendar year t, and

Kt is a correction factor to account for any under or over recovery arising from actual Carbon Payment Revenue tariffs in relation to allowed revenue and is expressed as follows:

$$K_t = (Ky_t + Kz_t + K_{t-1})$$

where:

Ky_t is calculated in accordance with the formula below;

Kz_t is calculated in accordance with the formula below;

K_{t-1} is the figure calculated for Kt for calendar year t–1; and

Calculation of Ky_t

Ky_t is a correction factor determined with reference to the following formula:

$$Ky_t = CPR_{t-1} - CPP_{t-1}$$

where:

CPR_{t-1} is the total revenue which it is estimated Envestra will earn from its Carbon Payment tariffs in respect of all customers in calendar year t-1; and

CPP_{t-1} is the aggregate of all charges that Envestra estimates it will be required to pay in Carbon Payments in respect of calendar year t-1.

Calculation of Kz_t

Kz_t is a correction factor for the difference between the estimates made when calculating Ky for calendar year t-1 and the actual values now available. Kz_t is expressed by the formula below.

$$Kz_t = (CPRa_{t-2} - CP\mathrm{Re}_{t-2}) - (CPPa_{t-2} - CPPe_{t-2})$$

where:

$CPRa_{t-2}$ is the actual total revenue earned by the Envestra from Carbon Payment tariffs in respect of all distribution customers in calendar year t–2;

$CP\mathrm{Re}_{t-2}$ is the figure used for CPRt-1 when calculating Kyt for calendar year t-2;

$CPPa_{t-2}$ is the aggregate of all charges that Envestra incurred in Carbon Payments in respect of calendar year t-2; and

$CPPe_{t-2}$ is the figure used for CPPt-1 when calculating Kyt for calendar year t-1.

Note: Kzt = 0 for 2014

Note: Kt requires an adjustment for the time value of money.

Revision 12.8: Make all necessary amendments to reflect the AER's final decision on the ESV levy. In particular:

Delete the ESV levy factor from the reference tariff control formula in the proposed access arrangement Part B.

Delete paragraphs four to six of section 4.4.1.

Delete Victoria Box 3 of Annexure D of the proposed access arrangement Part B for the Victorian distribution network.

Revision 12.9: Make all necessary amendments to reflect the AER's final decision on the timeframe for notifying the AER in respect of the annual reference tariff variation process. In particular:

Replace section 4.6.1 of the proposed access arrangement Part B with the following:

Where Envestra wishes to vary any Reference Tariff pursuant to section 4.4, Envestra will notify the AER in respect of the proposed variation, such that variations occur on the first of January of any year. The notification will be made at least 50 Business Days before the date of implementation and include:

(a) the proposed variations to the Reference Tariffs; and

(b) an explanation and details of how the proposed variations have been calculated.

If Envestra proposes variations to the Reference Tariffs pursuant to section 4.4 and those variations have not been approved by the next 1 January then the Reference Tariffs will be varied with effect from that next 1 January by the same percentage increment or decrement as occurred on the previous 1 January, until such time as variations to Reference Tariffs are approved by the AER.

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

Within 30 Business Days of receiving Envestra's variation notice, the AER will inform Envestra in writing of whether or not it has verified the proposed variation in the Envestra's notice as compliant with the Reference Tariff Control Formulae.

The 30 Business Day period may be extended for the time taken by the AER to obtain information from Envestra, obtain expert advice or consult about the notification. However, the AER must assess a variation application within 30 Business Days of receiving Envestra's variation notice, excluding any extension of the decision making time. The AER may require an extension of a specified duration. The AER will notify Envestra of the extension, and its duration within 30 business days of receiving a notification from Envestra.

Revision 12.10: Make the following amendment to the definition of Insurance Cap Event in clause 4.5 in Part A of Envestra's revised access arrangement proposal:

Under (b) delete the phrase 'or losses'

Under (c) insert 'reference' between 'providing' and 'services'.

Revision 12.11: Make the following amendment to clause 4.5 in Part A of Envestra's revised access arrangement proposal:

Delete the UAFG Benchmark Event

Revision 12.12: Make the following amendment to clause 4.5 in Part A of Envestra's revised access arrangement proposal:

Insert the following phrase at the end of the definition of a National Energy Customer Framework Event:

'including any amendment, withdrawal or introduction of any associated Victorian legislation, regulations or rules'.

Revision 12.13: Make the following amendment to clause 4.5 in Part A of Envestra's revised access arrangement proposal:

Under the first paragraph delete the following phrase 'in which each individual event materially increases or materially decreases the cost of providing the reference services'

Revision 12.14: Make the following amendment to clause 4.5 in Part A of Envestra's revised access arrangement proposal:

Amend the definition of Insurance Cap Event as follows:

Under paragraph (b), delete the phrase 'or losses'.

Under paragraph 9c), insert the word 'reference' between 'providing' and 'services'.

Revision 12.15: Make the following amendment to clause 4.5 in Part A of Envestra's revised access arrangement proposal:

Insert the following definition of a Mains Replacement Event:

A Mains Replacement Event means the event whereby Envestra:

(a) completes 268 kilometres of its planned total completion of Historical Volumes of Mains Replacement during the course of the 2013–17 access arrangement period; and

(b) costs are incurred, or are to be incurred, by Envestra in the remainder of the 2013-17 access arrangement period to complete a volume of Mains Replacement in excess of the Historical Volumes.

For the purposes of the Mains Replacement Event:

Historical Volumes means 365 km being the volume of mains replacement completed by Envestra for the 2008 to 2012 access arrangement period, with reference to the AER’s decision to approve the 2013-17 access arrangement and its reasons as set out in its Final Decision; and

Mains Replacement means mains replacement for low pressure to high pressure block rollout, which involves the replacement of:

(i) low pressure distribution mains with high pressure polyethylene mains through a process of dividing a low pressure region into smaller areas (referred to as blocks) which are then subject to systematic low pressure to high pressure replacement, and

(ii) includes the minimum amount of replacement of medium pressure supply mains necessary to undertake the proposed low pressure mains replacement in the 2013-2017 access arrangement period, as specified in (i)

Costs are to be determined in accordance with the pre-approved unit rates set out in the AER's decision to approve the 2013-17 access arrangement and its reasons as set out in its Final Decision or, where unit rates have not been pre-approved, are to be determined as otherwise set out in its Final Decision.

Revision 12.16: Make the following amendment to clause 4.6.2 in Part A of Envestra's revised access arrangement proposal:

replace each reference to '60 business' days with '90 business days'.

Revision 12.17: Make the following amendment to clause 4.6.2 in Part A of Envestra's revised access arrangement proposal:

In the first paragraph delete the phrase '(or scheduled to occur)'.

13 Non-tariff components

Envestra's access arrangement proposal sets out terms and conditions that are not directly related to the nature or level of tariffs paid by users, but which are important to the relationship between the network service provider and users. These are referred to by the AER as non-tariff components of the access arrangement.

This attachment sets out the AER's consideration of the non-tariff components of Envestra's revised access arrangement proposal. These include Envestra's proposed capacity trading requirements,[966] queuing policy,[967] extension and expansion requirements[968], and terms and conditions on which the reference service will be provided.

13.1 Final decision

The AER does not approve Envestra's proposed non-tariff components. In particular, the AER does not approve the following:

- Envestra's terms and conditions in Annexure F to its revised access arrangement proposal.
- Envestra's Network Extensions and Expansions under clause 8 of its revised access arrangement proposal.
- New clause 9g) of Envestra's network user policy in clause 6.4 of its revised access arrangement proposal.
- Envestra's revision commencement date

The AER approves the following non-tariff components:

- Envestra's Capacity trading procedures under clause 7 of its revised access arrangement proposal.
- Envestra's draft access arrangement insofar as it does not include any queuing arrangements.
- Envestra's terms and conditions for changes to receipt or delivery points in clause 7.3 of its revised access arrangement proposal.
- Review submission date

13.2 Terms and conditions

13.2.1 Final decision

The AER does not approve Envestra's proposed terms and conditions. In particular, the AER does not approve the inclusion of the following terms:

- 19.3—Service Attempt
- 26.3—Right to suspend services

966 NGR, r. 105.
967 NGR, r. 103.
968 NGR, r. 104.

The AER proposes amendments to the following terms to make Envestra's access arrangement acceptable:

- 3.3—Fixed component of the haulage service charge (Albury)
- 9.3—Maintenance and removal
- 28.2—Termination by Envestra
- 33.3—User's indemnities–death or personal injury
- 34—Insurance
- 35.5(c) —Access to premises
- 39—Assignment

The AER proposes to either amend some of these proposed terms and conditions or remove others altogether.

13.2.2 Revised proposal

Envestra in its revised access arrangement proposal in relation to terms and conditions adopted most of the amendments required by the AER in its draft decision. In some cases Envestra has made minor changes to the amendment required by the AER.

13.2.3 Assessment approach

The AER's assessment approach for terms and conditions is set out in section 12.1.3 in attachment 12 of part 2 of the draft decision.

The AER received submissions from AGL[969] and Origin.[970]

13.2.4 Reasons for decision

Where Envestra has adopted the AER's draft decision on a particular term, and no further submissions have been received on that term, the AER approves those terms or conditions for the reasons set out in its draft decision.[971]

The AER's reasons for approving or not approving all other terms and conditions is set out below.

Fixed component of the Haulage Service Charge

Albury

The AER proposes to revise sub-clause 3.3 (Fixed component of the Haulage Service Charge) in Envestra's Albury access arrangement. The AER's proposed amendment will remove the reference to Current User. This will reflect the approach taken by Envestra for its Victorian network and will make the Albury access arrangement acceptable.

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969 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

970 Origin, Submission to the AER : SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, p. 5.

971 AER, Envestra access arrangement proposal, draft decein, pp. 291–333.

Sub-clause 3.3 is substantially the same for the Envestra Victoria and Albury revised access arrangement proposals. The only variation is the clause in the Albury access arrangement proposal refers to the 'Current User'. However, this term is not defined.

AGL's submission points to the disparity between the two clauses.[972]

To address this disparity, the AER considers that consistency between Envestra's two businesses is beneficial and avoids confusion. This promotes the efficient operation and use of gas services and is in the long term interests of consumers with respect to price.

Albury & Victoria-Ongoing service charges

Sub-clause 3.3 provides that the Network User will remain responsible to pay Haulage Service Charges in respect of each Delivery Point for so long as it remains the FRO (Financially Responsible Organisation) for that Delivery Point.

AGL submitted that if there is no shared customer at the Delivery Point (DP) and no consumption, the Network User should not be liable for ongoing service charges.[973]

The AER considers that under AEMO’s Retail Market Procedures for Victoria, the party registered as the FRO is the party responsible for settling the account relating to the supply point. Accordingly, the AER considers that the proposed sub-clause is appropriate, because it follows the procedures of the market operator. This is consistent with the efficient operation of Envestra’s network.

Guaranteed service level payments

The AER approves Envestra's proposed sub-clause 3.4 (Guaranteed service level payments).

Revision 12.2 in the AER's draft decision required Envestra to insert a new sub-clause 3.4 requiring Envestra to notify the Network User where it makes a guaranteed service level payment directly to a Customer.

Envestra adopted the substance of the AER's required amendment, but proposed to clarify that the clause only applies if a Network User is a Gas Retailer. It also proposed to amend related definitions in the Glossary.[974]

GSL payments apply to the relationship between Network User, Customer and Service Provider. Where a Network User is an End User it will be the Customer. Where there is not a third party customer, GSL payments will not be applicable.

The AER considers that Envestra's amendments are commercially sensible and reasonable, create greater clarity and avoid the potential for uncertainty or disputes. This is in the long term interests of consumers with respect to price.

Retail services

The AER approves Envestra's non-inclusion of clause 3.5.

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[972] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[973] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[974] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 2.

Revision 12.3 in the AER's draft decision required Envestra to insert a new sub-clause 3.5 in the same terms as clause 7.2 in Envestra's current terms and conditions. The AER's amendment required Envestra to pay fair and reasonable fees in respect of any Retail Services provided to Envestra by the Network User.[975]

Envestra did not adopt the amendment required in the AER's draft decision. Envestra submitted that it can request retail services without the proposed clause and the proposed clause does not appear to oblige Network Users to provide retail services that are requested.[976] Other of the submissions put forward by Envestra relate to the form and mechanics of the clause.[977]

After reviewing Envestra's reasoning, the AER accepts that there is no need to include a term requiring payment. The AER considers that the clause is not necessary because Envestra can request services without the proposed clause. The clause is not needed to facilitate the request.[978]

The AER considers that if Envestra requests services from a Network User, it is open to the Network User to accept or refuse the request. The proposed terms and conditions do not oblige a Network User to provide services to Envestra. Accordingly, if Envestra requests services, the Network User can negotiate the terms on which it is prepared to provide those services. If Envestra does not accept those terms, the Network User may refuse to provide the requested services. In view of this, the AER approves Envestra's non inclusion of clause 3.5.

Network Limitations

The AER approves Envestra's proposed sub-clause 4.3,

Sub-clause 4.3 provides that at no time will Envestra have an obligation to deliver more gas through a User Delivery Point than is possible given the technical, physical and practical limitations of the Network and the pressure and flow rate of gas in the Network at the time.

AGL submitted that it is the responsibility of the Service Provider to maintain the pressure and flow rate. Clause 14 (Delivery Pressures) should be adequate to limit the Service Provider's liability. Therefore, AGL submitted that the limiting phrase "and the pressure and flow-rate of Gas within the Network" should be deleted.[979]

The AER considers that the qualification proposed by Envestra is consistent with the NGO. Envestra should not be obliged to deliver more gas than the technical limitations of the network provide for. The AER considers that pressure and flow-rate amount to technical limitations. The AER considers that clearly specifying the limits on Envestra's obligation promotes the efficient operation use of gas services.

Maintenance and removal

The AER does not approve sub-clause 9.3. The AER proposes revisions to sub-clause 9.3 to make Envestra's access arrangement acceptable.

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975 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 297.
976 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 6.
977 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 4.
978 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 6.
979 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

Sub-clause 9.3 covers the removal of telemetered meters when they are no longer required by law. Revision 12.5 in the AER's draft decision required Envestra to amend sub-clause 9.3 by inserting the words 'and the Network User requests the equipment be removed'. Envestra did not adopt the AER's required amendment in its revised proposal.

In its draft decision the AER considered that it was not reasonable for Envestra to make a unilateral decision to remove the relevant equipment and then require the Network User to pay the removal costs. The AER considered that a Network User should only be obliged to pay the costs of removal where it requested the removal.[980]

In its revised proposal Envestra provided reasons to support its decision.[981] However, following an information request[982] from the AER, Envestra reconsidered the proposed amendment and adopted the clause proposed by the AER in its draft decision.[983]

AGL submits that this clause deems the Network User liable for the costs of removal of equipment regardless of circumstances. AGL submits that Network Users should only be liable where it has requested removal.[984] The AER agrees with AGL.

Therefore, for the reasons set out in its draft decision, the AER does not approve sub-clause 9.3 of the revised proposal.[985]

Notice of Results

The AER approves Envestra's proposed sub-clause 10.5.

Sub-clause 10.5 provides that whenever a party responsible for a metering installation conducts a test at the request of the other party, it will give the other party notice of the results as soon as practicable after the test takes place.

Origin submitted that this clause be amended to read 'as soon as practicable and in any case within 10 business days'.[986]

The AER considers that an obligation to act as soon as practicable allows the flexibility to prioritise activities while imposing an obligation to provide the results.

The AER considers that a flexible approach to the performance of activities promotes the efficient operation and use of gas services, aspects of the NGO.

Specifications

The AER approves sub-clause 12.1 as proposed by Envestra. Sub-clause 12.1 provides for Envestra to set gas specifications and make reasonable variations from time to time by notice given to the Network User. The AER considers that:

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980 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 300.

981 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, pp. 8–9.

982 Information request Fd12a, 16 January 2013.

983 Envestra, response to Information request FD-12a

984 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

985 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 299.

986 Origin, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, p. 5.

- Envestra's approach has benefits because it provides certainty to Network Users, rather than permitting Envestra to refuse or cease delivery of gas that it considers contains deleterious material, with no prior notice.

- setting out defined specifications ensures that Network Users know what gas will and will not be accepted and can take positive steps to ensure that gas does not contain deleterious material, because any such material will be set out in the specifications.

- a clause that sets specifications and provides certainty is reasonable and consistent with the NGO. It acts to prevent harmful material being injected into Envestra's network. This could cause damage and outages, which would not be in the long term interests of consumers with respect to price, reliability or security of supply.

- certainty also avoids situations where Network Users are suddenly informed that their gas contains deleterious material and is released or flared. Such a situation would not be in the long term interests of consumers with respect to price, reliability or security of supply.

The AER also notes that the inclusion of this provision does not preclude negotiation on this clause. The AER's decision is based on the information before it. The AER acknowledges that commercial circumstances may develop where a different approach may be agreed by a Network User and Envestra.

In its draft decision, the AER in revision 12.8 required Envestra to amend sub-clause 12.1 by removing a qualification requiring gas injected into Envestra's network to meet any specifications, beyond those imposed by law, reasonably specified by Envestra.[987]

Envestra did not adopt the AER's required amendment in its revised proposal. Envestra made submissions in support of its proposed approach. These submissions are discussed below.

Envestra submitted that Victorian and NSW regulations provide that the prescribed Australian standard is Australian Standard 4564 'Specifications for general purpose natural gas'. This standard is not intended to be exhaustive.[988] Envestra submitted that AS 4564 is intended to be general and does not address all the issues that are relevant to the composition of natural gas. In particular, AS 4564 does not specify a temperature element. Envestra submitted that temperature is important because it may have adverse effects on the network's structural and operational integrity.[989]

Envestra stated that AS 4564 is generic in its application and does not attempt to define specific limits or levels for compounds or other substances that might occur in gas. The specifications imposed by law do not address all of the issues that might render gas unsuitable for transportation through Envestra's network. Envestra considered that the term it proposed enables detailed specifications that overcome the generality of the specifications of the law.

In addition to Envestra's revised proposal, the AER considered AGL's submission. AGL submitted that Envestra should not be able to impose higher specifications than those imposed by law. The

987 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 302.

988 Envestra revised access arrangement proposal, Attachment 16, 9 November 2012, p. 11.

989 Envestra, Revised access arrangement proposal, attachment 16, 9 November 2012 p. 11.

specifications should cover gas quality sufficiently and that is what is referenced in the upstream agreements.[990]

The AER has reviewed the specifications under the laws of Victoria as applied to Envestra's Victorian network and NSW as applied to Envestra's Albury network.

The Victorian law that relates to gas specifications is s. 6 of the Gas Safety (Gas Quality) Regulations 2007. The law states that the prescribed standard of quality for natural gas conveyed through a distribution pipeline is set out in AS 4564.

The NSW law that relates to gas specifications is s. 22 of the Gas Supply (Safety and Network Management) Regulations 2008. The law provides that a reticulator must not convey non-compliant natural gas through a distribution network. Non compliant natural gas is gas that is not compliant natural gas. Compliant natural gas is defined in s. 21 as gas that complies with the standard set out in AS 4564.

The AER considers that the law in both NSW and Victoria requires gas to comply with AS 4564. The AER considers that this is, as submitted by Envestra, a general specification that seeks to specify gas standards for a range of potential uses. The AER notes that AS4564 states that 'General purpose natural gas is subject to contractual requirements between buyer and seller".[991] The AER understands that there is a range of substances that could potentially harm gas distribution networks. The network owner is best placed to understand what substances cause risk.

Given the relevant laws set standards that do not cover all possible harmful substances, and because Envestra is best placed to know what substances may harm its network, the AER considers it is reasonable and consistent with the NGO for Envestra to set additional specifications.

Envestra submitted that it has no control over gas that is produced upstream and accepted by transmission pipeline operators. Envestra submitted that, for this reason, it should not be placed in a position where it is forced to accept gas that, on an objective and reasonable basis, is not safe or suitable for its network.[992]

The AER agrees that Envestra has no control over the gas that is produced upstream and accepted by transmission pipeline owners. Envestra's only control is through its contractual terms and conditions with Network Users. It is important to the integrity and efficient operation of Envestra's network that gas that has the potential of causing harm to the network is not injected into the network. Envestra has a legitimate interest in seeking to ensure that this does not happen. The AER considers that, to the extent that there is material that could harm Envestra's network which is not covered by the general AS 4564, it is appropriate for Envestra to set specifications that exclude such material.

The AER considers this clause is not substantially different from clause 4.4(c) in Envestra's 2008-12 access arrangement. The two clauses operate in a different manner but have the same practical effect. That is, Envestra can unilaterally decide what the specifications are or what substances may be harmful or deleterious to its network. The current approach is preferable because it provides certainty around the specifications, rather than allowing Envestra to suddenly refuse to accept delivery of gas because it considers it to contain material that is harmful or deleterious to the network.

990 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

991 AS4564–2011, clause 1.4.

992 Envestra, Revised access arrangement proposal, attachment 16, 9 November 2012 p. 12.

The AER recognises Network Users (such as AGL) are the contracting parties with upstream producers. They purchase large volumes of gas from those producers (particularly some of the larger Network Users such as AGL and Origin). However, in relation to AGL's submission, the AER considers that the Network Users are free to negotiate the terms of supply agreements. Their position as large volume purchasers provides them with a degree of commercial power when conducting negotiations. Accordingly, the AER does not accept that Network Users have no control over the setting of specifications in their supply agreements.

Temperature

The AER approves sub-clause 12.2. Sub-clause 12.2 provides that for the purposes of sub-clause 12.1, gas delivered must have a temperature of at least 2 degrees Celsius.

Envestra submitted that its network has been designed and built to accept gas at a temperature of higher than 2 degrees Celsius. Envestra stated that it is critical for the safe operation of the network that gas is injected at a safe temperature.

It is important to the integrity and efficient operation of Envestra's network that gas that has the potential of causing harm to the network is not injected into the network. Envestra has a legitimate interest in seeking to ensure that this does not happen. The AER considers that, to the extent that there is material that could harm Envestra's network, it is appropriate for Envestra to set specifications that exclude such material.

AGL submits that the ability of Network Users to control gas temperatures is limited to what is contained in the Specifications. Upstream gas agreements require gas to meet the Specifications but Network Users are unable to enforce higher standards. For this reason AGL submits that it is unreasonable to include a term requiring Network Users to maintain a particular gas delivery temperature.

The AER considers that Envestra is best placed to understand the technical parameters of its network and when the network may suffer harm. AS 4564 does not set a minimum safe temperature. To the extent that the network may be harmed by gas at or below a particular temperature, it is reasonable to specify this as a specification. This is in the long term interests of consumers with respect to price, reliability and security of supply. Damage to the network would lead to additional repair costs and also interruption to supply.

Receipt Pressure

Sub-clause 13.1 provides that a Network user will ensure that gas delivered at any User Receipt Point by or for the account of the Network user is delivered at a pressure agreed in writing between Envestra and the Network User or as specified from time to time by Envestra by notice given to the Network User.

AGL submitted that Envestra should not be able to unilaterally change the receipt pressure, particularly given that AGL and the customer will have agreed upon the Receipt Point Pressure at the meter. In AGL's opinion, Envestra should have to notify a retailer of the intent to amend the Receipt

Point Pressure at the meter. That change should only occur once the retailer has had the opportunity to engage with the customer. [993]

The AER considers that it is important that Envestra's network is operated in a way that prevents damage to the network. As the owner and operator of the Network, Envestra is best placed to understand its limitations.

Retailers can manage any potential changes in Envestra's specified pressure through their contracts with upstream suppliers.

Further, for the reasons discussed under 'Specifications' the AER considers that this sub-clause is reasonable and consistent with the NGO.

The AER considers that this clause is consistent with the NGO because it promotes the efficient operation of the Network.

Payment of charges

The AER approves sub-clause 19.2 and Envestra's revisions relating to the provision of full services.

The AER does not approve sub-clause 19.3. The AER proposes to delete sub-clause 19.3 to make Envestra's access arrangement acceptable.

Sub-clause 19.2 provides for the payment of charges for ancillary reference services. Sub-clause 19.3 provides for payment for ancillary reference services where a Network User requests the service and Envestra is unable to provide it as a result of acts or omissions by the Network User or its customer.

Envestra adopted some of the AER's required revisions and has made further revisions. Envestra's revisions relate to the provision of the full service and the non–completion of ancillary services.

Provision of the full service

Revision 12.12 in the AER's draft decision required Envestra to amend sub-clause 19.2 by inserting the line 'after Envestra has provided the requested Ancillary Reference Service'.[994]

Envestra submitted that the attachment to the Tariff Schedules, located in Annexure C, already makes it clear that Envestra is not entitled to charge for Ancillary Reference Services until it has completed the requested service.[995] The relevant passage states that 'the Ancillary Service Charge to be included in the statement of charges for a given Billing Period is the Ancillary Service Charges for each Ancillary Service where the service request was completed during that Billing Period in respect of any User DP'.[996]

The AER considers that this provision has the same effect as the AER's proposed amendment. Accordingly, the AER approves Envestra's proposed sub-clause 19.2.

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993 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

994 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 303.

995 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 14.

996 Envestra, Revised access arrangement proposal, 9 November 2012, p. 37.

Non completion of ancillary services

The AER's revision also required the insertion of an additional paragraph specifying that Envestra could charge on a pro rata basis if it was unable to fully provide the service because of an act or omission by the Network User. Envestra has proposed a broader alternative to the amendments required by the AER. In particular, Envestra has extended its coverage to include an act or omission of the Network User's customer.

AGL submitted that Envestra's proposal will allow it to charge when it is unable to obtain access. This amounts to a 'no access' charge.[997]

In its revised proposal, Envestra submitted that the AER's required amendment fails to have the intended effect because it is not possible to partially provide an ancillary service.[998] Envestra gave the example that if it was requested to provide a meter reading but was unable to do so because the customer had padlocked the gate, it would not have provided any part of the requested service. However, it would have incurred the costs of attempting to do so.

Envestra submitted that the AER's required approach will not work because it is not possible to partially provide an ancillary service. Accordingly, any charge will not be for the ancillary service. Rather, it will be, as AGL suggests, a charge for the customer's non availability. The AER considers it not appropriate to apply such a charge under the terms and conditions.

In considering both AGL and Envestra's submissions, it is clear that where an ancillary service cannot be completed, there will have been no ancillary service provided[999] and no actual work undertaken.[1000] The AER considers that it is not consistent with the NGO to permit charging for a service that has not been provided, or even partially provided. Such a charge is not a charge for an ancillary reference service.

Statement of charges

The AER approves Envestra's amendments to sub-clause 21.5 and clause 23. The AER considers that these amendments make the dispute resolution process clearer and take into account the transition to NECF, once it is adopted in Victoria. This avoids confusion which is in the long term interest of consumers with respect to price, an aspect of the NGO.

Envestra's clauses 21.5 and 23 referred to r. 510 of the NGR. Rule 510 is part of NECF and has not yet been adopted in Victoria. To address this, the AER required Envestra to remove the reference to r. 510 and insert the wording of r. 510 in a new sub-clause 21.7. The AER then proposed that clauses 21.5 and 23 refer to sub-clause 21.7.

These amendments were designed to address the fact that NECF (which includes r. 510) has not yet been adopted in Victoria and its implementation date is as yet unknown. It may not be implemented until after Envestra's access arrangement has commenced.[1001]

[997] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.
[998] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 15.
[999] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 15.
[1000] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.
[1001] AER, Draft decision, Envestra access arrangement proposal for 1 January 201331 December 2017, p. 296.

Envestra adopted the substance of the AER's required amendments. However, rather than inserting the wording of r. 510 into a new sub-clause 21.7, it chose to include it in clause 23.

Envestra submitted that this is because clause 23 is headed 'Disputed Statement of Charges' and addresses disputes.[1002]

The AER considers that Envestra's amendments have exactly the same effect as the amendments it proposed. These amendments clarify the operation of this clause.

Envestra has also proposed some amendments to the text of r. 510. These amendments provide that if the dispute resolution process in Part 15C of the NGR (part of NECF) are not in force, the dispute resolution process in clause 37 applies.

The AER considers that these amendments are consistent with the NGO. They operate to make it clear when and how clause 37 will apply. This avoids uncertainty which is in the long term interests of consumers with respect to price.

Adjustment of charges

The AER approves the inclusion of sub-clause 22.3.

Sub-clause 22.3 provides that no claim for an adjustment will be made by the Network User after the expiration of more than eleven months from the date of the relevant statement of charges.[1003]

In the draft decision, the AER considered that a Network user's ability to dispute incorrect charges should not be limited and that there is a need to be able to recover incorrectly billed charges when they are identified.

Envestra submitted that the issue of disputes is not relevant to sub-clause 22.3 as it and sub-clause 22.2, apply irrespective of any dispute. Sub-clause 22.3 refers to adjustments. Envestra submitted that it is clear that adjustments refers not to disputes but to adjustments to account for differences between estimated and actual meter readings and to account for errors or corrections of metering data. There may be no dispute about these kinds of adjustments.[1004]

Envestra further submitted that sub-clause 22.3 is designed to prevent a situation where a retailer accumulates adjustments and does not raise them promptly or raises them as an issue collateral to a dispute or negotiation.[1005] Envestra submitted that removing the time limit on adjustments removes an incentive on the parties to act in a timely manner and allows adjustments to be raised long after the relevant events, which could lead to price distortions.

Taking into account Envestra's submissions, the AER now considers that the inclusion of a time limit on sub-clause 22.3 acts as an incentive to seek adjustments. If a Network User knows it has limited time to seek adjustments, it will be incentivised to seek adjustments promptly.

There is a risk that if there was no such time limit, a Network user could accumulate adjustments and raise them all at once. This could potentially cause price distortions, where adjustments are sought

1002 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 15.
1003 Envestra, Revised access arrangement proposal, Annexure F, 9 November 2012, p. 18.
1004 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 16.
1005 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 16.

after tariffs have been reset. This would not be consistent with the efficient operation of natural gas services or in the long term interests of consumers with respect to price, aspects of the NGO.

The AER considers that Network users will not be disadvantaged by this clause where they discover an error after the time limit for adjustments has expired. In such circumstances they could use the dispute resolution mechanism in clause 23.

Right to suspend services

The AER does not approve sub-clause 26.3, which permits Envestra to cease delivering gas and cease performing any of its other obligations if the Network User fails to pay any amount due. The AER proposes to delete sub-clause 26.3 to make Envestra's access arrangement acceptable.

The AER considers that sub-clause 26.3 should be deleted because:

- it allows for responses that are disproportionate to any harm caused and fails to provide adequate protection for Network Users and consumers
- the AER maintains its position as set out in its draft decision that the general law, and, once NECF is adopted, r. 503, in conjunction with s. 232 of the NGL, provide adequate remedies in the event that any amount due remains unpaid[1006]
- the sub-clause, as proposed, would be open to interpretation. This raises the possibility of legal disputes over the actual meaning of the sub-clause.

The AER considers that deletion of the sub-clause is reasonable and consistent with the NGO. The AER notes that the terms and conditions of Envestra's 2008–2012 access arrangement do not include a mirror provision to clause 26.3.

In the draft decision, the AER required Envestra to delete sub-clause 26.3.[1007]

In its revised proposal, Envestra retained sub-clause 26.3. Envestra raised several points in support of its proposed sub-clause.

AGL submitted that this clause does not align with the NGO because it doesn't promote the efficient operation and use of gas services. AGL stated that if a situation warrants termination, a party should terminate the access arrangement under clause 28. AGL submits that this clause has the same effect as termination. AGL also submitted that this clause appears to permit Envestra to randomly target 'innocent customers'.[1008]

The AER's assessment of each of the issues raised in Envestra's revised proposal and AGL's submission is set out below.

Practical and commercial limitations

Envestra submitted that it is not in its interests to cease delivering gas. Envestra has a significant commercial interest in ensuring that gas is perceived as a reliable source of energy. It is not in

[1006] AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 307.
[1007] AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 307.
[1008] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

Envestra's commercial interests to take unnecessary extreme action that would damage this perception.[1009]

The AER considers that whilst commercial constraints may discourage Envestra from acting in a particular way, they do not prevent it from doing so. If Envestra chooses not to enforce or exercise a legal right for commercial reasons, that is a commercial decision for Envestra to make. However, the commercial and practical limitations do not prevent Envestra from exercising its legal rights if it so chooses.

Unrealistic to disconnect every delivery point

Envestra submitted that it is unrealistic to suggest that Envestra can practically cease to supply customers. To achieve this Envestra would need to physically disconnect each customer's delivery point at its own cost. This is not a realistic option.

The AER acknowledges there are practical limitations on actually ceasing to supply customers. However, not all customers would need to be disconnected immediately to cause harm. Further, if Envestra is unable to practically cease delivery of gas, a remedy enabling it to cease delivery is unnecessary and ineffective.

Judicial interpretation

Envestra stated that it doubts that a court would read this clause literally. Envestra submitted that a court is likely to require Envestra to act reasonably in its reliance on this clause.[1010]

The AER considers that the actual manner in which a court will interpret this sub-clause is unclear. Therefore, the unqualified nature of this sub-clause renders its actual legal meaning ambiguous.

This lack of clarity and ambiguity creates scope for disputes over the meaning of the sub-clause. This is particularly the case if Envestra was to apply the sub-clause to a scenario as set out above. This could lead to protracted and expensive litigation.

The AER considers that this has the potential to lead to litigation. This would not be consistent with the NGO as it may lead to additional costs which are not in the long term interest of consumers with respect to price.

The sub-clause has the same effect as termination

Envestra stated that it disagrees with AGL’s submission that this clause has the same effect as termination.[1011] AGL has reiterated this submission.[1012]

The AER considers that this sub-clause has a different effect to termination. This clause permits Envestra to suspend the delivery of services. While Envestra would not be obliged to provide services, the contract between it and the Network User would continue to apply. This is clearly different to the termination of the agreement, which would bring the contract to an end.

1009 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1010 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1011 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1012 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

Other remedies are not effective

Envestra submitted that this clause is necessary because other remedies are not necessarily effective.[1013] Envestra stated that:

- damages are not effective because action through the courts is time consuming and expensive
- termination is not an effective remedy. It is impossible to cease gas supplies without physically disconnecting delivery points.[1014] Envestra submitted that termination of an agreement is meaningless if customers can continue to withdraw gas.[1015]
- termination will end the Network User's contractual obligation to pay charges under the agreement in relation to gas that is taken after the termination.[1016]

The AER considers that the cost and delay of action to recover money are practical considerations that need to be taken into account when considering legal action.

Under AEMO's procedures, the Network User will continue to be the Financially Responsible Organisation (FRO) following termination of the Agreement.[1017] This means that the Network User will continue to be responsible for paying for gas extracted at delivery points for which it is the FRO. Accordingly, if Envestra terminates its agreement with a Network User, the Network User will continue to be obliged to pay for gas extracted by its customers.

Notwithstanding that customers will continue to be able to extract gas, termination would be a serious sanction against Network Users. Termination would cause serious reputational harm. Envestra could refuse to connect any new customers for that Network User and other Network Users could seek to engage its existing customers. Accordingly, the AER considers that termination of the agreement would have serious commercial repercussions for a Network User. On the other hand, it is unlikely to cause the payment and recovery issues that Envestra has suggested.

Qualifications are unnecessary

Envestra submitted that if qualifications, such as a materiality concept or something similar were included, they would prejudice the effectiveness of the clause.[1018]

The AER considers this argument to be inconsistent with Envestra's assertion that a court is likely to require Envestra to act reasonably in its reliance on this clause. In making this assertion about how a court would interpret this clause, it is apparent that Envestra considers that the clause contains an implicit 'reasonableness' qualification.

The AER considers that a reasonableness qualification is similar to a materiality qualification. If, as Envestra asserts, a qualification will prejudice the effectiveness of this clause, then the clause's effectiveness is already prejudiced.

The AER considers that this differing views of what the clause does and does not include, adds to the ambiguity of the meaning of the clause.

1013 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1014 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1015 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1016 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1017 AEMO – Retail Market Procedures (Victoria)
1018 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 19.

Current access arrangement

Envestra submits that clause 26.3 has been included in Envestra's standard terms and conditions since 1997.[1019]

The AER requested Envestra to explain which clause it considered to be analogous to sub-clause 26.3. Envestra submitted that clause 4.4(c) of its 2008–12 access arrangement is analogous.[1020]

The AER considers that clause 4.4(c) of Envestra's 2008–12 access arrangement is not analogous to sub-clause 26.3. Clause 4.4(c) provides that Envestra is not obliged to provide Distribution Services if the User has not made payment of monies due within 7 days of receipt of a notice of default or has not issued a notice of dispute.

The AER considers that the clauses are not comparable in that clause 4.4(c) requires Envestra to have initiated action for failure to pay monies owing and is limited to ceasing delivery. By comparison, clause 26.3 is significantly broader and allows Envestra to cease delivering gas and cease performing any of its other obligations for failure to pay monies owing. Moreover, under the proposed clause 26.3, there is no requirement upon Envestra to have pursued that debt via a notice of default or a notice of dispute as there is in the existing clause 4.4(c).

Previous review

Envestra submits that this clause has previously been reviewed by several regulators, including the AER in its decision on Envestra's South Australia and Queensland networks.[1021]

The AER has full discretion when assessing terms and conditions.[1022] The AER assesses each access arrangement proposal with reference to the particular proposal and any submission it receives about that proposal. Each access arrangement review is a separate process. The AER takes account of all relevant information, including previous access arrangements and previous AER decisions.

Credit support

The AER approves Envestra's proposed sub-clause 27.5.

The AER considers that the proposed amendment to sub-clause 27.5 is consistent with the NGO because it would not be in the long term interests of consumers with respect to price for Envestra to be required to pay twice. It is also consistent with the NGR.[1023]

The AER required Envestra to amend sub-clauses 27.4 and 27.6 to reflect the terms of rr. 525 and 528 of the NGR.[1024] Envestra has adopted this amendment in substance, subject to some minor modifications, by including the AER's proposed amendment to sub-clause 27.4 as a new sub-clause, 27.5.

Envestra included a further amendment in sub-clause 27.5 which limits the clauses application to circumstances where Envestra is not otherwise required to do so by law. The purpose of this

1019 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 19.
1020 Envestra, response to information request FD12a, question 10.
1021 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 19
1022 NGR r. 40(3)
1023 NGR r. 100(b).
1024 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 308.

amendment is to ensure that Envestra is not subject to two separate (one contractual and one statutory) reimbursement obligations.[1025] The AER approves Envestra's amendments.

Termination by Envestra

The AER does not approve sub-clause 28.2 (which provides for termination by Envestra in a number of circumstances) and proposes a number of revisions to make Envestra's access arrangement acceptable.

In the draft decision, the AER required Envestra to amend sub-clause 28.2 by including a clarification that the sub-clause is subject to clauses 23 (Disputed statement of charges) and 37 (dispute resolution) and by qualifying sub-clause 28.2(a) with a 14 day remedy period.[1026] Envestra has not adopted the AER's required amendments.

In the discussion below, the AER has set out its consideration of each of the points raised by Envestra. In summary,

- the AER does not accept Envestra's submissions that the practical conditions of the gas market protect consumers from the consequences of a strict application of sub-clause 28.2(a), as proposed by Envestra.
- the AER considers that Envestra's proposed sub-clause 28.2(a) gives it the legal right to terminate the agreement in response to breaches that cause it minimal harm. Envestra's submission that it would not do so, does not detract from the fact that it would be permitted to do so under its proposed clause.
- the AER considers that the inclusion of a remedy period is reasonable and consistent with the NGO. The inclusion of a remedy period acts to provide a Network User with an opportunity to remedy any breach by paying the outstanding money to Envestra. This protects Network Users' consumers by ensuring that a Network User is given warning before termination.
- The AER notes that Envestra's 2008–12 access arrangement provided for a 14 day remedy period.[1027]

In its revised proposal, Envestra raised a number of points in support of its proposed sub-clause 28.2(a). Each of these points is considered below.

AGL submitted that the inclusion of seven days notice for termination outside of when permitted by law does not provide for the efficient operation of a network. AGL states that termination following failure to pay any amount due is a harshly disproportionate outcome for Network Users. AGL states further that it is difficult to argue that this clause is in the best interests of customers, as they will likely be adversely impacted if the clause is invoked.[1028]

1025 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 19.

1026 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 309.

1027 Envestra, 2008 – 2012 access arrangement proposal, clause 12 p. 29.

1028 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

Practical and commercial constraints

The AER considers that practical limitations do not provide a sufficient safeguard against the disproportionate exercise of this clause.

Envestra refers to the practical difficulties associated with ceasing the supply of gas to a Network User's customers. That is, that it would not be possible or cost effective to disconnect all Delivery Points within a short space of time and that it has a commercial interest in continuing to supply delivery services.[1029]

The practical issues may discourage Envestra from exercising its legal right. Whether Envestra wishes to take steps to implement a legal right is a commercial decision for it to make. However, the AER's concern remains that sub-clause 28.2(a) gives Envestra the legal right to terminate the agreement if the Network User fails to pay any amount.

Regulatory involvement

Envestra states that if its view was that circumstances were serious enough to justify termination of an agreement with a gas retailer, it is best served by notifying the relevant regulatory authorities that it proposes to terminate that retailer's agreement. This would then require the relevant regulatory authorities to consider whether the circumstances justify action under the relevant regulatory powers.[1030]

The AER considers that the amendment proposed by the AER does not prevent this option from being pursued. If Envestra is required to give a remedy period before terminating, it is still open to it to inform the relevant regulatory authorities that it is considering terminating the agreement.

Restricts Envestra's ability to respond quickly

Envestra submitted that the provision of a notice and remedy period does not protect Envestra's interests. It restricts Envestra's freedom to respond quickly.[1031]

The AER considers that a 14 day remedy period is a reasonable restriction on a contractual right that can have serious potential consequences.

Envestra submitted that it will only be used in the most serious circumstances.[1032] However, the AER considers that the legal operation of the sub-clause is not restricted to serious circumstances. As drafted, the sub-clause can be used in circumstances which may not warrant termination.

Contrary to the long term interests of consumers

Envestra submitted that the provision of a notice and remedy period is contrary to the long term interests of consumers. Envestra has a significant commercial interest in continuity of supply, so there is a strong correlation between the interests of Envestra and consumers.[1033]

The AER considers that allowing termination for minor breaches or for breaches that could easily have been remedied is not in the long term interests of consumers. It could create instability and

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[1029] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 20.
[1030] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 20.
[1031] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 21.
[1032] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 20.
[1033] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 21.

uncertainty. The AER considers that the long term interests of consumers are best served by allowing for the continuity of existing relationships unless there are strong reasons to end them. The AER considers that a 14 day remedy period achieves these goals and is therefore consistent with the NGO.

Assumption that the right will be used capriciously

Envestra states that AGL's submission assumes that the right will be used capriciously or unreasonably. These submissions do not take account of Envestra's strong commercial incentives. It is unrealistic to suggest that Envestra will terminate supply in circumstances where it is not justified.[1034]

As has been discussed above, sub-clause 28.2(a) gives Envestra a legal right that can potentially be used in a disproportionate manner. Commercial circumstances do not limit the legal effect of this sub-clause. To this extent, the AER considers that AGL's submissions[1035] justifiably draw attention to the potential for this sub clause to be used in disproportionate circumstances.

Limitation

Envestra submitted that if a Network User disputes an amount specified in a statement of charges the dispute resolution process in clauses 21.5 and 23 or r. 510 of the NGR (once NECF is adopted) will apply.[1036] Thus, in the case of a disputed statement, Envestra cannot rely on non payment to terminate an agreement.

The AER accepts that this clause will apply where a Network User disputes an amount but in all other cases including where the dispute concerns other matters, it would remain open to Envestra to terminate. The AER considers that there may be circumstances where a Network User chooses not to dispute a statement of charges. In any case, these mechanisms do not act to limit the potential disproportionate outcome that could result from this sub-clause.

Remedy period

Envestra referred to Origin's submissions on its access arrangement proposal. Origin submitted there is no provision of a remedy period. Envestra stated that this is incorrect as Clause 28.2 contemplates that Envestra must give the retailer seven days notice of termination. Clause 28.2(b) allows a 14 day remedy period.[1037]

Sub-clause 28.2(b) does provide for a remedy period. However, sub-clause 28.2(a) does not. The AER's draft decision required amendments to sub-clause 28.2(a) to include a remedy period.[1038]

Breach of a conduct provision

Envestra submitted that once NECF is adopted, r. 503 of the NGR will provide that a failure to pay will be a breach of a conduct provision. Rule 503 obliges retailers to pay the distribution services charge

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[1034] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 21.
[1035] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.
[1036] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 21.
[1037] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 22.
[1038] AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 309.

by the due date. Rule 503 has not been qualified in the manner suggested by Origin or AGL. Rule 503 does not provide for a notice period or a cure period.[1039]

The AER accepts that once rule 503 is operative it will provide further recourse to a distributor in that under s 232 of the NGL it could seek an order that a retailer is in breach of a conduct provision where payment has not been made by the due date. However, it does not provide for a distributor to terminate an agreement and is not therefore relevant to the AER's assessment of clause 28.2.

Credit support

Envestra submitted that under r. 528(a) of the NGR it is entitled to draw credit support with three business days notice. This rule does not provide for cure periods.[1040]

The AER considers that the operation of credit support provisions is not relevant to the issue of notice periods before terminating the agreement. Rule 528 does not provide for termination of the agreement. Credit arrangements are about protecting Envestra in an ongoing relationship. The manner in which one mechanism operates should have no bearing on how another, unrelated, mechanism operates.

Dispute resolution

Envestra submitted that under r. 132 of the NERL a ROLR event occurs as soon as an insolvency official is appointed. There are no provisions that make a ROLR event subject to the resolution of disputes.

The AER accepts that in certain circumstances Envestra should be able to terminate the contractual relationship with a Network User without a requirement to follow the dispute resolution process in clauses 23 (Disputed statement of charges) or 37 (Dispute resolution). However, in other circumstances, the right to terminate should be subject to dispute processes. Each of the circumstances is discussed below.

Clause 37–Dispute resolution

The AER considers that termination under sub-clauses 28.2(a) or (b) should be subject to having followed the dispute resolution process under clause 37.

These two sub-clauses allow for termination because of a failure to pay an amount due on time or in the manner required (28.2(a)) or for breach of any other obligation (28.2(b)). These are circumstances where the parties may be in dispute.

The remaining grounds for termination in sub-clause 28.2 include circumstances that are self evident and where there will not be a dispute between the parties. For example, where the Network User becomes an externally administered body, ceases to be registered under the NGR, or ceases to be a covered pipeline.

The AER considers that providing for the resolution of disputes surrounding payment or breach of obligations, prior to termination, is reasonable and promotes the efficient operation and use of gas services in the long term interest of consumers with respect to price. This avoids the potential disruption and cost increases that may be faced by consumers in the event of termination.

1039 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 22.
1040 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 22.

Clause 37 provides for a dispute resolution mechanism.

Envestra submitted that under the ROLR event mechanism in s.132 of the NERL, once it is adopted in Victoria, there is no provision that makes the occurrence of a ROLR event subject to the resolution of disputes. In its draft decision, the AER required sub-clause 28.2 to be amended to make it subject to clauses 23 and 37.[1041] Envestra stated that it would create a curious situation if there was a ROLR event but Envestra could not terminate an agreement under clauses 28.2(c), (d) or (g) because the retailer disputes the basis of the termination.[1042] Sub-clauses 28.2(c), (d) and (g) are likely to be ROLR events.

As Envestra has submitted, it would be a perverse situation if a Network User could dispute a decision to terminate an agreement because of its insolvency, the appointment of an external administrator or official, or ceasing to be registered under the NGR. It would also be perverse if Envestra had to go through the dispute resolution process before terminating the agreement for any of these reasons. These occurrences will be self evident and will often trigger a ROLR event. In these circumstances the AER considers that it is reasonable and consistent with the NGO for Envestra to terminate the agreement. Such an outcome promotes the efficient operation and use of gas services because it ensures that following a ROLR event, Envestra is able to end the contractual relationship.

Clause 23–Disputed statement of charges

The AER considers that it is only necessary for sub-clause 28.2(a) to be made subject to clause 23 (Disputed statement of charges). The other sub-clauses in clause 28.2 do not relate to the payment of charges and therefore it would not be appropriate to make them subject to a disputed charges provision (clause 23).

The AER considers that Envestra should not be permitted to terminate on the grounds of outstanding monies where there is a dispute over the statement of charges to which the subject monies relate. If this were the case, this would enable Envestra to terminate whenever a Network User disputed a statement of charges. This would not be in the long term interests of consumers with respect to prices.

Exclusion of economic loss and consequential loss and maximum liability for other loss

The AER required Envestra to replace the defined term 'Claim' in sub-clause 29.6 and 29.7 with the undefined 'claim'.[1043] Envestra has adopted this amendment, subject to revised wording. Envestra proposed the removal of the definition of 'Claim' in sub-clause 29.3 and its replacement with a new definition in the Glossary. Envestra also proposed to delete all of the words in sub-clause 29.3, after sub-paragraph (b).[1044]

The AER approves Envestra's revisions as they are reasonable and have substantially the same effect as the AER's proposed amendments, whilst clarifying the meaning of 'Claim'. Sub-clauses 29.6 and 7 now operate reciprocally. The AER considers that these amendments are consistent with the

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1041 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 308.

1042 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 22.

1043 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 312.

1044 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 23.

NGO because they provide certainty which promotes the efficient operation and use of gas services and avoids the potential for disputes.

AGL submits that this exclusion should not apply to negligent or wilful actions[1045] but has not provided supporting reasons. The AER notes that sub-clause 29.6 applies reciprocally to Envestra and Network Users. The AER considers that a clause of this nature acts to incentivise a party that suffers loss to take steps to mitigate the extent of that loss. This will result in lower costs, which is in the long term interests of consumers, with respect to price. If this clause was excluded from application where the loss was caused by negligence or wilful conduct, a party would face a reduced incentive to mitigate its loss. Such an outcome would not be consistent with the NGO.

Credit support

The AER does not approve Envestra's amendments to clause 6.4 (Network User policy) of the access arrangement. However, the AER does approve Envestra's amendment to sub-clause 27.1 (credit support) of its terms and conditions.

The AER proposes a further amendment to sub-clauses 27.2 to deal with the delay in the adoption of NECF in Victoria and to make Envestra's access arrangement acceptable.

In its revised proposal, Envestra submitted that its initial access arrangement proposal was prepared under the assumption that the NECF would be implemented in Victoria at the same time that the access arrangement would take effect.[1046]

Envestra therefore proposed additional changes to the credit support provisions in clause 6.4 of its access arrangement and clause 27.1 of its terms and conditions. Envestra proposed to amend its sub-clause 27.1 to make it clear that clause 27 will apply if there is no legal requirement governing credit support. Because the NECF has not been adopted in Victoria, there is currently no law that governs the provision of credit support. If Envestra's proposed amendment was not accepted, sub clause 27.1 would not make sense. Envestra's proposed amendment makes it clear that clause 27 will apply where there is no law requiring credit support.

Envestra requested that the AER consider approving these further amendments to its revised proposal under r. 60(2) of the NGR.[1047]

Rule 60(2) provides that amendments to an access arrangement proposal must be limited to those necessary to address maters raised in the access arrangement draft decision unless the AER approves further amendment. The AER approves the revisions made by Envestra to its revised proposal. These are considered below.

The AER considers that the delays to the adoption of the NECF in Victoria necessitate amendment to sub-clause 27.1 of Envestra's terms and conditions. Accordingly, the AER approves this further amendment under r. 60(2).

The AER also considers that the non-adoption of the NECF in Victoria necessitates a further amendment in order to make clause 27 fully effective. In sub clause 27.2(a) the reference to an

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1045 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.
1046 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 35.
1047 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 35.

amount 'permitted by law' should be removed. The AER considers that this phrase should be replaced with an obligation on Envestra to act reasonably when determining the amount of credit support.

The AER considers that the proposed amendment to clause 6.4 of the access arrangement is not necessary as a result of the delays to the adoption of the NECF in Victoria. The AER considers that Envestra's proposed amendment to clause 6.4 is unnecessary in view of its proposed amendment to sub-clause 27.1. Accordingly, the AER does not approve this further amendment.

Death or personal injury

The AER approves sub-clause 29.1 under which Envestra provides the Network User with a limited indemnity against personal injury to the Network User's servants, agents etc caused by Envestra as a result of negligence.

The AER does not approve sub-clause 33.3 under which a Network User would be required to provide a strict liability indemnity against death or personal injury to Envestra's servants, agents etc caused by the Network User or a shared customer.

The AER proposes revisions to sub-clause 33.3 to make Envestra's access arrangement acceptable. This would require that the Network User provide a limited indemnity in the same way that Envestra must provide a limited indemnity under sub-clause 29.1. At minimum the AER considers that it is in the long term interest of consumers, with respect to price, to incentivise the parties to take reasonable steps to avoid foreseeable risks. A reciprocal limited indemnity obligation will achieve that objective.

The AER's reasons are as follows:

- Consistency with the NGO is achieved by each party offering a fault based indemnity.
- A limited liability indemnity incentivises the parties to take steps to avoid causing personal injury which could lead to claims against them.
- Envestra submitted, and the AER accepts, that if reciprocity is appropriate, having regard to the NGO, it should be achieved instead by amending clause 33.3 so that the Network User provide Envestra with a limited indemnity in the same way that Envestra must provide a limited indemnity to the Network User under clause 29.1(b).[1048]
- Based on the information available to the AER, it is not conclusive that a strict liability indemnity either applied to the Network User only or to both Envestra and the Network User will create the necessary incentives for efficient provision of the services.

The AER notes that Envestra's 2008–12 access arrangement did not contain any form of indemnity, from either party, against death or personnel injury. The AER also notes that the 2013–17 access arrangements proposed by SP AusNet and Multinet do not include comparable obligations.

In this context, the AER acknowledges that commercial circumstances may develop where a different approach may be agreed by a Network User and a gas pipeline operator. The AER's decision is based on the information before it at this time. The AER's proposed inclusion of this provision therefore would not preclude negotiation by the parties on this clause.

[1048] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 25.

The AER in its draft decision required Envestra to amend sub-clause 29.1 by replacing the limited liability indemnity that would apply to it with a strict liability indemnity clause that reflected the strict liability indemnity that it sought from Network Users under sub-clause 33.3.[1049] At that time, the AER considered that reciprocity was appropriate and a strict liability indemnity provided by both Envestra and the Network Users would achieve this.

In its revised proposal, Envestra has not adopted the AER's required changes. In its revised proposal, Envestra retained its original drafting of clause 29. Envestra submitted that the AER should focus on the issue of whether it is appropriate for Network Users to be subject to an indemnity that imposes strict liability on them, or whether the NGO dictates that a Network User's indemnity should be a fault based indemnity like the indemnity Envestra proposes in sub-clause 29.1(b).[1050] Envestra then provided a number of reasons why it considers that Network Users should be subject to strict liability instead of the fault based liability it proposes for itself. Envestra's submissions are considered below.

AGL submitted that the strict liability indemnity in sub-clause 33.3 should be made reciprocal.[1051]

Based on the information available to the AER and the AER's analysis set out below, it is not conclusive that a strict liability indemnity either applied to the Network User only or to both Envestra and the Network User will create the necessary incentives for efficient provision of the services.

Incentives under a Strict liability indemnity

Envestra objected to the AER's draft decision to impose strict liability upon Envestra. Envestra submitted that Envestra would be liable for an injury that it causes, even where it has adopted industry best practice and acted with all due care.[1052]

Envestra submitted that a strict liability indemnity is more likely to create a disincentive for a party to develop appropriate procedures and safety measures. Envestra submitted that strict liability means Envestra is liable for any injury it causes no matter what procedures or safety measures it adopts. This does not act as a strong incentive to develop those procedures or safety measures.[1053] In contrast, Envestra submitted that an indemnity against negligence rewards the development of appropriate procedures and safety measures.

Envestra also submitted that imposing strict liability on it would not encourage or reward efficiency. Instead, it could lead to gold plating of procedures or safety measures, that is, [1054] measures that go beyond efficient and reasonable bounds. It would do so in an attempt to ensure that death or injury does not occur.[1055] The AER notes that this aspect of its submission appears to be at odds with its other claim, set out above, that strict liability would not act as a strong incentive to develop appropriate procedures and safety measures.

The AER accepts that a strict liability indemnity imposes liability for any death or injury caused by the indemnifying party, regardless of preventative steps taken. There is no need to prove negligence or fault. Only causation must be proved.

1049 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, p. 312.
1050 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 25.
1051 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.
1052 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 26.
1053 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 24.
1054 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 24.
1055 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 24.

Based on this, the AER considers that in general a strict liability indemnity is likely to incentivise a party to take steps to reduce the likelihood of the indemnity being triggered. Accordingly, the AER does not accept Envestra's assertion that a strict liability indemnity is likely to create a disincentive to a party developing appropriate procedures and safety measures.

The AER accepts that there may be a possibility that a strict liability indemnity (whether applied on a unilateral or reciprocal basis) will incentivise a party to 'gold plate' its safety standards so as to avoid ever triggering the indemnity, and this would not be consistent with the NGO. However, the AER considers that such an outcome is unlikely to eventuate if the allocation of risks, and the associated insurance costs, are balanced appropriately. These will be commercial considerations taken into account in negotiations between the parties.

Unnecessary to incentivise Envestra

Envestra submitted that the gas industry is heavily regulated and it is subject to extensive laws that regulate workers' health and safety and public health. Envestra submitted that these laws and obligations impose significant and adequate incentives on it to take steps to avoid causing death or injury.[1056]

Envestra also submitted that as a publicly listed company, it faces significant commercial and reputational incentives to conduct business in a safe manner.[1057]

The AER considers that these are factors that apply equally to Network Users, the majority of which are public companies. Any incentives will apply equally to Envestra and Network Users. If these factors are arguments against the need for an indemnity, they apply to the need for indemnities from all parties, not just Envestra.

Revenue and pricing principles

Envestra submitted that primarily the NGL seeks to achieve the NGO through the revenue and pricing principles.[1058] Envestra asserts that imposing strict liability on Network Users is consistent with the revenue and pricing principles.[1059] Envestra submitted that the purpose of the strict liability indemnity on Network Users is to ensure that where Envestra suffers loss, cost or expense as a result of death or personal injury that is suffered by its officers, servants, agents or contractors, it is able to recover that loss cost or expense. Envestra argues that this is consistent with the revenue and pricing principles.[1060]

Envestra submits that strict liability provides incentives to promote economic efficiency.[1061] Envestra states that imposing a strict liability indemnity on Network Users means that Envestra does not need to take inefficient steps to protect its officers, servants, agents and contractors.[1062]

Envestra stated that it is the party that engages in the physical operation of the network and it is this engagement that gives rise to the risk of death or injury. In essence, Network Users' obligations are

1056 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 24.
1057 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 24.
1058 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 25.
1059 NGL 24.
1060 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 25.
1061 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 25.
1062 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 26.

simply to pay for services provided by Envestra and provide credit support. Envestra considers that these obligations do not expose Network Users to the same risk of causing death or injury.[1063]

The AER does not agree that the revenue and pricing principles are a basis for applying strict liability upon a Network User. The relevant criteria to be applied to the terms and conditions is consistency with the NGO. The revenue and pricing principles are a paramount consideration in the application of reference tariffs but are not a mandatory consideration when determining non-tariff terms and conditions.

In response to Envestra's suggestion that the absence of a strict liability indemnity obligation upon Network Users would mean that Envestra would need to act inefficiently, the AER has been presented with no evidence that this has occurred under Envestra's current access arrangement which does not include such a provision. The AER considers that there is no suggestion that to date Envestra has not been incentivised to take efficient steps to protect its own officers, employees, agents and contractors.

In relation to Envestra's submission concerning the nature of the pipeline operators and the appropriate balance of risk, the AER considers that a limited liability indemnity is sufficient incentive to ensure that the parties take steps to avoid causing personal injury which could lead to claims against them. This meets the requirements of the NGO. The information before the AER is not sufficient for the AER to conclude that a strict liability provision applied only to the Network User will create the necessary incentives for efficient provision of the services.

The same indemnities were approved by the AER in SA and QLD

Envestra submits that this clause has previously been approved by the AER in its previous decisions on Envestra's access arrangements for its South Australian and Queensland businesses.[1064]

The AER has full discretion when assessing terms and conditions.[1065]

The AER assesses each access arrangement proposal with reference to the particular proposal and any submissions it receives about that proposal. Each access arrangement review is a separate process. The AER takes account of all relevant information, including previous access arrangements and previous AER decisions.

Assistance

Sub-clause 32.2 provides that the Network User will use its best endeavours to cause or procure Upstream Operator's and Shared Customers to provide Envestra at no cost with whatever information, assistance or co-operation it might reasonably require in connection with the Agreement.

AGL submitted that the Network User should be able to pass on any costs that are charged by the Shared Customer or Upstream Operator in assisting Envestra. AGL states that the AER did not provide any view upon this in their draft determination. AGL therefore requests that the AER review this clause during this current round of consultation.[1066]

1063 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 25.
1064 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 26.
1065 NGR 40(3).
1066 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

The AER notes that it addressed AGL's original submission on page 314 of its draft decision.

The AER considers that the Network User is best placed to ensure that customers and upstream operators provide necessary assistance, cooperation or information in a timely manner. As the Network User has a contractual relationship with these parties, these obligations can be managed through that relationship.

The AER considers that obliging the Network User to provide or obtain assistance or information to assist Envestra to comply with its obligations is consistent with the NGO. Such obligations ensure that Envestra can meet its obligations and operate the network efficiently. The AER considers that this promotes the efficient use of services.

User's insurance

Clause 34 imposes a number of obligations on Network Users with respect to insurance.

The AER does not approve clause 34 and proposes a number of revisions to make Envestra's access arrangement acceptable.

In its draft decision the AER required Envestra to make a number of amendments to the insurance obligations set out in clause 34 of its access arrangement proposal to make them reciprocal.[1067] Envestra has not adopted the required amendments.

Envestra made a number of submissions on the insurance clause. These submissions are discussed below.

AGL submits that if a requirement to obtain insurance is necessary, not only should it be reciprocal, but Envestra should also not be able to approve the Network Users' insurers. AGL states that it has many contracts with many different entities and different types of insurance coverage such that it would not be able to note the interests of all of its counter parties.[1068]

Obligation to obtain and maintain insurance

The AER proposes a clause that requires Envestra to take out and maintain insurance, so as to make Envestra's access arrangement acceptable. The AER considers that such an obligation incentivises Envestra to take out and maintain insurance and protects Network Users from the risk that Envestra may not take out insurance or adequate insurance.

Envestra's 2008–12 access arrangement contained reciprocal obligations requiring each party to take out adequate insurance and provide the other party with proof of the currency of this insurance on reasonable request.[1069] The AER notes that SP AusNet and Multinet have each proposed a term in this form.[1070]

In its draft decision the AER required the obligation to obtain and maintain insurance to apply to Envestra as well as the Network Users.

[1067] AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 315

[1068] AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

[1069] Envestra, Access Arrangement 2008–12, Part C, clause 13.4.

[1070] SP AusNet, Access arrangement proposal, clause 13.4; Multinet, Access arrangement proposal, clause 13.4.

General commercial factors

Envestra submitted that it is not necessary for it to face such an obligation for a number of reasons: it is a publicly listed company; its directors have a duty to act in the best interests of the shareholders; and there are adequate commercial incentives for it to obtain insurance.[1071]

The AER considers that these factors generally apply to Network Users as well. Accordingly, they are not persuasive arguments against the need for a term obliging Envestra to take out insurance especially taking into account that Envestra's exisitng access arrangement includes such a reciprocal obligation.

Reference tariff

Envestra submitted that the reference tariff incorporates insurance costs that are assessed as part of its opex base. [1072] Envestra submits that an insurance clause is not necessary to protect consumers from the risk of its insolvency resulting from uninsured loss.[1073]

An insurance component is included in Envestra's opex base but this is distinct from a contractual obligation to insure. Including an obligation requiring Envestra to insure against risks that a person carrying on a business of operating a gas distribution network would prudently insure against acts to provide comfort to Network Users that Envestra is adequately protected. Without this, Network Users may need to take out additional insurance to protect themselves from risks that Envestra would ordinarily be expected to insure against. This would increase costs which would not be in the long term interests of consumers, an aspect of the NGO.

Benefit of insurance - sub-clause 34.2

Clause 34.2 requires a Network User to ensure that any insurance it obtains notes the interest of Envestra in the insurance policy. The AER does not approve sub-clause 34.2 and proposes that it be removed to make Envestra's access arrangement acceptable.

Envestra stated that in the case of most Network Users it does not rely on sub-clause 34.2. For the case of Network Users of substance that are publicly listed companies Envestra has not relied on this clause to require a Network User to note Envestra's interests on any policy or to produce certificates of currency.[1074]

Envestra also submitted that if the AER has concerns about sub-clause 34.2, it would be preferable to simply delete the clause.[1075]

AGL submits that it has many contracts with many different entities and different types of insurance coverage and would not be able to note the interests of all the counterparties.[1076]

The AER considers that the inclusion of clause 34.2 in the terms and conditions is not consistent with the NGO. The broad application of such a clause could potentially limit the commercial flexibility for a Network User to choose an appropriate insurer and would impose additional costs on Network Users

1071 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 27.
1072 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 28.
1073 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 27.
1074 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 28.
1075 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 28.
1076 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

in amending their existing insurance policies. It would also likely increase the costs faced by Network Users if they were required to note Envestra's interest on each insurance policy they hold. This could potentially lead to increased costs which would not be in the long term interests of consumers with respect to price.

Sub-clause 34.4

The AER approves sub-clause 34.4 which requires the Network User to give notice of any claims that 'relate to the Network'.

The AER accepts Envestra's submission that sub-clause 34.4 does not need to be reciprocal (as the AER had required in its draft decision). To make this sub-clause reciprocal would impose a burden on Envestra much greater than that faced by the Network Users. As Envestra owns and operates the network, most of its claims would 'relate to the network'. In contrast, this would be less of an imposition upon Network Users, as it is unlikely that many claims made by a Network User will 'relate to the network'.

This increased burden on Envestra would be likely to lead to increased administrative costs. This would not be reasonable nor in the long term interests of consumers with respect to price.

Sub-clauses 34.5, 34.6 and 34.7

The AER considers it is not practical for sub-clauses 34.5 (claims enforcement) and 34.6 (claims settlement) to be reciprocal. The AER accepts Envestra's proposed terms and conditions with respect to these sub-clauses.

The AER considers that these clauses do not impose a significant burden on Network Users. However, if they were to apply to Envestra, they would impose a significant burden.

Given that Envestra contracts with multiple Network Users, making these sub-clauses reciprocal would mean that:

- Envestra must take steps required by each Network User when a claim arises (sub-clause 34.5)
- Envestra must have the consent of each Network User before settling or compromising a claim (sub-clause 34.6)
- each Network User could take out insurance on Envestra's behalf, at Envestra's cost, if Envestra did not take out insurance required under the Agreement (sub-clause 37.7).

The AER considers that these scenarios would be impractical, and potentially lead to increased costs as well as creating confusion. Such a situation would not promote the efficient operation of natural gas services and would be likely to lead to increased costs. This would not be in the long term interests of consumers with respect to price.

Sub-clause 34.7

Sub-clause 34.7 requires the Network User to notify Envestra if it fails to obtain or maintain insurance required under the Agreement. It then provides that, where this is the case, Envestra can take out insurance on the Network User's behalf, at the cost of the Network User.

The AER proposes that sub-clause 34.7 (failure to insure) be revised so that the first part applies reciprocally, and the second part is deleted.

In relation to the first part of sub-clause 34.7, the AER considers that an obligation to notify the other party if it fails to take out or maintain insurance required under the Agreement should be reciprocal. Such a failure could have a serious impact on the other party's risk exposure and each party should be given the opportunity to increase its own insurance coverage to guard against its exposure.

The AER considers that the second part of sub-clause 34.7 — the power to take out insurance on the other party's behalf — should be deleted. It would be impractical to apply the second part reciprocally. It could lead to multiple Network Users taking out insurance on Envestra's behalf and seeking the costs from Envestra. This would likely increase costs to consumers and would not be consistent with the NGO. The AER considers that an obligation to notify the other party when a party fails to obtain or maintain insurance required under the Agreement provides adequate protection. This is because it ensures that the counter party is informed of the situation and is in a position to balance the risk of continuing to deal with the uninsured party.

The AER sought Envestra's comment on its proposals set out above.[1077] Envestra submitted that it does not agree with the proposal. This is because a significant amount of time could elapse between notification of failure to insure, and the rectification of that breach. In the intervening period, no insurance would be in place, this being at Envestra's risk, which is unacceptable.[1078]

Envestra further submitted that, consistent with the national gas objective, it is better for Envestra to have the self-help rights under clause 34.7 rather than be forced to pursue its other remedies for breach such as termination of the haulage agreement with the network user. It also noted that the clause, in its entirety, is a "boilerplate" clause that is common in many contracts.[1079]

The AER considers that where a party fails to insure against a risk, if the counter party is made aware of that failure, the counterparty then has the opportunity to take out its own insurance against the risk and seek damages for breach of contract. Notice of the failure to insure keeps the counter party informed and allows it to take a commercial approach to the risk. In Envestra's case, if it considered the risk was unacceptable, it could insure against it. This ability for a party to take out its own insurance and seek damages acts as a self help remedy. Further, the AER considers that the 'boilerplate' nature of a clause is not relevant to assessing its consistency with the NGO.

Accordingly, the AER proposes to make the first part of sub-clause 34.7 reciprocal, and remove the second part.

Business interruption insurance

Envestra stated that it has chosen not to take out business interruption insurance because of the cost. However, if clause 34.1 were applied reciprocally there is an issue as to whether it will have to take out this insurance.[1080]

The wording of clause 34.1, as proposed by Envestra, is qualified. The obligation is to obtain and maintain insurance against risks a person carrying on a business (of operating a gas delivery network) would prudently insure.

The AER considers that the qualified nature of the term is in the long term interests of consumers, as it would not oblige Envestra to take out insurance where it was not prudent or efficient to do so.

1077 AER information request Fd17a, dated 17 February 2012.
1078 Envestra, response to information request Fd17a, 27 February 2012.
1079 Envestra, response to information request Fd17a, 27 February 2012.
1080 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 30.

Clause 34 was previously approved

Envestra submits that the AER approved this clause in its previous decisions on Envestra's access arrangements for its South Australian and Queensland businesses.[1081]

The AER has full discretion when assessing terms and conditions.[1082]

The AER assesses each access arrangement proposal with reference to the particular proposal and any submissions it receives about that proposal. Each access arrangement review is a separate process. The AER takes account of all relevant information, including previous access arrangements and previous AER decisions.

Access to premises

Sub-clause 35.5 provides that Envestra will not be liable to the Network User for any failure to perform the Agreement if the failure is because it could not obtain safe, reasonable, and unhindered access to any premises.

The AER does not approve sub-clause 35.5. The AER proposes a revision to sub-clause 35.5(b) and to delete sub-clause 35.5(c) to make Envestra's access arrangement acceptable.

In its decision, the AER required Envestra to make three minor amendments to sub-clause 35.5.[1083] Envestra adopted these amendments. Envestra proposed a further amendment to sub-clause 35.5 to define three circumstances that will expressly not be covered by the obligation to exercise reasonable endeavours. These circumstances are:

- to enter or attempt to enter, any premises by force or to take steps that might involve damage, or the risk of damage, to any property; or
- to take any steps that might involve a risk of physical injury or harm or a risk to the safety of any person; or
- to take any steps the costs of which have not been included or allowed in the calculation or derivation of the reference tariffs.[1084]

The AER considers that the first amendment is consistent with the NGO. The AER considers that it would be unreasonable to require Envestra to enter premises by force or take steps that may damage the premises. The AER considers that an obligation to exercise best endeavours would not encompass these activities. Nonetheless, the amendment makes this explicitly clear, which the AER considers adds clarity. The AER approves sub-clause 35.5(a).

AGL submitted that it accepts the clause as excluding Envestra from being liable to the Network User for failing to perform an Agreement where it could not do so on account of access issues. AGL sought clarification on how it will be determined whether or not costs have been included or allowed in the calculation of the Reference Tariffs.[1085]

1081 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 30.
1082 NGR 40(3).
1083 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 317.
1084 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 30.
1085 AGL, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement proposals, 7 January 2013, Attachment B.

The AER approves the second amendment, subject to the insertion of "reasonable" prior to each occurrence of 'risk'. The AER considers that the wording proposed by Envestra would apply to any risk, regardless of how foreseeable or likely the risk was. The AER considers that this would negate the obligation to exercise best endeavours. The inclusion of a reasonableness qualification acts to limit the extent of the second amendment. With the AER's proposed amendment, Envestra will be required to exercise its best endeavours but will not be required to take steps that might objectively involve a risk to the safety of any person.

In relation to the third amendment, the AER considers that the reference tariffs include allowances for costs though many of those costs are general in nature and if incorporated into base year opex may not be specifically identified. In addition, Envestra will ultimately determine how that opex is allocated. Taking this into account the AER considers that the proposed qualification is unclear and uncertain and could not practically be applied. Accordingly, the AER considers that it is not consistent with the NGO and the AER does not approve this additional qualification.

Assignment

The AER does not accept clause 39, which sets out the processes for assignment. The AER proposes a number of revisions to clause 39 to make Envestra's access arrangement acceptable.

The AER considers that it is reasonable and consistent with the NGO for the terms and conditions to contain a term requiring Envestra to permit Network Users to assign their rights and obligations. However, such a term needs to be qualified to ensure that assignment can only take place when all regulatory requirements have been met and where practical problems will not be created. If this was not the case, Network Users could assign their rights to an assignee that was not able to operate within the gas market. This would not be in the long term interests of consumers with respect to reliability of supply.

In its draft decision, the AER required Envestra to amend clause 39 to make the assignment rights reciprocal.[1086]

Envestra has not adopted the required amendments. In its revised proposal, Envestra made a number of submissions against making assignment reciprocal.

Reciprocity

Envestra submitted that under AEMO's Retail Market Procedures (Victoria) the retailer is the Financially Responsible Organisation (FRO). Following assignment, the assignor will continue to be the FRO although the assignee would have the contractual right to have gas delivered. However, the assignor will have no agreement in respect of the delivery points for which it is the FRO. The assignment will lead to a disconnect between the party who is the FRO and the party who has the right to have gas delivered.[1087]

Envestra submitted that if the assignee is intended to become the FRO, then it is impossible to address the assignment independently of the requirements of the Victorian Retail Market Procedures. A principle of these procedures is that a customer is not transferred by a retailer without their explicit, informed consent (clause 4.1.4). It is not appropriate to give a retailer the ability to assign the

[1086] AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 318.
[1087] Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 31.

agreement, without addressing the issue of consent and requiring the assignment to take place simultaneously with the registration of the transfer requests. This is impractical.[1088]

Once NECF is adopted in Victoria, assignment would also create a disconnect between the contractual obligation to pay charges and credit support under the agreement and the equivalent obligation in the NGR. The contractual obligation will pass to the assignee but the statutory obligation will remain with the assignor (the FRO).[1089]

The AER considers that the regulatory regime imposes constraints that may impact upon the process of assignment. In particular, for the assignee to replace the assignor as the FRO, it must obtain informed consent from all customers before transferring them. However, assignment would still be possible if the assignee and assignor were able to meet these requirements.

The AER agrees with Envestra that, in view of the practical complications, a Network User wishing to sell its business will generally do so by way of a sale of shares rather than a sale of assets and assignment of relevant agreements.[1090] This process would overcome the difficulties that would be faced by an assignment.

Nevertheless, there may potentially be circumstances where a sale of business is not appropriate or practical. In these situations an assignment process would be needed. For instance, if an organisation wished to transfer its gas retail business between subsidiary companies. The AER considers that, subject to all regulatory requirements being met, Network Users (and their holding companies) should not be constrained in the structuring of their businesses.

Qualifications

Envestra proposed that, if the AER requires Network Users to have the right of assignment, the right of assignment should only be allowed if, prior to the effective date of the assignment, the following conditions have been met:

a. the assignor has explicit informed consent from all of the customers for whom the assignor is the gas retailer to the assignee becoming their new gas retailer;

b. the transfer of those customers is registered by AEMO under the Victorian Retail Market Procedures (such that the assignee becomes the FRO for the relevant delivery points);

c. the assignee enters into an agreement with Envestra under which the assignee agrees to be bound by the agreement between Envestra and the assignor as if the assignee stood in the shoes of the assignor;

d. the assignee meets the requirements of Envestra's Network User Policy;

e. the assignee holds the requisite licences or authorisations to retail gas and is registered as a participant in the relevant gas markets;

f. the assignee has provided Envestra with the same credit support as Envestra holds from the assignor for the charges payable by the assignee; and

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1088 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 32.
1089 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 31.
1090 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 33.

g. Envestra has given its consent to the assignment of rights and obligations to the assignee (with such consent not to be unreasonably withheld).[1091]

The AER considers that, in general, the factors proposed by Envestra are reasonable and consistent with the NGO. They permit Network Users to assign their rights under the agreement but act to ensure that the assignee meets all the regulatory requirements. This avoids situations where the Network User assigns its rights to an assignee that is not able to operate in the gas market. This is in the long term interests of consumers with respect to reliability and security of supply.

The AER proposes factors based on the factors proposed by Envestra, with amendments to more specifically reference AEMO's Retail Market Procedures. The AER has also made amendments to refer to the 'prospective assignee' rather than the 'assignee'. This is because, at the time the preliminary stages take place, there will have been no assignment yet.

Commercial matters

Origin submitted that the AER has determined that these matters are best left to commercial negotiation between the parties. Origin questions whether this is a workable approach to the regulation of monopoly assets.[1092]

Origin understands that the AER is seeking to move to a more collaborative approach to the negotiation of terms and supports greater collaboration in principle. Origin welcomes in particular the AER's finding that nothing in the rules precludes a distributor from negotiating terms with individual retailers that differ from the overall access arrangement.

Origin stated that in its experience distributors have at times asserted that the rules preclude negotiation of different terms, since this would create preferential treatment for one user or would create retailer-specific rates.[1093]

Origin supports flexibility but does not support an approach where the AER leaves significant terms (such as the details of terms of payment) up to negotiation between service providers and users where negotiation in the workshop has proven unsuccessful. If commercial negotiation was sufficient to resolve points of difference over haulage terms then the current costly open access regime currently in place. The balance of interests between service providers and is such that the service provider can refuse an amendment and the user has no choice but to accept this. This leaves little scope for genuine negotiation. While a service provider has from time to time conceded on minor points, it has little incentive to concede on any point of commercial significance, and perhaps cannot be expected to do so within the existing rules framework.[1094]

For these reasons, Origin considers that investigating differences of opinion between service providers and users about haulage terms and adjudicating on these rules remains a primary responsibility of the AER under the NGL and NGR. Origin considers that terms noted in the draft

1091 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 33.
1092 Origin, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement revised proposals, 8 January 2013, p. 4.
1093 Origin, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement revised proposals, 8 January 2013, p. 4.
1094 Origin, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement revised proposals, 8 January 2013, p. 4.

decision as left to commercial negotiation should be those whose agreement has already been reached in the course of workshops.[1095]

The AER in its draft decision did not limit its consideration to whether terms and conditions, including those referred to by Origin, were "commercial matters". Instead, the AER made an assessment about the consistency of each proposed clause with the NGO. The AER considers that this approach is consistent with the requirements of the NGL and NGR.[1096]

In effect, the AER determines whether the proposal is consistent with the NGO. What is approved by the AER therefore will provide the fundamental basis and be sufficiently comprehensive to establish the requirements for accessing the reference services, subject to any further negotiations between the parties.

Origin submitted the example of clause 33.6 (Indemnity qualification). Origin submitted that in relation to clause 33.6 the AER appears to recognise that some amendment may be helpful but leaves the outcome of this to commercial negotiation.

The AER considers that clause 33.6 acts to benefit Network Users (such as Origin). The AER aproved the clause because it considered that it incentivised Envestra to avoid engaging in negligent or wrongful acts. The AER considered this to be consistent with the NGO. Beyond this the AER noted that it remained open to Origin to seek variation of the clause through its negotiations.[1097]

13.3 Capacity trading requirements

13.3.1 Final decision

The AER approves Envestra's capacity trading requirements.

13.3.2 Revised proposal

Envestra amended clause 7 of its access arrangement to provide that the capacity available at a Delivery Point can be transferred between Network Users in accordance with the Victorian Retail Market Procedures. Envestra has set out in detail the reasons why the nature of the Victorian gas distribution network means that there is no contracted capacity.[1098]

13.3.3 Assessment approach

The AER's assessment approach is set out in section 12.2.3 in chapter 12 of part 2 of the draft decision.

1095 Origin, Submission to the AER: SP AusNet, Envestra and Multinet access arrangement revised proposals, 8 January 2013, p. 4.

1096 Application by WA Gas Networks Pty Ltd (No 3) [2012] ACompT 12 (8 June 2012) para 276.

1097 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 3, p98.

1098 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 34; Envestra, revised access arrangement proposal, November 2012, p. 21.

13.3.4 Reasons for decision

In its draft decision the AER required Envestra to amend its access arrangement proposal to state that there are no applicable capacity trading requirements for the purposes of r. 48(1)(f) and 105(1) of the NGR.[1099]

Envestra addressed this issue in its revised proposal and its capacity trading requirements now accord with r. 48(1)(f) and 105(1)(a) of the NGR.

13.4 Queuing arrangements

13.4.1 Final decision

The AER approves Envestra's revised access arrangement proposal insofar as it does not include any queuing requirements.

13.4.2 Revised proposal

Envestra's revised access arrangement proposal did not include queuing requirements. This is consistent with the AER's draft decision

13.4.3 Assessment approach

The AER's assessment approach is set out in section 12.3.3 in chapter 12 of part 2 of the draft decision.

13.4.4 Reasons for decision

As the capacity of Envestra's distribution pipeline is managed by AEMO, queuing requirements are not applicable for Envestra. The AER thereforeapproves Envestra's revised proposal insofar as it does not include any queuing requirements.

13.5 Extension and expansion requirements

13.5.1 Final decision

The AER approves Envestra's extension and expansion policy.

13.5.2 Revised proposal

Envestra's revised access arrangement proposal set out the same extension and expansion requirements as its initial access arrangement proposal, which were approved by the AER in its draft decision.[1100]

13.5.3 Assessment approach

The AER's assessment approach is set out in section 12.4.3 in chapter 12 of part 2 of the draft decision

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1099 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 320.

1100 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, pp. 324–6.

13.5.4 Reasons for decision

In its draft decision the AER accepted Envestra's extension and expansion requirements.[1101] For the reasons set out in that decision, the AER approves Envestra's extension and expansion policy.[1102]

The AER notes that following the draft decision it considered the possible inclusion of certain assumptions in Envestra's extension and expansion requirements. The intention was for such assumptions to apply for the purpose of rule 119M(2)(c) of Part 12 of the NGR which is to commence on the implementation of NECF in Victoria. [1103] Rule 119M concerns the connections charges criteria and any assumptions included in an access arrangement would assist in determining the appropriate connection charge. Such assumptions may be about, for example, the connection assets required, the discount rate or the expected life of the connection. The AER sought to include the following assumptions:

- For Tariff V and Tariff D customers, the discount rate as "the pre tax real WACC included in the distributor's approved access arrangement".
- For Tariff V customers, for the expected life of the connection, an assumption of 20 years for domestic customers and 15 years for commercial industrial customers with the qualification that a different life for commercial and industrial customers may be used if there are grounds to consider that the life of the connection may be less than 15 years.
- For Tariff D customers, for the expected life of the connection, an assumption of 15 years, although a different life may be used if there are grounds to consider that the life of the connection may be less than 30 years.

Currently such assumptions are included in Schedule 2 to the Gas Distribution System Code (Victoria) (Code) but the intention is for the Code to cease to apply on commencement of NECF in Victoria.

The AER sought comment from Envestra, and the other gas distribution businesses, on the need to include the assumptions as set out above.[1104] Envestra did not agree to inclusion of assumptions for the following reasons:[1105]

- First, it maintained that it would be inappropriate to preserve elements of the Victorian Gas Distribution System Code when on the commencement of NECF it is the intention for the Code to no longer apply.
- Second, it submitted that Schedule 2 of the Victorian Gas Distribution System Code is not relevant to the extension and expansion policy. Moreover, Schedule 2 covers the same ground as Part 12 of the NGR and this is why the Victorian Government has deemed that Schedule 2 (and the remainder of the Code) will no longer apply when NECF commences in Victoria. Furthermore, Envestra notes that under Part 12 of the NGR, the AER will approve Envestra's connection charges under model standing offers for connection services. That is, this provides a further degree of oversight by the AER.

1101 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 322.

1102 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, pp. 324–6.

1103 Part 12A was added to the NGR to regulate the connection process and how DNSPs may charge for new connections.

1104 AER information request Fd17a, 20 February 2013.

1105 Envestra, response to information request Fd17a, 27 February 2013.

The AER has considered Envestra's submission but considers that the inclusion of assumptions would provide greater certainty around the calculation of connection charges. Moreover, rule 119M(2)(c) specifically allows for their inclusion.

The AER notes that both SP AusNet and Multinet agreed, subject to amendments being made to the AER's draft provision, to the inclusion of certain assumptions for the purpose of r 119M.[1106] SP AusNet specifically sought inclusion of more assumptions than had been proposed by the AER because "without firm rules on how these will be determined, there could be disputes with customers and so SP AusNet would request that they be included."[1107]

However, both SP AusNet and Multinet expressed concern that it was late in the AER's decision-making process to make this substantial change to the access arrangement.[1108] To achieve a satisfactory outcome would require further consultation on possible amendments to the drafting.

Therefore, at this stage, the AER has determined not to include any assumptions in the 2013-17 access arrangements for each of the distributors on the basis that to do so requires further consultation with the gas distribution businesses. This consultation relates to what assumptions should be included in access arrangements in order to minimise disputes and the drafting of any such amendment to an access arrangement.

13.6 Terms and conditions for changing receipt or delivery points

13.6.1 Final decision

The AER approves Envestra's terms and conditions for changing receipt or delivery points.

13.6.2 Revised proposal

The AER's draft decision did not approve Envestra's proposed terms and conditions for changing receipt or delivery points. The draft decision required Envestra's proposed access arrangement to be amended to include a policy for the change of receipt or delivery points in the same terms as the policy proposed by SP AusNet.[1109]

In its revised proposal, Envestra included the AER's required amendments, subject to some minor changes.

Envestra made the required change with respect to the change of a receipt point.

13.6.3 Assessment approach

The AER's assessment approach is set out in section 12.5.3 in chapter 12 of part 2 of the draft decision.

[1106] SP AusNet, email dated 1 March 2013; Multinet, email dated 28 February 2013.
[1107] SP AusNet, email dated 1 March 2013.
[1108] SP AusNet, email dated 1 March 2013; Multinet, email dated 28 February 2013.
[1109] AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 325.

13.6.4 Reasons for decision

For the reasons set out in its draft decision, the AER is satisfied that Envestra's revised proposal complies with the NGR and is consistent with the NGO.[1110]

13.7 Review dates

13.7.1 Final decision

The AER approves Envestra's review submission date. It does not approve Envestra's revision commencement date. The AER proposes a defined revision commencement date of 1 January 2018 to make Envestra's access arrangement acceptable.

13.7.2 Revised proposal

Envestra adopted the amendment to its review submission date as required by the AER in its draft decision and maintained its revision commencement date as approved by the AER in its draft decision.[1111]

13.7.3 Assessment approach

The AER's assessment approach is set out in section 12.6.3 in chapter 12 of part 2 of the draft decision.

13.7.4 Reasons for decision

In its draft decision, the AER accepted the review commencement date proposed by Envestra which is the same as put forward in its revised proposal. However, on further review, the AER informed Envestra that the date proposed was not workable for the following reasons. The NGR and former Code definition of a revisions commencement date refers to a date. It doesn't refer to processes or mechanisms to determine dates. A revision commencement date must be a specific time, that is, a fixed, singular date. The AER proposed amending clause 9.2 of Envestra's access arrangement to provide for a revision commencement date of 1 January 2018, so as to remove the 'floating' aspect of what Envestra had proposed which could potentially cause confusion in future Access Arrangement decisions.[1112]

On 21 February 2013 Envestra stated that it did not agree with the AER's interpretation of the NGR but it nonetheless agreed to the definition of the revisions commencement date as proposed by the AER.[1113]

Taking into account the above relevant information, the AER does not approve the revision commencement date in Envestra's revised proposal. The AER proposes the fixed date of 1 January 2018 which the AER considers is consistent with r.50(1) of the NGR.

The AER considers that Envestra's review submission date is consistent with the general rule in r.50(1) of the NGR.

1110 AER, Draft decision, Envestra access arrangement proposal for 1 January 2013 – 31 December 2017, September 2012, Part 2, p. 327.
1111 Envestra, Revised access arrangement proposal, Attachment 16, 9 November 2012, p. 18.
1112 Email dated 18 February 2013 from Adam Petersen to Craig de Laine.
1113 Email dated 21 February 2013 from Craig de Laine to Adam Petersen.

13.8 Amendments

The AER proposes the following revisions to make Envestra's revised access arrangement proposal acceptable:

Revision 13.1: In sub-clause 3.3 of the Albury access arrangement, delete the words 'or the Current User'.

Revision 13.2: Amend sub-clause 9.3 as follows:

Insert the following phrase between the words 'DP' and 'the'

and the Network User requests that the equipment be removed.

Revision 13.3: Delete sub-clause 19.3

Revision 13.4: Delete sub-clause 26.3

Revision 13.5: Amend clause 6.4 of its access arrangement as follows:

Delete point (g) and everything following it

Revision 13.6: Amend sub-clause 27.2(a) as follows:

Delete the passage ', not exceeding the amount permitted by law.'

Insert 'reasonably' between 'amount' and 'requested'.

Revision 13.7: Amend sub-clause 28.2 as follows:

At the beginning of sub-clause 28.2(a) and (b) insert 'Subject to clauses 23 and 27'.

At the end of sub-clause 28.2(a) insert the following:

...and the Network User fails to pay the amount due within 14 days after it receives a written notice specifying the amount that is due.

Revision 13.8: Delete sub-clause 33.3

Insert a new sub-clause 33.3 as follows:

Subject to the other terms of this Agreement, the Network User will indemnify Envestra against injury caused to an officer, servant, agent or contractor of Envestra as a result of any negligent act or omission on the part of the Network User, its officers, servants or agents in connection with the provision to the Network User of Distribution Services pursuant to the Agreement or the operation, maintenance, repair, administration or management of the Network or any part of it.

Revision 13.9: Amend clause 34 as follows:

Delete sub-clause 34.2

Delete the second sentence in sub-clause 34.7

Insert a new clause 'Envestra's Insurance'

Insurance Required

Envestra must obtain and maintain insurance throughout the term against whatever risks a person carrying on a business of managing and operating a gas delivery network would prudently insure, with reputable insurers.

Insurance Information

Whenever reasonably requested by the Network User, Envestra must give the Network User a certificate of currency for the insurance.

Envestra must promptly notify the Network User if Envestra fails to obtain or maintain any insurance required under this Agreement.

Revision 13.10: Amend sub-clause 35.5(c) as follows:

Insert 'reasonable' before each reference to 'risk'.

Revision 13.11: Amend clause 39 as follows:

Amend sub-clause 39.1 by replacing 'Network User may' with 'parties must'.

Delete sub-clauses 39.3 and 39.4.

Insert a new sub-clause 39.3:

The Network User must not assign any of its rights or obligations under this Agreement unless it has:

Received the explicit informed consent to the registration of the assignee in AEMO's Metering Register as the FRO for that Supply Point from the Subject Customer in relation to each Supply Point that is the subject of the assignment (defined terms have the meaning given in version 5.0 of AEMO's Retail Market Procedures (Victoria))

A transfer request has been delivered to AEMO in relation to each Supply Point for which explicit informed consent has been obtained, specifying a prospective date for registration of the transfer (defined terms have the meaning given in version 5.0 of AEMO's Retail Market Procedures (Victoria))

Envestra has delivered a Transfer Request Notification in respect of the Transfer Request (defined terms have the meaning given in version 5.0 of AEMO's Retail Market Procedures (Victoria))

The prospective assignee has entered into an agreement with Envestra under which the assignee agrees to be bound, from the commencement of the assignment, by the agreement between Envestra and the assignor as if the assignee stood in the shoes of the assignor

the prospective assignee meets the requirements of Envestra’s Network User Policy

the prospective assignee holds the requisite licences or authorisations to retail gas and is registered as a participant in the relevant gas markets

the prospective assignee has provided Envestra with the same credit support as Envestra holds from the assignor for the charges payable by the assignee; and

Envestra has given its consent to the assignment of rights and obligations to the assignee (with such consent not to be unreasonably withheld).

Revision 13.12: Delete clause 9.2 of Envestra's access arrangement and replace it with the following:

The nominated revision commencement date is 1 January 2018.