

# **Access Arrangement Information**

**Envestra's Victorian Gas Distribution Network**

**1 January 2013 – 31 December 2017**

**April 2013**

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# 1 INTRODUCTION

## 1.1 Purpose of this Document

This document is the Access Arrangement Information (AAI) in relation to the Access Arrangement (AA) for the Vic Gas Distribution Pty Ltd (ABN 73 085 899 001) gas distribution network (the Network) for the period 1 January 2013 to 31 December 2017 (Fourth Access Arrangement Period). The Vic Gas Distribution Pty Ltd is a controlled entity within the Envestra Group.

The purpose of this document is to set out such information as is necessary to enable users and prospective users to understand the derivation of the elements of the AA for the Fourth Access Arrangement Period.

## 1.2 The Network

The Network serves the northern, outer eastern and southern areas of Melbourne, the Mornington Peninsula, rural communities in northern, eastern and north-eastern Victoria, and south-eastern rural townships in Gippsland. Maps outlining the areas covered by the Network are available from Envestra's website: [www.envestra.com.au](http://www.envestra.com.au).

## 1.3 Interpretation

Terms used in this AAI have the same meaning as they have in the AA (see section 10 of the AA).

In this document:

- Numerical values in tables may not tally due to arithmetic rounding
- A reference to opex is a reference to operating expenditure, and a reference to capex is a reference to capital expenditure
- A reference to the Third Access Arrangement Period is a reference to the access arrangement period from 1 January 2008 to 31 December 2012.

In the AAI, unless the context otherwise requires, where a word or meaning is capitalised it has:

- the meaning given to that word or phrase in the National Gas Rules (NGR); or
- the meaning given to that word or phrase in the glossary contained in the AA.

## 2 PIPELINE SERVICES

### 2.1 Reference Services

Envestra provides two reference services—Volume Haulage Services and Demand Haulage Services—and Ancillary Reference Services.

### 2.2 Haulage Reference Services

The Haulage Reference Services for the Fourth Access Arrangement Period are:

- Volume Haulage Service – this service provides for the delivery of gas through an existing Volume Delivery Point (DP). A DP is a Volume DP if it is not a Demand DP. The Volume Haulage Service is further broken down between residential and non-residential DPs. A DP is a residential DP if the gas delivered through it is used primarily for residential purposes to a single dwelling. Gas will be primarily used for residential purposes if 50% or more is used for residential purposes;
- Demand Haulage Service – this service provides for the delivery of gas through an existing Demand DP. A DP is a Demand DP if the Quantity of Gas delivered at that DP has either:
  - (a) exceeded 10 TJ in the preceding 12 month period (or, if less than 12 months of data is available, 10 TJ reduced in proportion to the period for which data is available as a proportion of 365 days); or
  - (b) exceeded 10 GJ in any hour during the preceding 12 months.

Section 2.2.3 of the Access Arrangement sets out how a DP will be classified as residential or non-residential.

Refer to chapter 2 to the AER's final decision for further information.

### 2.3 Ancillary Reference Services

The Ancillary Reference Services for the Fourth Access Arrangement Period are:

- (a) Meter and Gas Installation Test – on-site testing to check the measurement accuracy of a Metering Installation and the soundness of the gas installation downstream of the Metering Installation;
- (b) Disconnection – Disconnection by the carrying out of work using locks or plugs at a Metering Installation in order to prevent the withdrawal of gas at the DP;
- (c) Reconnection - this Reference Service comprises action to restore the ability to withdraw gas at a DP, following an earlier Disconnection (that is, the removal of any locks or plugs used to isolate supply, performance of a safety check and, where necessary, the lighting of appliances);
- (d) Meter Removal – removal of a meter at a Metering Installation in order to prevent the withdrawal of Gas at the DP;
- (e) Meter Reinstallation – reinstallation of a meter at a Metering Installation, performance of a safety check and the lighting of appliances where necessary; and

- (f) Special Meter Read – meter reading for a DP that is in addition to the scheduled meter reading that forms part of the Haulage Reference Service. (Special Meter Reads will be charged in accordance with location as either metropolitan or non-metropolitan).

## **2.4 Non-Reference Services**

Users may require services that are different from the Reference Services and Envestra will negotiate such services on a case-by-case basis.

## 3 OPERATING EXPENDITURE

### 3.1 Forecast operating expenditure

The table below summarises the forecast operating expenditure (including debt raising costs) for the Fourth Access Arrangement Period.

Refer to chapter 7 of the AER's final decision for further information regarding the basis on which the opex forecast has been derived.

**Table 3.1: Forecast Opex (\$m, 2012)**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Total</b>
Controllable opex	55.7	57.4	58.6	59.5	60.3	<b>291.5</b>
NMF	2.5	2.5	2.6	2.6	2.7	<b>12.9</b>
Ancillary reference services	2.3	2.4	2.4	2.4	2.5	<b>12.0</b>
Debt raising costs	0.6	0.6	0.7	0.7	0.7	<b>3.3</b>
<b>Total opex (inc. debt raising costs)</b>	<b>61.1</b>	<b>63.0</b>	<b>64.2</b>	<b>65.2</b>	<b>66.2</b>	<b>319.8</b>

## 4 CAPITAL EXPENDITURE

### 4.1 Forecast capital expenditure

Table 4.1 summarises the forecast capital expenditure which complies with the NGR.

**Table 4.1: Forecast capex for the Fourth 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
<b>Gross total capital expenditure</b>	<b>88.3</b>	<b>95.4</b>	<b>77.3</b>	<b>83.8</b>	<b>65.8</b>	<b>410.6</b>
Customer contributions	3.3	1.6	1.6	1.6	1.6	9.5
Government contributions	–	7.5	–	–	–	7.5
<b>Net total capital expenditure</b>	<b>85.0</b>	<b>86.3</b>	<b>75.7</b>	<b>82.3</b>	<b>64.2</b>	<b>393.6</b>

Refer to chapter 4 of the AER's final decision for further information on the basis and reasoning for the forecast capex.

## 4.2 Capital expenditure for the period 2007-2011

Table 4.2 summarises the capital expenditure for 2007-2011 which is conforming capex<sup>1</sup>. For the purpose of the capital base roll forward, the AER has adopted the ESC's benchmark capex for 2012, adjusted for actual growth. Refer to attachment 4 of the AER's final decision for further information on the basis and reasoning for the assessment of conforming capex for 2007-11.

**Table 4.2: Conforming capex for the period 2007-2011 (\$million, 2011)**

Category	2007	2008	2009	2010	2011	2012(a)
Mains replacement	9.2	8.6	3.8	7.4	22.0	31.0
Residential connections	19.8	24.2	21.7	22.1	25.4	24.7
Commercial/industrial connections	5.3	3.1	2.5	2.1	2.2	1.5
Residential meter replacement	2.4	2.3	1.7	2.2	2.4	4.0
Commercial/industrial meter replacement	0.7	0.8	0.5	0.5	0.5	0.4
Augmentation	3.8	2.2	6.1	7.0	3.4	14.4
IT	0.2	0.2	0.1	1.2	2.8	0.4
SCADA	–	–	–	–	–	0.4
Other	4.3	2.7	0.3	2.1	1.0	1.0
Gas Extensions	–	2.5	1.7	2.8	4.5	4.1
Overheads	7.9	8.3	6.7	8.0	10.2	10.6
<b>Gross total capital expenditure</b>	<b>53.6</b>	<b>55.0</b>	<b>45.1</b>	<b>55.3</b>	<b>74.5</b>	<b>92.6</b>
Customer contributions	–	1.9	0.7	1.8	3.4	0.2
Government contributions	–	–	–	–	–	–
<b>Net total capital expenditure</b>	<b>53.6</b>	<b>53.1</b>	<b>44.4</b>	<b>53.5</b>	<b>71.2</b>	<b>92.3</b>
Adjustment to reconcile with regulatory accounts	–	0.5	0.3	1.3	–	–
Adjusted net capex	53.6	53.6	44.7	54.8	71.2	92.3

Notes: (a) The AER has approved 2012 capex values equal to the ESC's benchmark capex, adjusted for actual growth. This is consistent with the ESC's capex incentive scheme and is discussed in attachment 3 of the AER's final decision.

<sup>1</sup> NGR, r.77(2).



## 5 CAPITAL BASE

### 5.1 Summary

The capital base at 1 January 2013 is \$1117.4 million (\$ nominal) and is forecast to be \$1473.4 million (\$ nominal) at 31 December 2017 as shown below.

**Table 5.1: Forecast capital base as at 31 December 2017**

	\$m
Closing Value of Capital Base (nominal)	\$1473.4
Closing Value of Capital Base (real \$2012)	\$1302.3

### 5.2 Opening Capital Base for the Third Access Arrangement Period

Envestra's opening capital base as at 1 January 2008 is \$992.2 million in real 2012 dollar terms.

### 5.3 Opening capital base

The capital base is adjusted in accordance with rule 77(2) of the NGR.

Conforming capital expenditure was calculated by deducting capital contributions from gross capital expenditure.

Regulatory depreciation for the Fourth Access Arrangement Period has been set equal to the depreciation approved by the ESC (adjusted for actual inflation).

For the purposes of rolling forward the regulatory asset base, the actual percentage change in the September to September CPI has been used. The Consumer Price Index is defined in the AA as the "All Groups Weighted Average for the Eight Capital Cities, as published by the Australian Bureau of Statistics or its successor".

Using the inputs outlined above, the closing capital base for the Third Access Arrangement Period is set out in table 5.2.

**Table 5.2: Roll-forward of the Capital Base 2008 to 2012 (\$m, 2012)**

	2008	2009	2010	2011	2012
Opening Capital Base	992.2	1013.6	1022.1	1037.7	1067.6
plus Conforming Capital Expenditure	55.5	46.2	56.8	73.7	95.6
less Depreciation	34.1	37.8	41.1	43.8	45.8
<b>Closing Capital Base</b>	<b>1013.6</b>	<b>1022.1</b>	<b>1037.7</b>	<b>1067.6</b>	<b>1117.4</b>

## 5.4 Projected Capital Base in the Fourth Access Arrangement Period

The projected capital base in the Fourth Access Arrangement Period has been determined by adjusting the closing value at 31 December 2012 for forecast capital expenditure, depreciation and inflation in the Fourth Access Arrangement Period. A CPI value of 2.50 per cent has been assumed for 2013 to 2017. It is forecast that the capital base will increase to \$1473.4 million by December 2017 as set out in the summary table below.

**Table 5.3: Projected capital base for the Fourth Access Arrangement Period (\$m, nominal)**

	2013	2014	2015	2016	2017
Opening Capital Base	1117.4	1196.8	1277.8	1345.4	1420.0
plus Capital Expenditure	91.5	95.4	85.6	95.3	76.3
less Straight-line Depreciation	40.1	44.3	50.0	54.3	58.4
Inflation Adjustment	27.9	29.9	31.9	33.6	35.5
<b>Closing Capital Base</b>	<b>1196.8</b>	<b>1277.8</b>	<b>1345.4</b>	<b>1420.0</b>	<b>1473.4</b>

## 6 RATE OF RETURN

### 6.1 Introduction

This section sets out the rate of return to apply for the Fourth Access Arrangement Period.

### 6.2 Rate of Return

The rate of return on capital determined by the AER is based on the cost of equity plus the cost of debt weighted by the respective proportions of equity and debt in the benchmark capital structure. This is commonly referred to as the weighted average cost of capital (WACC).

The details of how the WACC parameters have been established are set out in chapter 5 of the AER final decision. The input parameters and the calculated rate of return are summarised below:

**Table 6.1: WACC Parameters**

<b>WACC Parameters</b>	<b>Estimate</b>
Risk Free Rate	3.53%
Inflation Forecast	2.50%
Equity Beta	0.80
Market Risk Premium	6.00%
Debt Risk Premium	3.23%
Cost of Equity	8.33%
Cost of Debt	6.76%
Value of Imputation Credits	0.25
Gearing	60.00%
Benchmark Credit Rating	BBB+
<b>Nominal vanilla WACC</b>	<b>7.39%</b>

### 6.3 Other Parameter Values

#### 6.3.1 Gearing

The AER has applied a benchmark gearing of 60% debt for Envestra's regulated assets.

#### 6.3.2 The Value of Imputation Credits

The AER has applied a value of 0.25 for the assumed utilisation of imputation credits, or gamma ( $\gamma$ ), of 0.25. Refer to section 7.5 for further information.

### 6.3.3 Inflation

The AER has estimated the annual rate of inflation to be 2.50% for the Fourth Access Arrangement Period.

### 6.3.4 Debt Raising Costs

The AER has approved an allowance of 9.4 basis points per annum as the benchmark level of debt raising costs in the operating expenditure forecasts.

### 6.3.5 Derivation of the WACC

The nominal vanilla WACC of 7.39% has been derived from the formula below. In this formulation of the WACC corporate taxes are dealt with in the forecast cash flows.

$$WACC = R_e \times \frac{E}{V} + R_d \times \frac{D}{V}$$

The cost of equity is calculated using the CAPM formula set out below:

$$R_e = R_f + \beta_e \times MRP$$

The cost of debt is calculated using the formula set out below:

$$R_d = R_f + DRP$$

where

$R_e$	8.33%, which is the risk adjusted post-tax cost of equity required by investors derived from the Capital Asset Pricing Model (CAPM)
$E$	40%, which is the benchmark level of equity expressed as a percentage of $V$
$D$	60%, which is the benchmark level of debt expressed as a percentage of $V$
$V$	Sum of assumed debt level plus assumed equity level ( $V = D + E$ )
$R_f$	3.53%, nominal risk free rate of return
$DRP$	3.23%, debt risk premium
$R_d$	6.76%, cost of debt ( $R_f + DRP$ )
$MRP$	6.00%, the market risk premium
$\beta_e$	0.80, the equity beta for the benchmark service provider

## 7 COST OF TAX

### 7.1 Introduction

A post-tax regulatory framework has been used to derive the revenue requirement for the Access Arrangement.

### 7.2 Calculating the Cost of Tax

The forecast cost of tax (FCT) for each year of the Fourth Access Arrangement Period is calculated in accordance with the following formula:

$$FCT = (RTI_t \times STR_t)(1 - \gamma)$$

where:

$RTI_t$  is an estimate of the regulatory taxable income for regulatory year  $t$  that would be earned by a benchmark efficient distributor as determined by the AER post-tax revenue model;

$STR_t$  is the expected statutory tax rate for regulatory year  $t$ ; and

$\gamma$  is the assumed utilisation of imputation credits.

The determination of RTI is based on the same inputs used to determine the regulatory revenue requirement. Specifically, RTI is calculated as the regulatory revenue requirement less operating expenditure that is deductible for tax purposes, tax depreciation and interest expense. The STR is set at 30 per cent while the value of imputation credits ( $\gamma$  or gamma) is set at 0.25.

The benchmark tax liability for Envestra is calculated as total tax payable (RTI multiplied by STR) adjusted for the value of imputation credits (gamma).

### 7.3 Setting the Tax Asset Value

The opening Tax Asset Base (TAB) was \$382.7 million (\$ nominal) as at 1 January 2013. The TAB is discussed in the AER's draft and final decisions.

### 7.4 Tax Losses Carried Forward

There was no tax loss carried forward.

### 7.5 Value of Imputation Credits (Gamma)

Gamma is the factor used to adjust tax payable for the value attributed to imputation credits<sup>2</sup>. Gamma is the product of two components, known as "the distribution rate" (the proportion of created franking credits that are distributed to shareholders by attaching them to dividends) and "theta" (the value to the relevant shareholder of each franking credit that is distributed to them).

In the regulatory context, the higher (lower) the value of gamma the lower (higher) the revenue and cash flow available to the regulated business. Consequently, the value of gamma affects

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<sup>2</sup> The terms 'gamma', franking credits and 'value of imputation credits' are used interchangeably throughout this AAI.

the revenue and cash flow available to support the business's operations and credit rating, and to provide the required return to its investors.

A gamma value of 0.25 has been adopted, consistent with the decision of the Australian Competition Tribunal.

## 7.6 Benchmark Cost of Tax

The cost of tax calculation, applying the approach and parameters set out in this section, is shown in table 7.1.

**Table 7.1: Benchmark Cost of Tax Calculation, 2013 to 2018 (\$m, nominal)**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Total Revenue	163.2	184.2	188.3	199.9	211.6
less Opex	62.7	66.2	69.2	72.0	74.9
less Interest	45.3	48.5	51.8	54.6	57.6
less tax depreciation	44.5	44.1	44.9	46.1	47.6
less tax losses carried forward	0.0	0.0	0.0	0.0	0.0
Taxable Income	10.7	25.4	22.5	27.3	31.5
<b>Tax payable</b>	<b>3.2</b>	<b>7.6</b>	<b>6.7</b>	<b>8.2</b>	<b>9.4</b>
less Value of Imputation Credits	0.8	1.9	1.7	2.0	2.4
<b>Benchmark Cost of Tax</b>	<b>2.4</b>	<b>5.7</b>	<b>5.1</b>	<b>6.1</b>	<b>7.0</b>

## **8 INCENTIVE MECHANISM**

### **8.1 Summary**

This section sets out the incentive mechanism to apply for the access arrangement period.

### **8.2 Incentive Mechanism for the access arrangement period**

The AER approved a rolling carryover incentive mechanism which will operate during the access arrangement period in accordance with r. 98 of the NGR. Details regarding the operation of this incentive mechanism are set out in section 5 of the AA. For further information regarding the basis on which the incentive mechanism was approved for the Fourth Access Arrangement Period refer to chapter 8 of the AER's final decision.

## 9 TOTAL REVENUE

Envestra's total revenue requirement was determined using a building block approach (in accordance with Rule 76 of the NGR). The building block components are:

- a return on the projected capital base.
- depreciation of the projected capital base.
- a forecast of opex.
- a forecast of the Cost of Tax.

Envestra's total required revenues and X factors for each year of the Fourth Access Arrangement Period are, calculated using the Post Tax Revenue Model and, summarised in the following table.

**Table 9.1: Annual revenue requirement and X factors (\$m, nominal)**

	2013	2014	2015	2016	2017
Return on capital	82.6	88.4	94.4	99.4	104.9
Return of capital	12.2	14.4	18.0	20.7	22.9
plus operating and maintenance	62.7	66.2	69.2	72.0	74.9
plus benchmark tax liability	2.4	5.7	5.1	6.1	7.1
<b>Revenue requirement</b>	<b>159.8</b>	<b>174.7</b>	<b>186.7</b>	<b>198.2</b>	<b>209.8</b>
less: ancillary services revenue	2.4	2.5	2.6	2.7	2.8
<b>Net reference services revenue</b>	<b>157.4</b>	<b>172.2</b>	<b>184.1</b>	<b>195.5</b>	<b>207.0</b>
<b>Smoothed reference services revenue</b>	<b>166.8</b>	<b>174.3</b>	<b>181.3</b>	<b>190.4</b>	<b>200.6</b>
X factors	0.17%	-1.5%	-2.0%	-3.0%	-3.0%



## 10 DEMAND FORECASTS

### 10.1 Network Usage for the earlier access arrangement period

Envestra Victoria's demand over the earlier access arrangement period is set out in Tables 10.1 to 10.3 below. These figures are based on actual demand for Calendar Years 2008 to 2011, and forecast demand for 2012.

**Table 10.1: Demand over the third access arrangement period**

	2008	2009	2010	2011	2012F
<b>Residential tariff V</b>					
Customer numbers	501 200	514 180	527 983	541 152	553 604
Demand (TJ)	27 071	26 828	28 321	27 248	27 526
<b>Non-residential tariff V</b>					
Customer numbers	22 430	22 559	22 674	22 644	22 798
Demand (TJ)	7 083	6 797	6 991	6 772	6 768
<b>Tariff D</b>					
Customer numbers	229	228	231	231	233
Demand - MHQ (GJ)	6 440	6 389	6 487	5 993	6 281

## 10.2 Forecast customer numbers and demand

Forecast customer numbers and demand by tariff class for the access arrangement period are set out in Table 10.2 below.

**Table 10.2: Forecast customer numbers and demand for the Fourth Access Arrangement Period**

	2013	2014	2015	2016	2017
<b>Residential tariff V</b>					
Customer numbers	565 983	578 210	590 315	602 208	614 365
Demand (TJ)	26 854	26 575	26 324	26 060	25 873
<b>Non-residential tariff V</b>					
Customer numbers	22 950	23 141	23 329	23 454	23 658
Demand (TJ)	6 234	6 063	5 917	5 802	5 716
<b>Tariff D</b>					
Customer numbers	281	283	285	288	290
Demand - MHQ (GJ)	5 721	5 420	5 176	4 983	4 808

# 11 REFERENCE TARIFFS

## 11.1 Introduction

Envestra recovers its regulated revenue by charging tariffs to customers for Haulage Reference Services and Ancillary Reference Services. The Haulage Reference Tariffs will apply to three categories of Delivery Points:

1. Volume Tariffs (Tariff V) – residential and non residential customers; and
2. Demand Tariffs (Tariff D).

In earlier Access Arrangement Periods, Envestra’s Haulage Reference Tariffs covered two categories:

1. Volume Tariff V – there was no split between residential and non residential customers; and
2. Demand Tariffs (Tariff D).

In the fourth access arrangement period, Envestra Victoria’s initial tariffs will apply from 1 July 2013.

## 11.2 Haulage Reference Service Tariff Classes

Table 11.1 below details Envestra Victoria’s Tariff Classes.

**Table 11.1 Envestra Victoria Tariff Classes**

<b>Tariff Class</b>	<b>Haulage Reference Service</b>	<b>Geographical Zone</b>
<b>Tariff V – Residential</b>	Volume	Central
<b>Tariff V – Non Residential</b>	Volume	Central
<b>Tariff V – Residential</b>	Volume	North
<b>Tariff V – Non Residential</b>	Volume	North
<b>Tariff V – Residential</b>	Volume	Murray Valley
<b>Tariff V – Non Residential</b>	Volume	Murray Valley
<b>Tariff V – Residential</b>	Volume	Bairnsdale
<b>Tariff V – Non Residential</b>	Volume	Bairnsdale
<b>Tariff D</b>	Demand	Central
<b>Tariff D</b>	Demand	North
<b>Tariff D</b>	Demand	Murray Valley
<b>Tariff D</b>	Demand	Bairnsdale

### 11.2.1 Volume Tariff Classes – Tariff V (Residential and Non Residential)

The residential and non-residential tariffs V will comprise the following charging parameters:

1. Supply charge (in dollars per day); and
2. Banded volume charges (in dollars per GJ per day).

The residential tariff V will shift to three volumetric consumption bands in the fourth Access Arrangement Period with no differentiation between peak and off peak period. In the earlier access arrangement period Tariff V residential had four volumetric consumption bands with a differentiation between peak and off peak period.

The residential tariff V will comprise the following three volumetric:

- a charge for the first 0.0274GJ of Gas Delivered (\$/GJ) per day – equating to 10GJ per annum;
- a charge for the next 0.0219GJ of Gas Delivered (\$/GJ) per day – equating to 8GJ per annum; and
- a charge for Additional Gas Delivered (\$/GJ).

The first step of consumption broadly captures a customer using a gas cooker and solar hot water system, the second step captures a customer with a non-solar gas hot water system while the final step captures customers utilising gas for space heating. This block structure is different from that of the earlier volumetric. Unlike in the earlier access arrangement period, Envestra will not continue to differentiate between peak (June to September) and off peak (October to May) periods due to the lack of ability to influence customer behaviour on a seasonal basis.

The non residential tariff V is a new tariff class that will apply in the fourth access arrangement period. It will maintain four volumetric consumption bands, however the steps are different to that applying to Tariff V over the earlier Access Arrangement period:

- a charge for the first 0.05GJ of Gas Delivered (\$/GJ) per day – equating to 18GJ per annum;
- a charge for the next 0.50GJ of Gas Delivered (\$/GJ) – equating to 183GJ per annum;
- a charge for the next 0.82GJ of Gas Delivered (\$/GJ) – equating to 299GJ per annum; and
- a charge for Additional Gas Delivered (\$/GJ).

The non residential tariff V will not differentiate between peak and off peak periods.

The structure and the initial level of these tariffs are set out in the tables below.

**Table 11.2 Envestra Haulage Reference Tariff V — Central Zone**

<b>Residential</b>	
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
<b>Non-residential</b>	
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

**Table 11.3 Envestra Haulage Reference Tariff V — North Zone**

<b>Residential</b>	
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
<b>Non-residential</b>	
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

**Table 11.4 Envestra Haulage Reference Tariff V — Murray Valley Zone**

<b>Residential</b>	
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
<b>Non-residential</b>	
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

**Table 11.5 Envestra Haulage Reference Tariff V — Bairnsdale Zone**

<b>Residential</b>	
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
<b>Non-residential</b>	
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

**11.2.2 Demand Tariff Classes – Tariff D**

The structure of the Demand Tariff Classes consist of a number of banded MDQ charging parameters (in dollars per GJ of MDQ per day), with the first band effectively representing a fixed charge as a minimum chargeable MDQ applies. Consistent with the Volume Tariffs, Tariff D is a “declining block tariff”, whereby the charges become smaller as MDQ increases.

The MDQ charges are capacity charges intended to reflect the demands on the network assets. The structure provides economic signals to customers of a preferred usage profile. The locational aspect of Tariff D reflects the cost of servicing customers and also incentivises customers to connect to those parts of the network that will impose the least costs on Envestra (and hence customers).

For each of the Demand Tariff Classes, Tariff D contains three MDQ bands as follows:

- MDQ of 10GJ or less;
- next 40GJ of MDQ;and
- additional GJ of MDQ.

The structure and the initial level of these tariffs are set out in the table below.

**Table 11.6 Envestra Haulage Reference Tariff D — All Zones**

	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

### 11.3 Ancillary Reference Services

Reference Tariffs for Ancillary Reference Services will be maintained in real terms over the Fourth Access Arrangement Period. The tariffs reflect a continuation of charges in the Third Access Arrangement Period, with increases reflecting inflation only.

## 12 TARIFF VARIATION MECHANISM

The formulae for annual routine adjustment of tariffs are described in section 4.4 of the AA and detailed in Annexure D of the AA. Those formulae are different from those that currently apply in that they explicitly incorporate an adjustment factor for authorized costs pass through and a carbon tax tariff component.

### 12.1 Haulage Reference Services

#### 12.1.1 Tariff Variation Mechanism

A tariff basket annual tariff variation mechanism in the form of a weighted average price cap (WAPC) formula applies to haulage reference services through to 2017. The Tariff Control Formula is detailed in Box 1.

#### BOX 1 TARIFF CONTROL FORMULA

The following formula applies separately to each of Tariff V and D:

$$\frac{\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} \cdot q_{t-2}^{ij}}{\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} \cdot q_{t-2}^{ij}} \leq (1 + \Delta CPI_t)(1 - X_t)(1 + L_t)(1 + A_t) \pm (CT_t)$$

where:

$\Delta CPI_t$  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  $t-1$ , minus 1;

$X_t$  is - 0.015 for 2014;

$X_t$  is - 0.02 for 2015;

$X_t$  is - 0.03 for 2016;

$X_t$  is - 0.03 for 2017;

$n$  is the number of different Haulage Reference Tariffs;

$m$  is the different components, elements or variables ("components") comprised within Haulage Reference Tariff  $i$ ;

$p_t^{ij}$  is the proposed component  $j$  of Haulage Reference Tariff  $i$  in Calendar Year  $t$ ;

$p_{t-1}^{ij}$  is the prevailing component  $j$  of Haulage Reference Tariff  $i$  in Calendar Year  $t-1$ ;

$q_{t-2}^{ij}$  is the verified annual quantity of component  $j$  of Haulage Reference Tariff  $i$  sold in Calendar Year  $t-2$  (expressed in the units in which that component is expressed (eg, GJ));

$L_t$  is the Licence Fee factor as defined in Victoria box 2;

$A_t$  is the approved pass through amount as defined in Victoria box 3;

CT refers to the carbon tax tariff (refer Victoria box 4 in the AA).



The licence fee factor set out in is the same as that applying in the 2008–12 Access Arrangement Period. The license fee factor is detailed in Box 2.

## BOX 2 License fee factor formula

$L_t$  is the Licence Fee pass through adjustment to the Distribution price control in Calendar Year  $t$ , calculated as follows:

$$L_t = \frac{(1 + L'_t)}{(1 + L'_{t-1})} - 1$$

where:

$$L'_t = \frac{l_{f_{t-1}}(1 + \text{pretaxWACG})^{3/2}(1 + \Delta CPI_t)^{3/2}}{(1 + \Delta CPI_t)(1 - X_t)(1 + A_t) \sum_{i=1}^n \sum_{j=1}^m p_{t-1}^i q_{t-2}^j}$$

$L'_{t-1}$  is the value of  $L'_t$  determined in the Calendar Year  $t-1$

$l_{f_{t-1}}$  is the licence fee paid by the distribution business for the Financial Year ending in June of the Calendar Year  $t-1$

$\Delta CPI_t$  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  $t-1$ , minus 1;

$X_t$  is - 0.015 for 2014;

$X_t$  is - 0.02 for 2015;

$X_t$  is - 0.03 for 2016;

$X_t$  is - 0.03 for 2017;

$A_t$  is the approved pass through amount for Calendar Year  $t$ ;

$p_{t-1}^j$  is the prevailing component  $j$  of Haulage Reference Tariff  $i$  in Calendar Year  $t-1$ ; and

$q_{t-2}^j$  is the verified annual quantity of component  $j$  of Haulage Reference Tariff  $i$  sold in Calendar Year  $t-2$  (expressed in the units in which that component is expressed (e.g. GJ)).

The pass through adjustment factor formula is detailed in Box 3.

### BOX 3 Pass through Adjustment Factor

<p><math>A_t</math> is the pass through adjustment factor to the Distribution price control in Calendar Year <math>t</math>, calculated as follows:</p> $A_t = \frac{(1 + A'_t)}{(1 + A'_{t-1})} - 1$ <p>where:</p> $A'_t = \frac{ap^{t-1}(1 + \text{pretaxWACG})^{3/2}(1 + \Delta CPI_t)^{3/2}}{(1 + \Delta CPI_t)(1 - X_t) \sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}}$ <p><math>A'_{t-1}</math> is the value of <math>A'_t</math> determined in the Calendar Year <math>t-1</math></p> <p><math>ap^{t-1}</math> is the amount of any cost pass through approved by the regulator for the Calendar Year <math>t-1</math></p> <p><math>\Delta CPI_t</math> is calculated as the September quarter CPI for the year immediately preceding year <math>t</math>, divided by the September quarter CPI for the year immediately preceding year <math>t-1</math>, minus 1;</p> <p><math>X_t</math> is - 0.015 for 2014;</p> <p><math>X_t</math> is - 0.02 for 2015;</p> <p><math>X_t</math> is - 0.03 for 2016;</p> <p><math>X_t</math> is - 0.03 for 2017;</p> <p><math>p_{t-1}^j</math> is the prevailing component <math>j</math> of Haulage Reference Tariff <math>i</math> in Calendar Year <math>t-1</math>;</p> <p>and</p> <p><math>q_{t-2}^j</math> is the verified annual quantity of component <math>j</math> of Haulage Reference Tariff <math>i</math> sold in Calendar Year <math>t-2</math> (expressed in the units in which that component is expressed (eg, GJ)).</p>
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The Rebalancing Control Formula is detailed in Box 4 and is consistent with the formula applied in the 2008–12 Access Arrangement Period, other than the inclusion of an X factor. A Y factor of 0.02 has been adopted. The rebalancing control mechanism will not apply to Ancillary Reference Services.

#### BOX 4 REBALANCING CONTROL FORMULA

The following formula applies separately to each Tariff Class

$$\frac{\sum_{j=1}^m p_t^{ij} \cdot q_{t-2}^{ij}}{\sum_{j=1}^m p_{t-1}^{ij} \cdot q_{t-2}^{ij}} \leq (1 + \Delta CPI_t)(1 - X_t)(1 + L_t)(1 + A_t)(1 + Y_t)$$

where:

$\Delta CPI_t$  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  $t-1$ , minus 1;

$X_t$  is - 0.015 for 2014;

$X_t$  is - 0.02 for 2015;

$X_t$  is - 0.03 for 2016;

$X_t$  is - 0.03 for 2017;

$Y_t$  is 0.02;

$m$  is the components comprised within Haulage Reference Tariff  $i$ ;

$p_t^j$  is the proposed component  $j$  of Haulage Reference Tariff  $i$  in Calendar Year  $t$ ;

$p_{t-1}^j$  is the prevailing component  $j$  of Haulage Reference Tariff  $i$  in Calendar Year  $t-1$ ;

$q_{t-2}^j$  is the verified annual quantity of component  $j$  of Haulage Reference Tariff  $i$  sold in Calendar Year  $t-2$  (expressed in the units in which that component is expressed (eg, GJ));

$L_t$  is the Licence Fee factor as defined in Victoria Box 2; and

$A_t$  is an approved pass through factor as defined in Victoria Box 3.

#### 12.1.2 Carbon tax tariff

The carbon tax tariff is as defined in Box 5 of Annexure D of the AA Part B. The real pre-tax WACC applying to the carbon tax tariff is 0.0543.

#### 12.1.3 Tariff Variation Process

Envestra is required to submit an annual reference tariff proposal to the AER for approval at least 50 business days prior to the relevant financial year in which the proposed tariffs are to apply.

## 12.2 Ancillary Reference Services

Reference Tariffs for Ancillary Reference Services will increase by inflation (CPI) in each year of the Fourth Access Arrangement Period.

### 12.2.1 Ancillary Reference Tariff Variation Mechanism

Reference Tariffs for Ancillary Reference Services will be varied annually on the basis of the following Reference Tariff Control Formula:

The ancillary reference tariff to apply for the six month period from 1 July 2013 is based on the following formula:

$$ART_t = ART_{t-1} + (ART_{t-1} * CPI)^*2$$

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.

### 12.2.2 Ancillary Tariff Variation Process

The tariff variation process will follow Envestra's Haulage Reference Tariff variation process.

## 12.3 Cost Pass Through Events and Process

In accordance with Rule 97(c) of the NGR, Envestra has proposed a number of defined events, or Cost-Pass Through Events, for the Fourth Access Arrangement Period. These events are defined in section 4.5 of the AA. The AER has approved the events, and the process for assessment of Cost Pass Through Events in chapter 12 of its final decision for Envestra.

The process for assessment of Cost Pass Through Events is defined in chapter 4.6 of the AA.

### **12.3.1 Materiality Threshold**

All Cost Pass Through Events, excluding the National Energy Consumer Framework Event and the Mains Replacement Event are subject to a materiality threshold. The threshold is defined in section 4.5 of the AA.

## 13 NON-TARIFF COMPONENTS

### 13.1 Capacity Trading

The capacity trading policy is outlined in section 7 of the AA. Refer to chapter 13 of the AER's final decision for further information.

### 13.2 Network Extensions and Expansions

The extensions and expansions policy is outlined in section 8 of the AA. Refer to chapter 13 of the AER's final decision for further information.

### 13.3 Terms and Conditions

The terms and conditions (T&C) applicable to the provision of Reference Services are dealt with in section 6 of the AA. The detailed T&C are contained in Annexure F to the AA.

The following summary of the T&C may assist Prospective Users in understanding aspects of the terms of access:

- (1) Pursuant to section 6 of the AA, it is a condition that a Prospective Network User enter into an Agreement with Envestra for the provision of any Network Service. The term 'Agreement' is defined in the AA and means the entering into of a binding contractual arrangement between Envestra and a Network User. Prior to entering into an Agreement, a Prospective Network User must satisfy Envestra that it:
  - has the necessary financial capacity to meet its obligations to Envestra; and
  - has adequate arrangements in place to ensure it can keep Gas deliveries into and out of the Network in balance.
- (2) Annexure E allows for the details pertaining to the specific circumstances of the parties entering into the agreement.
- (3) Annexure F sets out the terms and conditions that are to apply, as a minimum, to the provision of each Reference Service. It describes terms and conditions which are applicable to both Haulage and Ancillary Reference Services.
- (4) The terms and conditions address matters including:
  - Meter accuracy and reading;
  - Minimum Gas quality and delivery pressures;
  - Possession of Gas and responsibility;
  - Warranties and title to Gas;
  - Supply curtailment;
  - Invoices and payment arrangements;
  - Credit support arrangements;
  - Termination;

- Liability and indemnities;
- Force Majeure;
- Insurance obligations
- Assistance;
- Access to premises;
- Confidentiality;
- Dispute resolution
- Notices;
- Assignment by the Network User;
- Amendment of the Agreement; and
- Other miscellaneous provisions.

The obligations, duties and responsibilities of Envestra and any Network User described in the T&C are in addition to those established in law or by any relevant regulatory instrument.