

21 December 2012

Essential Services Commission Victoria
By email: energy.submissions@esc.vic.gov.au

Dear Sir/Madam,

Review of Unaccounted for Benchmarks



Envestra is pleased to provide this public submission in response to the Commission's paper "Gas Distribution Code – Review of Unaccounted for Benchmarks".

As you would be aware, Envestra addressed this issue in its access arrangement submission lodged with the AER in March 2012. Envestra subsequently revised its submission in October 2012 in response to the AER Draft Decision (attached), in order to incorporate more recent UAFG data. The revised submission provides the most recent information available on UAFG that should be used by the Commission for its deliberations on the UAFG benchmarks. (The submission is not confidential).

As a key stakeholder, Envestra is keen to ensure that the benchmarks are appropriately set for the next regulatory period. Envestra proposes that actual UAFG recorded in 2011 be used as the basis for setting benchmarks in the 2013-17 regulatory period. This approach is consistent with that used by the AER in setting operating cost forecasts over the regulatory period. The proposed Class B benchmark of 3.7% has also been relatively stable over the last four years (see Figure 1 in the attached submission), and is therefore an appropriate benchmark for the next regulatory period.

We note that the "Commission anticipates that the Code will be amended to specify benchmarks to take effect from 1 July 2013". Envestra submits that for the purpose of the annual UAFG reconciliation, this timeframe is unreasonable. The attached paper demonstrates that for each year of the current regulatory period actual UAFG has been greater than the benchmark approved by the ESC in 2008. The implication of this error is that Envestra has been required to pay retailers the difference between the benchmark and actual UAFG over this current regulatory period (around \$7.5m). As UAFG is not included as a network expense, Envestra has been unable to recover this expenditure in its tariffs.

Envestra submits that UAFG benchmarks should be corrected as soon as practicable, and certainly no later than the start of the new regulatory period (1 January 2013). Envestra's key concern is to ensure correct benchmarks are in place by the time that the first annual reconciliation is undertaken in accordance with Schedule 1 Part C2 of the Code, so that the annual reconciliation payment amounts for the whole year (including for the period from 1 January 2013) are calculated using the correct benchmarks.

Envestra understands that there has been some discussion with the Government regarding the possibility of setting interim benchmarks for the period from January to June 2013 that may be different to those that will be approved by the ESC. Envestra believes it important that any interim benchmarks, including those used by the market for daily reconciliations, should be set at an appropriate level, that is, reflective of the most recent available confirmed data on UAFG levels. On 10 December, Envestra advised the Government that the 2013 interim estimates for Envestra's network should be 0.3% for Class A and 3.7% for Class B.

Envestra also discussed with the Government possible solutions should the UAFG benchmarks be unable to be changed by 1 January 2013. UAFG benchmarks are used for:

- daily market reconciliation; and
- an annual wash-up.

We suggested that if the correct UAFG benchmarks cannot be instituted by 1 January 2013, there should be a separation of these two processes so that the daily reconciliation is undertaken using the incorrect interim benchmarks, and the annual wash-up should be based on the correct UAFG benchmarks, as approved by the ESC. Any errors due to the use of incorrect benchmarks for daily reconciliation could be addressed through the reconciliation mechanism via the wash-up and final reconciliation process.

If the Commission is unable to make a decision on this matter by 1 January 2013, it would need to make its decision retrospective. This is provided for in Schedule 4 of the Code (clause 3) through obtaining agreement with the Distributors and the Commission's Customer Consultative Committee around the effective date of amending the Code.

While this solution is workable, it is not preferred. The preferred solution as noted above would be to put in place correct benchmarks from 1 January 2013 that can be used for both daily market reconciliation and the annual wash up.

If the Commission wishes to discuss any of the above issues further, please contact me on (08) 8418 1125.

Yours sincerely



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VICTORIA & ALBURY NETWORKS
2013-17 ACCESS ARRANGEMENT PERIOD

UAFG FORECAST

11 October 2012

Response to Draft Decision - Attachment 6.2A

Glossary

AEMO	Australian Energy Market Operator Ltd
AER	Australian Energy Regulator
AGC	The Albury Gas Company
Basic meter	A gas meter without a data recording device.
CI	Cast Iron mains
Class A Consumer	Consumer site at or exceeding 250TJ per annum consumption
Class B Consumer	Consumer site with less than 250TJ per annum consumption
Daily state average heating value	The daily state-wide flow-weighted average heating value as prescribed in the Gas Distribution System Code.
Heating value or HV	The energy contained in a volume of natural gas (MJ/m ³)
Heating value zone	A region across which the heating value is deemed the same for all meters in that region. Specified by AEMO.
Interval meter	A gas meter with a data recording device that can record hourly total gas flows
State average heating value	Same as daily state average heating value - The daily average of the zonal heating values flow-weighted for the flow of gas into each heating value zone.
Unaccounted for Gas (UAG or UAFG)	The difference between the gas metered into a pipeline system and the gas metered out of the same system.
UAFG benchmark	The unaccounted for gas benchmarks published in Part C of the "Gas Distribution System Code" (version 9) published by the ESC.
UPS	Steel mains without coating or cathodic protection – Unprotected Steel
Zonal heating value	The hourly average heating value applied (hourly) to all interval meters within a heating value zone.

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1. Executive Summary

This document summarises the UAFG performance of Envestra’s Victorian and New South Wales networks against the 2008-2012 regulatory benchmarks and provides a forecast and basis for UAFG benchmarks for the 2013-17 Access Arrangement period.

Envestra has been unable to meet the 2008-12 UAFG Access Arrangement benchmarks due to:

- An incorrect decision by the Essential Services Commission at the time of the last Access Arrangement Review whereby it rejected Envestra’s forecast for UAFG and substituted its own forecast based on a three-year average of historical data;
- A change in the source of gas supply to the network, which has resulted in an increasing error between actual delivered gas heating value and the AEMO calculated system average heating value used for billing.

As noted above, the current UAFG benchmarks were based on (at the time of the last access arrangement review) an average of the preceding 3 years level of UAFG. However, the methodology of averaging several years of historical data is not appropriate as it fails to adequately take into account changing conditions over time that may have impacted the level of UAFG, e.g. changes in gas heating value and deterioration of the old cast iron and unprotected steel network.

Envestra proposes that for the 2013-2017 Access Arrangement period, the 2011 year be used as the base year for UAFG forecasting. This is the most recent validated data available and therefore represents the most accurate starting point for forecasting purposes - any later period is still subject to market reconciliations and adjustments. Actual 2011 UAFG data also reflects the most recent gas heating values, which are not expected to vary over the next Access Arrangement period.

The proposed UAFG benchmarks for both the Victorian and New South Wales networks for the next Access Arrangement period (as a sendout %) are set out in the following table.

Table 1: UAFG Proposed Benchmarks

Vic & NSW Benchmark UAFG %					
Customer Class	2013	2014	2015	2016	2017
Class A	0.3	0.3	0.3	0.3	0.3
Class B	3.7	3.7	3.7	3.7	3.7

2. Introduction

2.1 Scope

The scope of this document covers:

- Envestra’s performance against UAFG benchmarks for its Victorian and NSW (Albury) networks during the current Access Arrangement period; and
- The formulation of proposed UAFG benchmarks for the 2013-17 Access Arrangement period.

2.2 UAFG Process

UAFG refers to the difference between the quantity of gas delivered into and out of the distribution system. Key factors contributing to UAFG include:

- Network leaks - fugitive emissions
- Billing correction factors (pressure, temperature, altitude, compressibility)
- Heating value variations
- Billing and accounting errors and anomalies
- Theft

The Victorian Gas Distribution System Code (GDSC) sets out UAFG benchmarks (expressed as a percentage of gas deliveries) within which Envestra is expected to operate. Envestra’s benchmarks for the 2008-12 Access Arrangement period are set out in the following table.

Table 2: UAFG Current Benchmarks

	2008	2009	2010	2011	2012
Vic Class A - %	0.3	0.3	0.3	0.3	0.3
Vic Class B - %	3.1	2.8	2.7	2.7	2.6
NSW Class A - %	0.1	0.1	0.1	0.1	0.1
NSW Class B - %	4.1	3.0	3.0	3.0	3.0

Unlike the Envestra South Australian and Queensland networks, where UAFG is purchased by Envestra, the retailers in Victoria and NSW purchase UAFG up to the benchmark amount. Second Tier retailers are deemed to purchase UAFG at the benchmark rates while the Tier One retailer purchases the remaining balance. As a result, UAFG is not a cost that is approved by the AER and recovered through network tariffs.

However, the Victorian market does provide for an annual UAFG “Wash-Up” process. If the actual level of UAFG is greater than the benchmarks, Envestra must pay a Reconciliation Amount (as defined in the GDSC) to the Tier One retailer. Conversely, where the actual level of UAFG is lower than the benchmark, the Tier One retailer makes a Reconciliation Amount payment to Envestra.

In practice, due to data integrity issues between the distributors, retailers and AEMO, reconciliation payments are also made between distributors and Second Tier retailers.

An outline of the UAFG Wash up calculation process is included at Appendix 1.

3. Network UAFG Performance

3.1 Actual versus Benchmark

The following table compares the actual and benchmark UAFG values. It should be noted that while different benchmarks exist for the Victorian and New South Wales portions of the distribution system, such a distinction is not practical, as some injection points service both states, i.e. there is no physical separation of the two networks. As a result, the current methodology for settling UAFG wash-ups is to sum the position for both Victoria and NSW and to settle at a combine level.

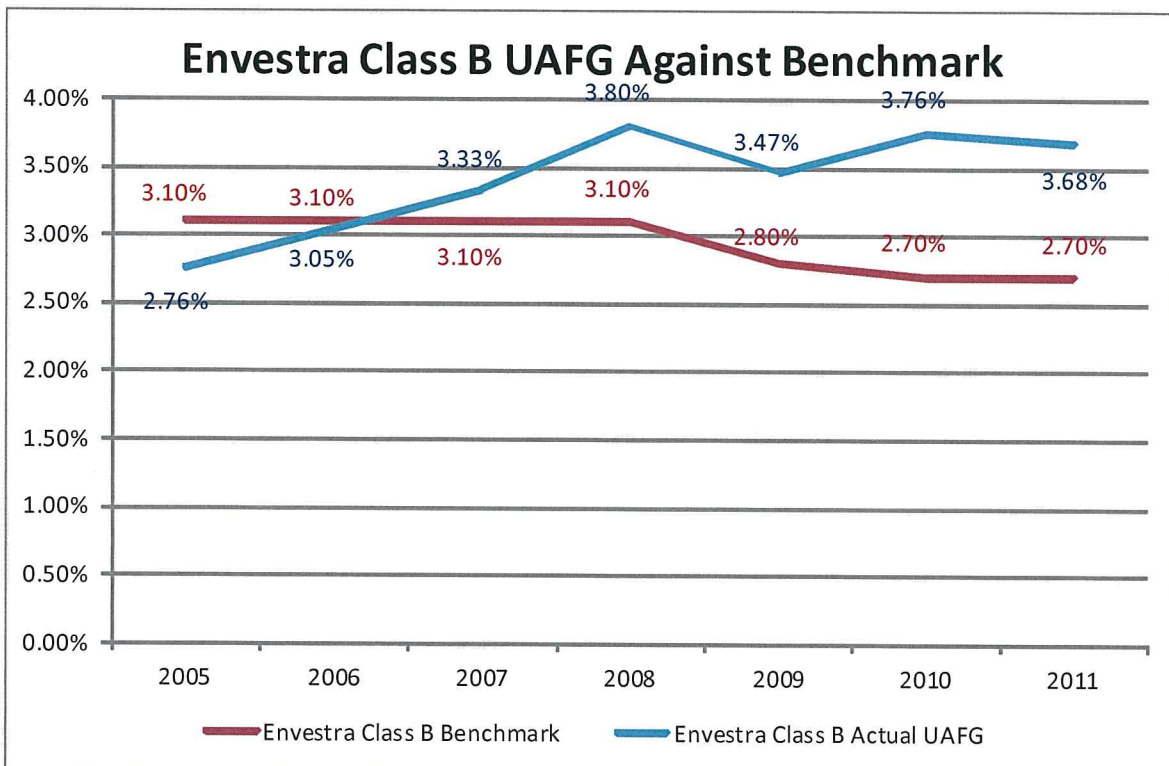
Table 3 - UAFG Actual versus Benchmarks

UAFG Performance					
Category	Measure	2008	2009*	2010*	2011*
Vic & NSW Total TJ	Benchmark	1339	1279	1300	1269
	Actual	1769	1560	1789	1711
	Variance	430	281	489	443
Vic & NSW Total %	Benchmark	2.37	2.16	2.06	2.10
	Actual	2.86	2.64	2.87	2.86
	Variance	0.49	0.48	0.81	0.76

* 2009-2011 wash ups are yet to be finalised with Retailers and are subject to change

If Class B data is extracted from the above (assuming Class A outcomes are the same as the benchmarks), the Class B UAFG outcomes are depicted in the following graph.

Figure 1: UAFG Actual versus Benchmarks



It is evident from the above data that, where there is an increasing or decreasing trend in a data series, it is inappropriate to set a forecast based on an average that extends back in time.

It is also clear from the data that Envestra has not achieved the UAFG Class B benchmarks. The cause of this is discussed in the following sections.

4. UAFG Forecast

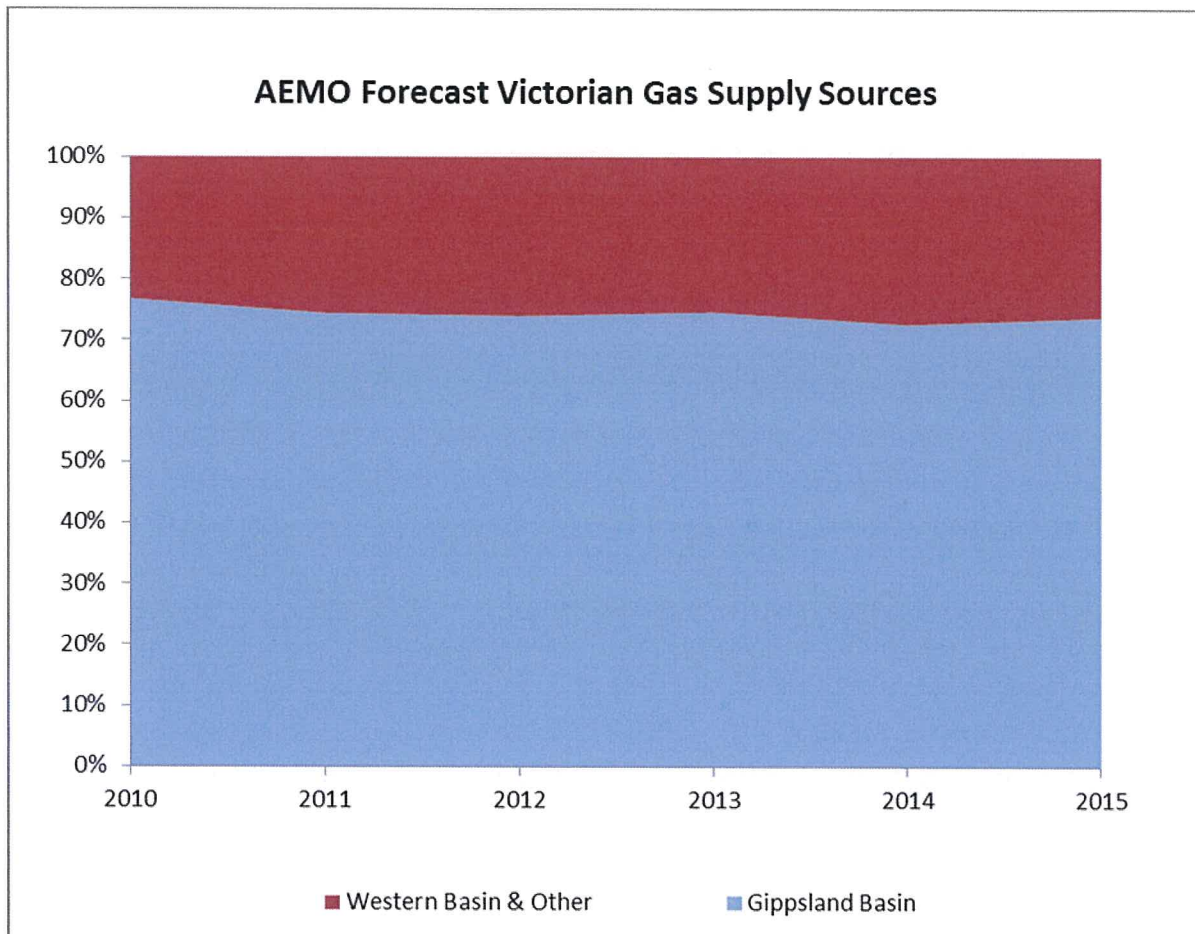
4.1 Base Year

The current Access Arrangement UAFG benchmarks were determined using a three-year average of the preceding years at the time of access arrangement review. The ESC has since concurred that this failed to take into account the changing source of supply of gas in Victoria and therefore understated the benchmarks that could be achieved.

Both Envestra and AEMO's analysis of heating values has identified an impact of approximately 0.3% - 0.5% to Envestra's detriment over the 2008–2010 calendar years.

Going forward, this is not expected to be an issue as the 2010 AEMO Victorian Annual Planning Review forecasts gas sources in Victoria to remain relatively constant over the next 5 years.

Figure 2: AEMO Forecast Source of Supply



Given that forecast supply arrangements are not expected to vary materially hereon, the impact of HV on UAFG should remain constant over the next Access Arrangement period. Consequently the 2011 UAFG represents the best and most accurate basis for a UAFG starting point. Envestra therefore proposes that 2011 be used as the base year for establishing UAFG benchmarks.

However, should changing sources of gas supply occur and have a material impact on UAFG during the next Access Arrangement period, Envestra will request a review of UAFG benchmarks at that time.

The base year UAFG wash up (preliminary) for Victoria based on 2011 is summarised in the following table.

Table 7: Vic & NSW UAFG Washup

2011 Wash-up				Total	Vic	NSW
Sendout Total :		GJ		59,895,137	57,063,579	2,831,558
Class		Consumption	Benchmark Rate	Grossed Up		
Class A	>250TJ	13,179,872	0.30%	13,219,531	13,219,531	
Class B Ds	<250TJ	8,260,250	2.70%	8,489,465	8,489,465	
Class B Vs	<250TJ	33,286,623	2.70%	34,210,301	34,210,301	
Class A	>250TJ	1,433,925	0.10%	1,435,360		1,435,360
Class B Ds	<250TJ	656,145	3.00%	676,438		676,438
Class B Vs	<250TJ	1,387,443	3.00%	1,430,354		1,430,354
Total		58,204,258		59,461,450	55,919,297	3,542,153
	Check	-				
		2.82%		-		
Less PYA	Vic	(19,788)	2.70%	(20,337)	(20,337)	
Less PYA	NSW	(737)	3.00%	(760)		(760)
Revised Total		58,183,733		59,440,353	55,898,960	3,541,393
Envestra's Favour/(retailers favour)				(454,784)	(1,164,619)	709,834

It is important to note however that an accurate determination of sendout by state (Victoria and New South Wales) is not possible due to some injection points servicing more than one state. As a result, the current methodology for settling UAFG wash-ups is to sum the position for both Victoria and NSW and to settle at a total level. (Consequently this paper (see section 5) proposes the abolition of separate benchmarks for Envestra's Victorian and southern NSW networks).

5. Proposed UAFG Benchmarks

While separate benchmarks have historically been set for Envestra's Victorian and NSW sections of the network, the inability to determine injections on a jurisdictional basis makes it nonsensical to establish separate benchmarks. On this basis, Envestra believes that the UAFG distinction between a contiguous network on different sides of the Victorian/NSW border should be eliminated, with a single benchmark applying.

Historically a nominal 0.3% UAFG has been assigned to Class A consumers on the basis that these consumers are, in theory, mostly supplied from trunk mains that have little or no leakage. The UAFG associated with this class is therefore presumed to be associated mostly with meter accuracy.

While this is questionable, it is not proposed to eliminate the Class A benchmark at this time, but to maintain it and continue a nominal benchmark of 0.3%.

In relation to the Class B benchmark, as discussed earlier, Envestra believes that the most recent validated data should be used, this being the 2011 year data - indicating a UAFG level of 3.7%. Envestra therefore proposes that the UAFG benchmarks be as shown in Table 10 below.

Table 10: 2013-17 Proposed UAFG Benchmarks (%)

Vic & NSW Benchmark UAFG					
Customer Class	2013	2014	2015	2016	2017
Class A %	0.3	0.3	0.3	0.3	0.3
Class B %	3.7	3.7	3.7	3.7	3.7

Envestra also notes that AEMO has, for some time, been undertaking a review of alternative Victorian methods for the treatment and reconciliation of UAFG costs between distributors and retailers. That work, via the Gas Retail Consultative Forum, is on-going and at the time of writing there has been no decision to change current processes. However, should such a decision be made, Envestra and other market participants will need to assess the impact of any such change and if necessary amend its access arrangement accordingly.

ATTACHMENT 1**UAFG Wash-up Calculations**

Rule 317 of the National Gas Rules sets out AEMO's obligation to produce a procedure for the wash-up calculation of UAFG. The "Wholesale Market Distribution UAFG Procedures (Victoria)" (UAFG Procedure) has been produced pursuant to this rule.

In practice the UAFG wash-up calculation process is time-consuming and complicated. This is primarily because the UAFG Procedure requires both retailers and distributors to agree on consumption before the wash-up can proceed (clause 2.3).

Agreement with retailers may be difficult because:

- all wash-up calculations must use the latest data available published by AEMO for CTM injections (sendout), net system load and interval metered sites (both Tariff D and large Tariff V sites). AEMO publishes data on a published D+18 and D+118 schedule as well as occasional 'revisions'. These versions must be stored and tracked and agreement reached with retailers and AEMO as to the most recent version.
- basic meter reads must be reconciled back to invoices to retailers in order to minimise disputes.
- duplicate data in the case of large Tariff V sites that appear in both raw Tariff V billing data and telemetry data needs to be stripped out.
- occasionally certain interval metered sites require an "off-market" settlement where a metering error has been detected outside the D+118 cut-off. Both AEMO and the retailer must agree with an off-market settlement.
- NSL (Net System Load) apportionment of basic meter reads, which straddle either the beginning or end of the calendar year, must be carried out.
- The above steps are the largest bottleneck to efficient agreement. This is largely due to the volume of data to be agreed and the iterative nature of the process. Final agreement with all retailers cannot be achieved until each individual retailer has agreed with their figures. Although one retailer may have agreed, this may be subject to changes because a subsequent retailer may have successfully disputed their figures.

The mathematical process of profiling meter reads to periods is also very computationally intensive because the procedure requires the distributor to profile on a NSL basis. NSL is published by AEMO each day for each distributor and is calculated by subtracting telemetered consumption from network injections (sendout). In effect this yields an average consumption profile for total un-telemetered consumption. To apply NSL profiling each meter read must be considered separately and consumption prorated to each period on the basis of the sum of NSL in that period compared to the sum of NSL over the entire meter read. The UAFG procedure requires NSL-profiling for all basic metered sites.

While Envestra now has a (largely) automated process for undertaking this NSL calculation phase, it can still take several weeks to set-up, test, calculate and confirm internally. Confirming the calculations with the relevant retailers then takes additional time due to the iterative process described and the volume of data involved. In 2008 4.1 million basic meter reads were sent to retailers of which 1.1 million reads were NSL profiled.

Attachment 2: ESC Final Decision on UAFG related to Heating Value Allocation.

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