ESSENTIAL SERVICES COMMISSION

REVIEW OF UNACCOUNTED FOR GAS BENCHMARKS

DRAFT DECISION – METHODOLOGY

MAY 2017

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ACRONYMS

AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	Essential Services Commission
CTM	Custody Transfer Meter
DTS	Declared Transmission System
GDSC	Gas Distribution System Code
Non-DTS	Non-Declared Transmission System
Non-PTS	Non-Principal Transmission System
PTS	Principal Transmission System
UAFG	Unaccounted for Gas

CONTENTS

1 ABOUT THE REVIEW

1.1 WHAT IS UNACCOUNTED FOR GAS?

Unaccounted for Gas (UAFG) refers to the difference between the measured quantity of gas entering the gas distribution system from various supply points and the gas delivered to customers.

The causes of UAFG are discussed in section 2 of this paper.

1.2 THE UAFG PROCESS

In Victoria, UAFG is managed via a benchmark process. The Gas Distribution System Code (GDSC) sets out UAFG benchmarks, expressed as a percentage of the aggregate quantity of gas injected into the distribution system for each Victorian gas distributor – Australian Gas Networks (formerly Envestra), Multinet and AusNet Services (formerly SP AusNet).[1]

The UAFG benchmarks apply to Class A and Class B customers on the Declared Transmission System (DTS) and non-DTS networks. The DTS was previously known as the Principal Transmission System (PTS), and the non-DTS was previously known as the non-PTS. The GDSC, which currently uses the old terms PTS and non-PTS, will be updated by the Commission as part of this review to reflect the new terms DTS and non-DTS.

[1] Schedule 1, Part C of the Gas Distribution System Code (GDSC), Version 11.0.

Class A customers use more than 250 terajoules per annum and are typically serviced by the high pressure network. Class B customers use less than 250 terajoules per annum and are typically serviced by high, medium and low pressure networks.

A non-DTS network is a transmission pipeline in Victoria that does not form part of the DTS. Australian Gas Networks has non-DTS networks in Bairnsdale and Paynesville. Multinet's non-DTS networks are in the South Gippsland towns which include Korumburra, Leongatha, Inverloch and Wonthaggi. AusNet Services has non-DTS networks in Ararat, Stawell and Horsham.

The GDSC requires gas distributors to use reasonable endeavours to ensure that UAFG is less than their benchmark. The Australian Energy Market Operator (AEMO) performs an annual reconciliation between gas distributors and retailers based on whether actual UAFG is over or under the benchmark.[2]

Under the Victorian UAFG model, retailers are required to purchase sufficient gas to cover customer consumption and actual UAFG. If actual UAFG is greater than the benchmark, the relevant gas distributor is required to compensate the retailers for the UAFG in excess of the benchmarks. Where actual UAFG is lower than the benchmark, the retailers make reconciliation payments to the relevant gas distributor. The specific calculation is outlined in Schedule 1, Part C of the GDSC.

The UAFG requirements in the GDSC are intended to incentivise the gas distributors to take steps to minimise the level of UAFG. As a result, the UAFG benchmarks affect the three gas distributors, as well as the cost of gas supply to retailers and, ultimately, Victorian households and businesses.

The GDSC contains UAFG benchmarks for the years 2013 to 2017. Therefore, the current UAFG benchmarks in the GDSC will expire on 31 December 2017. This review will set the UAFG benchmarks for the years 2018 to 2022.

[2] The UAFG requirements are specified in clause 2.4 of the GDSC.

The UAFG benchmarks are required by the National Gas Rules 2008.[3] Under Part 19 of the National Gas Rules 2008, AEMO has established procedures for reconciling UAFG.[4] The UAFG benchmarks in the GDSC are adopted by AEMO in its procedures.

1.3 THE COMMISSION'S APPROACH TO THE REVIEW

The Commission is undertaking the review of UAFG benchmarks in two stages.

The first stage of the review, which includes this draft decision, will involve consultation on the methodology to calculate the UAFG benchmarks. It includes an analysis of possible methodologies to calculate the UAFG benchmarks, and other key issues. The Commission plans to publish its final decision on the methodology to calculate the UAFG benchmarks by the end of July 2017.

The second stage of the review will involve consultation on the calculation of the UAFG benchmarks. It will set UAFG benchmarks for the years 2018-2022 based on the Commission's final decision on the methodology including key issues that are considered as part of the review. The Commission expects to publish a draft decision in September 2017 and a final decision in December 2017. Following its final decision, the Commission will amend the GDSC to give effect to the new UAFG benchmarks.

1.4 STRUCTURE OF THIS PAPER

The remaining sections of this draft decision are as follows:

Section 2 analyses the known causes and contributors to UAFG while also providing some Victorian context to these issues.

[3] Rule 235(8) of the National Gas Rules 2008 requires the assignment of a UAFG benchmark in accordance with a declared metering requirement. A Ministerial Order dated 26 June 2009 declared Schedule 1, Part C of the GDSC as a declared metering requirement for the purposes of rule 235(8) of the National Gas Rules 2008 (Victoria Government Gazette, 30 June 2009, p. 53).

[4] Wholesale Market Distribution UAFG Procedures (Victoria).

Section 3 covers the broad options for a UAFG methodology including bottom up, external comparisons and the revealed cost approach. It discusses the advantages and disadvantages of each option, and concludes with the Commission's proposed methodology for calculating the UAFG benchmarks.

Section 4 examines a number of key issues relating to the review of UAFG benchmarks including gas mains replacement, underspending on gas mains replacement, adjusting for efficiencies, and the distinction between class A and class B benchmarks.

Section 5 contains the Commission's draft decision on the proposed methodology to calculate UAFG benchmarks for the years 2018 to 2022.

Section 6 outlines the consultation process associated with this draft decision, and the next steps for the review of UAFG benchmarks.

2 CAUSES OF UAFG

There is some uncertainty about the causes of UAFG and the extent to which each of the known causes contributes to UAFG levels. Information provided to the Commission in 2013 indicated there are approximately 17 components that contribute to UAFG.[5] These components can be divided into five categories:

- fugitive emissions
- metering errors
- heating value
- data quality
- theft.

The extent to which distributors have control over these causes varies for each cause. For example, fugitive emissions are largely within the control of distributors through their mains replacement programs. In contrast, heating value is entirely outside the control of distributors because they do not source the gas that is supplied into their networks.

Even in the case of a new gas distribution system, there will be some amount of UAFG because it is impossible to entirely mitigate all UAFG. Also, although new technology and improved business practices can reduce UAFG levels, continued expansion of the networks may increase the absolute level of system-wide UAFG.

It is also possible that a one-off event – such as leaving a gas valve open between networks – could contribute to UAFG levels.

[5] Review of Gas Distribution Businesses Unaccounted for Gas, Prepared for Essential Services Commission by Zincara P/L (April 2013).

2.1 FUGITIVE EMISSIONS

Fugitive emissions refers to gas that is lost into the atmosphere from each distributor's network due to leakage. The extent of fugitive emissions is to a considerable extent within the control of the distributors given that they are responsible for maintaining the quality of their distribution networks. Leaks are usually caused by defects, material failure and third party damage.

Distributors have a degree of control over the level of fugitive emissions in their network through their mains replacement programs. All Victorian gas distributors have programs to progressively replace the low pressure cast iron and unprotected steel pipes that are susceptible to deterioration over time, and are the main cause of leaks in the distribution system. These old pipes are being replaced with new polyethylene and protected steel pipes that have much lower leakage. These new pipes allow the networks to distribute gas using high pressure instead of low and medium pressure.

The disparity in pipeline technologies, age and condition, operating pressures, maintenance levels and ground conditions makes it difficult to accurately estimate the extent to which fugitive emissions contribute to UAFG.

2.2 METERING ERRORS

The two types of meters that contribute to metering errors are customer meters and custody transfer meters (CTM).

A customer is billed for their gas usage using the measured volume of gas passing through the customer meter at their premises. The volume of gas is then converted to energy by multiplying the volume by the heating value, and for large customers by the pressure and temperature of the gas supplied to the customer.

In Victoria, the GDSC specifies the maximum allowable error limit for meters. Part B of Schedule 1 of the GDSC states that the maximum allowable variance in quantity from the agreed true quantity for a gas meter shall be:

a) not more than two per cent in favour of the distributor

b) not more than three per cent in favour of the customer.

In addition, there is a further allowance of plus or minus one per cent for equipment used by large customers to correct their volume measurement to standard conditions. Given that large customers consume substantial amounts of gas, there can be a significant impact on overall UAFG if these customers have not been metered accurately.

A CTM is a meter that measures the volume of gas injected into the distribution system. There are approximately 150 CTMs in the Victorian gas distribution system, and each CTM generally has an accuracy of at least plus or minus one per cent.

Metering errors on both input and output from the distribution system are a significant contributor to UAFG, however the extent of the contribution is difficult to quantify with any level of accuracy.

In general, metering error is somewhat within the control of distributors. Higher quality meters could be used to mitigate some of the metering errors, but this may not be economical.

2.3 HEATING VALUE

The heating value of gas is used to convert the measured volume of gas consumption to energy units for the purposes of billing customers. The heating value is related to the quality of gas delivered into the network. There are multiple sources of gas supply across Victoria and each gas source may not have the same quality and heating value. For simplicity, a uniform state-wide heating value is used to calculate the energy consumption of customers. This leads to some uncertainty around the heating value of gas in Victoria.

The majority of gas supplied to the Victorian gas market comes from the Gippsland area, which includes the Longford gas plant and the Lang Lang gas plant. A small and declining amount of gas is also supplied from the Port Campbell area, which includes the Otway and Minerva gas plants and the Casino development.

In the 2013 UAFG review, the distributors argued that the multiple gas sources had impacted the quality of gas entering their networks. Although the Australian Energy Market Operator agreed in principle with the distributors' argument, it noted that the margin of error for heating value measurement is plus or minus 0.7 per cent.[6] For this reason, it is not definitive that the heating value for each distributor is adversely affected by the multiple gas sources.

The quality of gas supplied to the distribution system is outside the control of distributors as they do not source the gas being transported through their network. Nevertheless, the uncertainty associated with heating value is a contributor to UAFG.

2.4 DATA QUALITY

The quality of data received by distributors is subject to some administrative and timing errors with customer meters that cannot be read remotely. As all meters cannot be read at the same time, gas demand at any point in time has errors due to meter reading lag. Data quality is therefore a contributing factor in UAFG.

The gas injected into the network is measured using CTMs which can be read remotely. Similar technology is also used for large customer installations. When UAFG is calculated using the data from different types of meters, the issue of time lag contributes to the UAFG error.

In addition, residential and small industrial and commercial customers do not have any equipment to compensate for temperature and pressure when measuring gas consumption. The calculation of the gas volume deems all of these meters to have the same temperature and pressure when the gas volumes are measured, but in reality temperature and pressure vary across the network.

[6] Market Issue IN031/09 and AEMO's Analysis on GMI 031/09 Zonal Heating Value.

2.5 THEFT

Theft can occur where gas is unlawfully removed from the distribution network, such as where a customer meter is bypassed. The theft of gas is a factor that contributes to UAFG, although the extent of its contribution is difficult to quantitatively assess.

2.6 CONCLUSION

This section has examined the main causes of UAFG and outlines the many sources of uncertainty associated with UAFG. These sources of uncertainty are relevant to the options for a UAFG methodology and the key issues relating to the review of UAFG benchmarks, which are discussed in subsequent sections of this paper.

Most causes are at least somewhat within the control of distributors. However it may not be cost effective for distributors to address all of these causes in an attempt to minimise UAFG. Fugitive emissions are the cause of UAFG that distributors have the most control over, through their mains replacement programs.

3 OPTIONS FOR UAFG METHODOLOGY

Section 8A of the *Essential Services Commission Act 2001* (Vic) requires the Commission, in seeking to promote the long term interests of Victorian consumers, to have regard to efficiency in the gas industry and incentives for long term investment. Further, the GDSC requires that distributors use reasonable endeavours to ensure that their quantity of UAFG is below their UAFG benchmark. Therefore, the Commission must set efficient benchmarks and distributors must use reasonable endeavours to meet their benchmark.

The UAFG benchmark regime exists to incentivise the gas distributors to efficiently minimise UAFG levels. The distributors are rewarded for reducing UAFG levels below the benchmarks set by the Commission. On the other hand, they are penalised for UAFG levels above the benchmarks.

The regime relies on basic profit-maximising principles and incentivises the distributors to efficiently invest in reducing UAFG if the benefits of doing so exceed the costs.

The level of the UAFG benchmarks does not actually influence incentives as the marginal incentives for distributors are constant for any given level of UAFG. Regardless of the level at which the UAFG benchmarks are set, the distributors will be rewarded or penalised for any reduction or increase in UAFG at the same rate. It is the existence of a benchmark that underpins the incentive for distributors to efficiently invest in minimising UAFG.

Despite this, higher UAFG levels may not be indicative of underperformance by a distributor. As outlined in section 2, there are exogenous factors beyond the distributors' control which partly determine the level of UAFG. The distributors' actions to minimise UAFG levels are focused on the known causes of UAFG that are within their control.

Further, UAFG is not the main incentive driving distributors' investment decisions. The distributors' primary obligations relate to safety and reliability. These factors largely drive business decisions on, for example, mains replacement programs and maintenance expenditure. Such activities potentially reduce UAFG levels, which is a benefit to the distributors in terms of revenue. The UAFG benchmarks are a marginal incentive on top of safety and reliability considerations which are taken into account when the distributors make investment decisions and plan maintenance, but it is only one factor.

3.1 BOTTOM UP

A bottom up approach uses the engineering characteristics of the distribution network to estimate UAFG. Under this approach, each component which contributes to UAFG is identified and a comprehensive quantitative analysis of its contribution to UAFG is then carried out.

A bottom up approach relies on analysis of UAFG data in order to allocate a portion of total UAFG to each specific cause of UAFG. Given the uncertainty of both the causes and how much each cause contributes to UAFG levels, a bottom up approach would result in the use of technical assumptions that are unlikely to be sufficiently robust. For the above reasons, the use of a bottom up approach is not practical.

3.2 EXTERNAL COMPARISONS

The use of external comparisons is essentially a benchmarking exercise that takes a top down view of UAFG for each distribution network, and aims to achieve best practice in the management of UAFG. Under this approach, a benchmark is used to compare the UAFG performance of a distributor over time against the UAFG performance of other distributors (either in Victoria or other jurisdictions) with similar characteristics.

When using external comparisons, it is important to recognise that UAFG performance can be affected by a number of factors such as:

- condition and age of the network
- length and type of material in the network
- characteristics of the customer base
- gas throughput of the network
- number of sources of gas supply into the network
- capital expenditure on mains replacement and meter upgrades
- operating expenditure on maintenance of the network.

It is also important to recognise that the availability and quality of relevant data will have a direct impact on the ability to measure the impact that each of the factors above has on the UAFG performance of the distributor.

Although external comparisons allow for competition by comparison and thereby provide the distributors with an incentive to improve UAFG performance, they would not necessarily take into account the specific circumstances of each gas distribution network in Victoria. There are a number of factors that cause UAFG, and these factors can affect each distribution network differently. The infrastructure of each distributor is different and network characteristics such as size, age, condition, operating environment and geographical considerations will impact UAFG performance.

Further, external comparisons based on technical assumptions could potentially expose a distributor with an older network that has leaky pipes to the threat of systematic under-recovery of revenue.

3.3 REVEALED COST

The revealed cost approach uses the gas distributors' past UAFG performance as the base for determining the future UAFG benchmarks. The rationale is that as the distributors were subject to a profit-maximising incentive structure in previous periods, their actual performance should reflect an efficient level of UAFG which is assumed to be an accurate indicator of an efficient benchmark.

Revealed cost has the major advantage of taking into account the actual circumstances of distributors, even when the individual drivers of UAFG are not known with the required level of precision or where the drivers are out of the control of the distributors. For example, data quality and theft are mostly out of the distributors' control. In historical data, the amount to which these causes contribute to UAFG is difficult to quantify. Under revealed cost, the unknown contribution of data quality and theft is included in an efficient benchmark as historical data accounts for these causes. Under other methodologies, it would be much more difficult to accurately incorporate these factors.

The incentive structure may become unreliable if the distributors believe that benchmarks for future periods will be based on past performance. If the distributors invest less than optimal in the current period, UAFG levels should rise and distributors should underperform their benchmark. If this data is then used to set forward UAFG benchmarks on the assumption that distributors have been efficiently investing in UAFG reduction, the forward benchmarks will be set at these higher levels. The distributors will then receive benefits in subsequent review periods from prolonged under-investment in efficient measures to reduce UAFG.

To mitigate this risk, the Commission will require each distributor to provide a detailed explanation of how it has sought to efficiently reduce UAFG levels during the 2013-2017 regulatory period. This will provide the Commission with confidence that distributors have been efficiently investing in measures to reduce UAFG, and that the data submitted by the distributors reflects efficient levels of UAFG.

If the Commission uses the revealed cost approach, there is a choice either to use the data from the most recent year or a multi-year average of recent years. There are advantages and disadvantages to both approaches.

3.3.1 MOST RECENT YEAR

The advantage of using the most recent year of UAFG data to calculate the benchmarks is that, assuming no variations in data, the most recent data represents the best estimate of efficient UAFG going forward. In practice, this approach is not robust because UAFG levels are subject to variations due to the inherent uncertainty in the causes.

A risk in using the most recent year of UAFG data is that if that year was influenced by factors beyond the distributors' control which caused actual UAFG levels to be higher or lower than normal, the benchmarks could be set at inappropriate levels. The use of a multi-year average addresses this risk.

3.3.2 MULTI-YEAR AVERAGE

Under a multi-year average approach, the effect of any variations in year to year UAFG levels are minimised as an average of actual UAFG levels across years is used. For this reason, there is a greater likelihood that a multi-year average will provide a better estimate of future UAFG levels.

There is a question of how many years of data to include in a multi-year average. When using a shorter period, the data is more recent and therefore more likely to reflect the distributors' current circumstances. If the period used is extended, the effects of year-to-year variations are reduced. However, the relevance of the data diminishes as the period used is extended because older data may not reflect the current circumstances faced by the distributors.

When selecting the number of years to include in a multi-year average, it is important to consider whether there are any structural breaks in the UAFG data. Structural breaks, such as a change in gas supply (which affects heating values), can distort the UAFG data and should be avoided where possible.

3.4 PROPOSED UAFG METHODOLOGY

A bottom up approach in theory is reasonable provided there is accurate and reliable data on which to base the UAFG calculation. In practice, however, this approach is not practical because there is uncertainty about the causes of UAFG and the extent to which each of the known causes contributes to UAFG levels.

The use of external comparisons would allow for competition by comparison and thereby incentivise the distributors to improve UAFG performance. However, they would not necessarily take into consideration the actual circumstances of distributors and may therefore result in unachievable or inefficient UAFG benchmarks.

A major advantage of the revealed cost approach is that it is based on the actual circumstances the distributors are experiencing, even where the extent to which causes contribute to UAFG is unknown or where causes are outside the control of the distributors. On this basis, the Commission considers that the revealed cost approach would result in the most reliable and efficient UAFG benchmarks.

In comparison to using the most recent year of UAFG data to calculate the benchmarks, a multi-year average will minimise the possible variations in year to year UAFG levels and is therefore likely to be a better metric for more efficient UAFG benchmarks.

For the reasons specified above, the Commission proposes to use the revealed cost approach with a multi-year average to calculate the UAFG benchmarks. The Commission will consider how many years of data to include in the multi-year average when it receives the settled UAFG data from the distributors. The Commission's proposed decision on the number of years of data will be included in its draft decision on the calculation of UAFG benchmarks.

In both the 2008 and 2013 UAFG reviews, the Commission used the revealed cost approach and a multi-year average of three years to determine UAFG benchmarks.

4 KEY ISSUES

The following key issues are associated with the calculation of UAFG benchmarks. These issues should be considered with, and can be incorporated into, the methodologies described in section 3.

4.1 GAS MAINS REPLACEMENT

All three distributors have a mains replacement program to reduce the leaks in their low pressure networks and to a lesser extent in their medium pressure networks. The low pressure networks generally consist of old cast iron and unprotected steel mains, and the deterioration of these pipes is the main cause of leaks.

The main drivers for the replacement of the low pressure network are safety and capacity issues, rather than reducing UAFG. Despite this, leaks from the distribution network are a contributor to UAFG. Australian Gas Networks and AusNet Services are expected to complete their mains replacement program in the mid-2020s, and Multinet in the mid-2030s.

During the 2008 UAFG review, the Commission considered that leakage from low pressure pipes was a significant cause of UAFG and that – all other things being equal – the distributors' mains replacement programs would result in UAFG for class B customers trending downwards as leakage is reduced. On this basis, the Commission applied an annual leakage rate reduction of 200 GJ per kilometre to each distributor's approved kilometres of low pressure mains renewal, to adjust for the estimated reduction in UAFG levels for class B customers.

The three distributors accepted the existence of a relationship between low pressure mains replacement and reduced UAFG, although there was disagreement with the Commission about the leakage rate reduction that should be applied. At the time, the

distributors proposed a leakage rate reduction of 100 GJ per kilometre of low pressure mains replaced.

During the 2013 UAFG review, the Commission considered there was significant uncertainty about the causes of UAFG, and that the correlation between the distributors' mains replacement programs and reduced UAFG levels was likely to be low. The Commission's view was supported by UAFG data submitted by the distributors which showed increasing levels of UAFG, despite the distributors' mains replacement programs.

On this basis, the Commission did not apply a downward trend to the forward UAFG benchmarks for class B customers over the 2013-17 regulatory period. The Commission stated that accounting for increased mains replacement without also calculating the countervailing effects could potentially bias the forecast.

At this stage, for the 2017 UAFG review, the Commission continues to consider that accounting for possible reductions in UAFG resulting from the distributors' mains replacement programs, without also accounting for possible variations related to the other known causes of UAFG, may bias the forecast for UAFG. For the same reason, the Commission does not propose to account for the possibility of any increased leakage caused by continued deterioration of the distribution networks which may outweigh the reduced leakage from mains replacement. There are many factors causing UAFG which pull in opposite directions, and collectively they affect the levels of UAFG in a distribution network.

As discussed in section 2 of this paper, there is some uncertainty about the causes of UAFG, as well as the extent to which each of the known causes contributes to the total UAFG for each distribution network. The Commission notes that studies of each distribution network indicate there are many components that contribute to UAFG, which makes the task of analysing the causes of UAFG considerably complex. The studies have also found that the contribution of each component to the total UAFG differs between distribution networks. Further, these studies have been unable to attribute substantial amounts of UAFG to any specific component.

4.2 UNDERSPENDING ON GAS MAINS REPLACEMENT

For the purposes of the 2013 review of UAFG benchmarks, the three distributors delivered a lower volume of mains replacement than approved by the Commission for the 2008-12 regulatory period. Multinet replaced less than half of the kilometres of pipes previously approved by the Commission, while Envestra (now Australian Gas Networks) replaced just over 60 per cent. SP AusNet (now AusNet Services) completed most, but not all, of its mains replacement program.

As part of the 2013 UAFG review, the Commission found that lower mains replacement had resulted in a windfall gain to the distributors. Given how the regulatory framework operates, consumers had paid gas prices reflective of the higher volumes of mains replacement approved in the previous regulatory period, not the actual volumes completed. Although underspending resulted in a lower capital base, and therefore lower projected returns on capital and depreciation allowances for future periods, the distributors retained the return on, and had the use of the return of, capital for the increment of approved expenditure not spent in 2008-12.

Accordingly, the Commission decided to make a downward adjustment to the forecast base UAFG benchmarks. The Commission considered that if the distributors undertook the level of mains replacement that they were funded for in the previous regulatory period, UAFG levels would be lower than the historical data.

The Commission considers that underspending on gas mains replacement is unlikely to be an issue for the 2017 review of UAFG benchmarks because the scope for the distributors to underspend on mains replacement is now limited.

For the 2013-17 access arrangement period, the Australian Energy Regulator (AER) used the historical volumes delivered by the distributors over 2008-12 in approving the capital expenditure for each distributor's mains replacement program. The AER also put in place a mechanism which allowed a distributor to seek an additional allowance for expenditure on the mains replacement program during the current access arrangement period (via a cost pass through application) if the distributor could justify the additional expenditure and demonstrate that it could complete the work by the end of 2017.

All three distributors sought, and were granted approval by the AER for, additional capital expenditure to extend their mains replacement programs during 2013-17. The distributors have indicated that they will complete their mains replacement consistent with the allowance approved by the AER for the current access arrangement period.

4.3 ADJUSTING FOR EFFICIENCIES

As per the 2013 review of UAFG benchmarks, the Commission may consider whether there are any efficiencies that can be achieved by the distributors. The revealed cost methodology relies on the assumption that the distributors are efficiently minimising UAFG. Hence, the Commission will require distributors to provide a detailed explanation of how they have sought to efficiently reduce UAFG levels during the 2013-17 regulatory period. If the Commission believes there are efficiencies still to be gained by distributors, the Commission may decide to adjust the forward UAFG benchmarks accordingly.

For example, in its 2013 decision, the Commission applied a downward trend to the non-PTS benchmarks of SP AusNet (now AusNet Services) to account for expected efficiency improvements based on historical performance.

4.4 CLASS A AND CLASS B BENCHMARKS

In both the 2008 and 2013 reviews of UAFG benchmarks, the Commission applied separate benchmarks for class A and class B customers. The Commission acknowledged that a single UAFG benchmark may be appropriate in principle given that injections of gas for class A and class B customers are not measured separately. However, the Commission also accepted that class A customers are serviced by high pressure mains that have very low leakage rates compared to the high, medium and low pressure mains – and associated equipment – which service class B customers.

The rationale for setting separate UAFG benchmarks for these two customer classes is that it is more reflective of actual field conditions. Class A customers are large

customers with sophisticated equipment for measuring their gas consumption. The meters for these customers have a high degree of accuracy. Further, these customers are serviced by field equipment that measures the pressure and temperature of the gas volume and corrects the measured volume to the standard pressure and temperature conditions for billing purposes. This means that all class A customers are billed under the same conditions. Given there is no such correction for class B customers, the metering errors for class B customers exceed those for class A customers.

In addition, the class A customers are supplied from the distributors' high pressure mains which experience lower rates of leakage than the low and medium pressure mains which supply most of the class B customers.

Therefore, having separate UAFG benchmarks for class A and class B customers reduces any cross subsidy in UAFG costs between these two classes of customers, and results in a UAFG allocation that is more cost reflective.

For the current review of UAFG benchmarks, the Commission considers that it is unreasonable to set the UAFG benchmark for class A customers at the same level as for class B customers. On this basis, the Commission proposes to retain the current two benchmark approach to UAFG.

5 DRAFT DECISION ON PROPOSED UAFG METHODOLOGY

The Commission's draft decision on the proposed methodology to calculate the UAFG benchmarks comprises the following elements:

1. The Commission proposes to use the revealed cost approach with a multi-year average to calculate the UAFG benchmarks.

2. The Commission proposes not to account for possible reductions in UAFG resulting from the distributors' mains replacement programs.

3. The Commission proposes not to account for possible increases in UAFG caused by continued deterioration of the distribution networks.

4. The Commission proposes to consider whether there are any efficiencies that can be achieved by the distributors, and may decide to adjust the forward UAFG benchmarks accordingly.

5. The Commission proposes to retain separate UAFG benchmarks for class A and class B customers.

6 CONSULTATION

6.1 SUBMISSIONS

The Commission invites written submissions from regulated businesses and other interested stakeholders on our proposed methodology to calculate UAFG benchmarks for the period 1 January 2018 to 31 December 2022. The submissions received in response to the draft decision will inform the development of the final methodology, which will be used during the second half of 2017 to calculate the new UAFG benchmarks.

Submissions should be made by 5pm on 16 June 2017 in either of the following forms, noting our preference that submissions are made in electronic form:

By email: energy.submissions@esc.vic.gov.au

By post: Essential Services Commission
Level 37, 2 Lonsdale Street
Melbourne VIC 3000

The Commission's general approach is that submissions will be published on our website, except for any information that is commercially sensitive or confidential. Submissions should clearly identify which information is sensitive or confidential.

For any questions regarding this consultation, please contact us on (03) 9032 1300. The Commission's approach to consultation is set out in our *Charter of Consultation and Regulatory Practice* (2012).

6.2 NEXT STEPS

The Commission plans to publish its final decision on the methodology to calculate the new UAFG benchmarks by the end of July 2017.

As part of our final decision, we will invite submissions from regulated businesses and other interested stakeholders on the calculation of UAFG benchmarks for the years 2018-2022.

The Commission expects the submissions from gas distributors on the calculation of UAFG benchmarks to include:

- actual UAFG data that has been settled as part of the reconciliation process that is administered by AEMO
- a detailed assessment of the causes of UAFG to support their respective UAFG benchmark proposals
- a detailed explanation of how they have efficiently sought to reduce UAFG levels during the 2013-2017 regulatory period
- a comprehensive strategy for how they will seek efficiencies to minimise UAFG levels during the 2018-2022 regulatory period.

During the second half of 2017, the Commission will consult with regulated businesses and other interested stakeholders on the calculation of UAFG benchmarks for the years 2018-2022. As part of this consultation, the Commission expects to publish a draft decision in September 2017 and a final decision in December 2017. Following its final decision, the Commission will amend the GDSC to give effect to the new UAFG benchmarks.