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15 March 2017

By email: Warwick.Anderson@aer.gov.au

Dear Mr Anderson

ActewAGL Distribution – Tariff Variation Notice for 2017–18 Reference Tariffs

In accordance with clause 7.18 of ActewAGL Distribution's access arrangement for the ActewAGL gas distribution network in the ACT, Queanbeyan and Palerang, ActewAGL Distribution advises that it proposes to vary Reference Tariffs from 1 July 2017.

The attached variation notice:

- sets out ActewAGL Distribution's proposed reference tariffs for the 2017–18 financial year;
- demonstrates how these proposed 2017–18 reference tariffs comply with the annual tariff variation mechanism set out ActewAGL Distribution's access arrangement for the ACT, Queanbeyan and Palerang gas distribution network 1 July 2016-30 June 2021; and
- calculates ActewAGL Distribution's automatic adjustment factor – which includes licence fee factors and UAG adjustment – and applies them to its reference tariffs.

ActewAGL Distribution's submission escalates ActewAGL Distribution's reference tariffs by:

- the Consumer Price Index (CPI);
- the automatic adjustment factor for 2017–18;
- the cost pass through factor for 2017–18; and
- the annual allowed X-factor updated by the AER in its letter to AAD on 9 January 2017 to account for the return on debt for 2017–18.

Please find attached the ActewAGL Distribution:

- tariff variation notice for 2017–18 reference tariffs (public version and confidential version)
- revised reference tariff schedule;
- tariff basket model (2017–18);
- statement of audit to support the gas quantity inputs in the tariff variation formula
- regulatory supporting statement; and
- confidentiality claim.

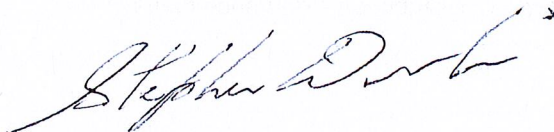
Confidential Information

ActewAGL Distribution has highlighted confidential information in the tariff variation notice. Attachment 5 to this letter details the relevant sections of the tariff variation notice that ActewAGL Distribution considers to be commercial-in-confidence and the basis of these claims. The claims are made and justified in accordance with the AER's confidentiality guideline.

ActewAGL Distribution has provided two versions of the tariff variation notice; a confidential version with the confidential information highlighted and public version with the confidential information redacted. Please note ActewAGL distribution claims confidentiality over the entire tariff basket model and the regulatory supporting statement and a single confidential version of each of these attachments is provided.

Should you wish to clarify any aspect of the proposed variations you can contact Philip Deamer, Manager Gas Access Regulation at philip.deamer@actewagl.com.au or by telephone (02) 6248 3438.

Yours sincerely



Stephen Devlin
General Manager, Energy Networks

TARIFF VARIATION NOTICE

**ACTEWAGL DISTRIBUTION ACCESS ARRANGEMENT
FOR THE ACT, QUEANBEYAN AND PALERANG GAS
DISTRIBUTION NETWORK. 1 JULY 2016-30 JUNE 2021.**

Version number 1 | Effective date: 15 March 2017

Public version

ActewAGL

for you

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Attachment 1. Gas network reference tariff schedule for ActewAGL Gas Distribution Network in ACT, Queanbeyan and Palerang – Schedule of Charges, Effective 1 July 2017 – attached as a separate document	20
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1. Introduction

1.1. Purpose

The 2016 Access Arrangement¹ (access arrangement) requires ActewAGL Distribution to submit a Variation Notice and a revised Reference Tariff Schedule to the Australian Energy Regulator (AER) for approval on or before the 15 March each year prior to the commencement of the next financial year.

ActewAGL Distribution hereby provides its Variation Notice for the 2017/18 reference tariffs in accordance with clause 7.18 of the access arrangement and:

- sets out ActewAGL Distribution's proposed reference tariffs for the 2017/18 financial year;
- demonstrates how these proposed 2017/18 reference tariffs comply with the relevant annual tariff variation mechanism specified in clause 7.4;
- calculates the automatic adjustment factor, and;
- Includes a statement to support the independently audited gas quantity inputs used in the annual Reference Tariff variation mechanism in Clause 7.4 and the automatic adjustment factor in Schedule 4 of the access arrangement.

This submission escalates ActewAGL Distribution's haulage reference tariff revenues by

- i. the Consumer Price Index (CPI),
- ii. the automatic adjustment factor for 2017-18,
- iii. the cost pass through factor for 2017-18 and
- iv. the annual allowed X-factor updated by the AER in its letter to ActewAGL on 9 Jan 2017 to account for the return on debt for 2017-18.

The annual allowed X-factor updated by the AER supersedes the X-factor approved by the AER in its Final Decision: ActewAGL Distribution Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network 1 July 2016-30 June 21, published on 26 May 2016.

1.2. Submission structure and access arrangement compliance

ActewAGL Distribution has structured this submission to demonstrate compliance with each requirement in clause 7 of its access arrangement:

Section 2: Tariff Classes – Schedule 3

Section 3: Variation Notice – clause 7.18

¹ The complete title of the Access arrangement is: ActewAGL Distribution Access arrangement for the ACT, Queanbeyan and Palerang gas distribution network. 1 July 2016-30 June 2021.

Section 4: Annual Reference Tariff variation mechanism – clause 7.4

Section 5: Automatic adjustment factor – Schedule 4

1.3. ActewAGL Distribution tariff basket model

This submission also includes ActewAGL Distribution's proposed tariff basket model (Attachment 2). ActewAGL Distribution developed this model to demonstrate that the proposed 2017-18 reference tariffs comply with the formula in clause 7.4 of its access arrangement.

The model demonstrates that for 2017-18 ActewAGL Distribution has updated its reference tariffs for:

- CPI
- annual allowed X factor (adjusted for the return on debt update)
- the automatic adjustment factor that reflects cost true-ups from the 2010 AA period for UAG costs, licence fees, carbon costs and relevant taxes, and
- verified gas quantity inputs for financial year t-2 (2015-16) (see section 3.3).

1.4. Submission standards and terminology

This submission employs the following standards:

- Unless otherwise stated, all prices are expressed in \$2017/18.
- For the purpose of relevant clauses and formulas in ActewAGL Distribution's access arrangement as applicable to this tariff variation notice:
 - i. *financial year t* is the 2017/18 financial year ending on 30 June 2018;
 - ii. *financial year t-1* is the 2016/17 financial year ending on 30 June 2017;
 - iii. *financial year t-2* is the 2015/16 financial year ending on 30 June 2016;
- The term 'customer' should be interpreted as an end consumer user of energy rather than a retailer.
- A reference to a clause is a reference to a clause of the access arrangement.

2. Tariff classes

In this section, ActewAGL Distribution sets out its tariff classes for 2017/18. The tariff classes for each reference service are those approved by the AER in its Final Decision on 26 May 2016 and are described in Schedule 3 of ActewAGL Distribution's access arrangement.

Table 1: ActewAGL Distribution's tariff classes

Tariff Class	Description
Demand tariffs	
DBC	Demand Business Capacity
DBT	Demand Business Throughput
DBG	Demand Business Large Scale Generation
Volume Tariffs	
VRI	Volume Residential Individual
VRH	Volume Residential (gas heating combined with other gas appliances)
VRB	Volume Residential Boundary
VBS	Volume Small Business
VBM	Volume Medium Business
VRG	Volume Residential Large Scale Generation

3. Variation Notice

3.1. Effective date of the proposed variation

The effective date of variation for ActewAGL Distribution's 2017/18 reference tariffs is 1 July 2017 for the purpose of clause 7.18(b) of the access arrangement.

3.2. Compliance with the annual Reference Tariff variation mechanism

For the purpose of clause 7.18(c), ActewAGL Distribution's compliance with the annual tariff variation mechanism is described in Section 4 below and in ActewAGL Distribution's proposed tariff basket model in Attachment 2.

3.3. Gas quantity inputs

ActewAGL Distribution's annual tariff variation mechanism relies upon actual haulage reference tariff quantity inputs and total metering and ancillary charges for the year two years prior to the year in which the proposed tariffs will apply. For the 2017/18 variation notice, ActewAGL Distribution must use the audited quantities that correspond to financial year t-2, i.e. 2015/16.

KPMG has provided an independent reasonable assurance report for the quantities data to comply with the audit requirement in the tariff variation notice as per Clause 7.4. The KPMG report and the accompanying regulatory reporting statement are provided in Attachment 3.

The tariff classes under the 2016–21 access arrangement are different to those which applied under the previous access arrangement for the 2010–15 period.

To obtain the actual data in the new blocks and tariff structures ActewAGL Distribution:

- For Volume and Demand markets, used individual billing documents for each MIRN to break down the actual consumption for each period (month / quarter) into the new block structures. This was audited by KPMG.
- Could not obtain the actual break down between Residential and Business ancillary services. KPMG audited the total number of ancillary services by service type. To obtain the break down between Residential and Business services ActewAGL Distribution used the relevant percentage break down from the AER's Final Decision. This is demonstrated in the tab "Calc|Ancillary Services Alloc" of the tariff basket model (Attachment 2)
- For tariffs with zero actual quantities, assumed a quantity of 1 to enable the side constraint formula to work. Relevant comments were included in the tariff basket model (Attachment 2) tab "Inputs|Volumes"

4. Compliance with the annual tariff variation mechanism

This section explains how ActewAGL Distribution has complied with the reference tariff variation mechanism, which includes a specified tariff basket price control formula and side constraint formula applying to each tariff class.

4.1. Annual reference tariff variation mechanism

ActewAGL Distribution's annual tariff variation mechanism as defined in clause 7.4 includes two formulaic tests that apply to each tariff class:

1. The tariff basket price control formula:

Equation 1

$$(1 + CPI_t)(1 - X_t)(1 + A_t)(1 + PT_t) \geq \frac{\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_{t-2}^{ij}}{\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}}$$

where ActewAGL Distribution has n Reference Tariffs and each Reference Tariff has up to m tariff components.

2. Side constraint formula:

Equation 2

$$(1 + CPI_t)(1 - X_t)(1 + A_t)(1 + PT_t)(1 + 0.02) \geq \frac{\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_{t-2}^{ij}}{\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}}$$

where ActewAGL Distribution has n Reference Tariffs within each Tariff Class and each of those Reference Tariffs has up to m tariff components.

and where for the purposes of each of the formulae above:

- t is the Financial Year for which the Tariffs are being set;
- p_t^{ij} is the proposed Tariff for component j of Reference Tariff i in Financial Year t , i.e. the new Tariff to apply from the commencement of Financial Year t ;

p_{t-1}^{ij}	is the Tariff for component j of Reference Tariff i that is being charged in Financial Year $t-1$ at the time the Variation Notice is submitted to the Relevant Regulator for assessment or, for the purposes of scaling by the Relevant Regulator in accordance with clause 7.25, at the time that scaling process commences;
q_{t-2}^{ij}	is the audited quantity of component j of Reference Tariff i that was sold in Financial Year $t-2$;
CPI_t	is the annual percentage change in the Australian Bureau of Statistics (ABS) CPI All Groups, Weighted Average of Eight Capital Cities from the December quarter in year $t-2$ to the December quarter in year $t-1$, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in financial year $t-1$

divided by

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the December quarter in financial year $t-2$ minus one.

If the ABS does not, or ceases to, publish the index, then CPI will mean an index which the Relevant Regulator considers is the best available alternative index.

X_t	means the X factor for Financial Year t , determined in accordance with the PTRM, updated for the return on debt in accordance with clauses 6.9 to 6.12;
A_t	is the automatic adjustment factor for Financial Year t calculated in accordance with clause 1 of Schedule 4; and
PT_t	is the cost pass through factor for Financial Year t calculated in accordance with clause 2.5 of Schedule 4.

For 2017/18, the two formulas respectively constrain:

- The annual movement in total notional revenues to no more than 3.18%.
- The annual movement in the notional revenues from any individual tariff class to no more than 5.24%.

ActewAGL Distribution's proposed tariff basket model (Attachment 2. provides a detailed explanation of how ActewAGL Distribution has applied the formula in clause 7.4 of the access arrangement, to ensure the proposed 2017/18 haulage reference tariffs meet the constraints set out in clause 7.4.

4.2. Calculation of the components of basket price control formula and side constraint

4.2.1. Calculation of CPI_t

This section describes how ActewAGL Distribution has calculated the annual CPI adjustment. The value of CPI applicable to the annual tariff variation mechanism is 1.48% (rounded to two decimal places). ActewAGL Distribution calculated this in accordance with clause 7.4.

This calculation involves ActewAGL Distribution obtaining the ABS CPI all groups weighted average of 8 capital cities for the December quarter in 2016 and 2015. ActewAGL Distribution then divided the CPI December 2016 index value of 110.0 by the CPI December 2015 index value of 108.4 and subtracted one. Based on this calculation, the CPI_t is 1.48 per cent.

Please refer to Attachment 2. for details of the calculation.

4.2.2. Calculation of the updated X factor

In line with clause 6.12 of the access arrangement, the AER has updated ActewAGL Distribution's return on debt for 2017/18 to 5.28 per cent under the NGR r.87(12). On 9 January 2017, the AER provided a letter to ActewAGL Distribution to notify of the updated X-factor for 2017/18 is -1.48 per cent. The AER has published an updated version of the final decision post-tax revenue model (PTRM) showing that updated X factor on its website².

4.2.3. Calculation of the Automatic Adjustment Factor, (A)

The calculation of the automatic adjustment factor is described in Section 4 below and evidenced in ActewAGL Distribution's proposed reference tariff model in Attachment 2.

4.2.4. Calculation of the Cost Pass Through Factor

Clause 2.5 of Schedule 4 of the access arrangement defines the cost pass through factor PT_t as:

Equation 3

$$PT_t = \frac{(1 + PT'_t)}{(1 + PT'_{t-1})} - 1$$

² <https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/actewagl-act-queanbeyan-and-palerang-access-arrangement-2016-21/updates>

where:

PT'_{t-1} is:

- (a) zero when t-1 refers to Financial Year 2016/17; and
- (b) the value of PT'_t determined in the Financial Year t-1 for all other Financial Years in the 2016 Access Arrangement Period,

And

Equation 4

$$PT'_t = \frac{AP_t}{(1 + CPI_t)(1 - X_t)(1 + A_t) \sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}}$$

where:

AP_t is

- (a) any Determined Pass Through Amount that the Relevant Regulator approves for Financial Year t; and/or
- (b) any pass through amounts arising from pass through events (as that term is defined in the access arrangement applying to ActewAGL Distribution immediately prior to this access arrangement) occurring in the 2010 Period that ActewAGL Distribution proposes to pass through in whole or in part in Financial Year t, adjusted to include an amount to reflect the time value of money between incurring the costs and recovering the costs, and exclude any amounts already passed through in Reference Tariffs.

4.2.5. Calculation of the Determined Pass Through Amount, AP_t

Clause 7.8 of the 2015-21 access arrangement requires ActewAGL Distribution to notify the AER within 90 days of becoming aware of the occurrence of a cost pas through event which will or is likely to have an administrative cost impact. Clause 7.6 defines a Cost Pass Through Event as one of the following:

- (a) a Regulatory Change Event;

As per Schedule 1 of the access arrangement, this is defined as a change in regulatory obligation or requirement that:

- falls within no other category of pass through event; and
- occurs during the course of an Access Arrangement Period; and

- substantially affects the manner in which ActewAGL Distribution provides the Reference Service; and
- materially increases or materially decreases the costs of providing those services.

ActewAGL Distribution notifies that a regulatory change event has not occurred.

(b) a Service Standard Event;

As per Schedule 1 of the access arrangement, this is defined as a legislative or administrative act or decision that:

- has the effect of:
 - (i) substantially varying, during the course of an access arrangement Period, the manner in which ActewAGL Distribution is required to provide the Reference Service; or
 - (ii) imposing, removing or varying, during the course of an Access Arrangement Period, the minimum service standards applicable to the Reference Service; or
 - (iii) altering, during the course of an access arrangement period, the nature or scope of the Reference Service provided by ActewAGL Distribution; and
 - materially increases or materially decreases the cost to ActewAGL Distribution of providing the Reference Service.

ActewAGL Distribution notifies that a service standard event has not occurred.

(c) an Insurance Cap Event;

As per Schedule 1 of the access arrangement, this is defined as an event where:

- ActewAGL Distribution makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy;
- ActewAGL Distribution incurs costs beyond the policy limit; and
- the costs beyond the policy limit increase the costs to ActewAGL Distribution of providing the Reference Service.

ActewAGL Distribution notifies that an insurance cap event has not occurred.

(d) an Insurer Credit Risk Event;

As per Schedule 1 of the access arrangement, this is defined as an event where an insurer becomes insolvent and, as a result, in respect of an existing, or potential, claim for a risk that was insured by the insolvent insurer, ActewAGL Distribution:

- is subject to a higher or lower claim limit or a higher or lower deductible than would have otherwise applied under the insolvent insurer's policy; or
- incurs additional costs associated with self-funding an insurance claim, which would otherwise have been covered by the insolvent insurer.

ActewAGL Distribution notifies that an insurer credit risk event has not occurred.

(e) a Terrorism Event;

As per Schedule 1 of the access arrangement, this is defined as an act (including, but not limited to, the use of force or violence, the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government), which:

- from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear); and
- which increases the cost to ActewAGL Distribution in providing the Reference Service.

ActewAGL Distribution notifies that a terrorism event has not occurred.

(f) a Natural Disaster Event;

As per Schedule 1 of the access arrangement, this is defined as any natural disaster including but not limited to fire, flood or earthquake that occurs during the 2016 access arrangement period that increases the costs to ActewAGL Distribution in providing the Reference Service, provided the fire, flood or other event was not a consequence of the acts or omissions of ActewAGL Distribution.

ActewAGL Distribution notifies that a natural disaster event has not occurred.

(g) a Network User Failure Event.

As per Schedule 1 of the access arrangement, this is defined as the occurrence of an event where:

- a Retailer of Last Resort (RoLR) Event as defined in section 122 of the National Energy Retail Law has occurred; and
- ActewAGL Distribution incurs costs in responding to the RoLR Event in accordance with its obligations under the NERL, NERR, NGL or NGR (including Guidelines and procedures that are binding under those instruments); and
- The costs are not recoverable by ActewAGL Distribution under other provisions of the NERL, NERR, NGL or NGR as in force at the time of the event, including but not limited to rule 531 of the NGR and other pass through events in this access arrangement.

ActewAGL Distribution notifies that a network user failure event has not occurred.

As per Clause 7.11 of the access arrangement, ActewAGL Distribution has not notified the AER that any cost pass through event has occurred and therefore, the Determined Pass Through Amount, as defined in Schedule 1 and denoted by AP_t , is equal to zero for 2017-18.

This results in a value of zero for PT'_t in **Equation 5**. We use this result in **Equation 4** and given that $PT'_{t-1}=0$ for 2016-17, we obtain a cost pass through amount, PT_t of zero.

4.2.6. Calculation of the prices (p) and quantities (q)

In line with clause 7.18 (d) of the access arrangement, ActewAGL Distribution is required to include a statement to support the gas quantity inputs in the annual Reference Tariff Variation mechanism. This statement must be independently audited and the gas quantity input must reflect the most recent actual Financial Year quantities available. The independent audit was performed by KPMG and the statement is provided in Attachment 3.

ActewAGL Distribution's annual tariff variation mechanism relies on actual haulage reference tariff quantity inputs from two years prior to the financial year in which the proposed tariffs will apply. For the 2017–18 variation notice ActewAGL must use the actual quantities that correspond to financial year t-2 (i.e. 2015-16), which is the most recent actual financial year for which quantity inputs are available at this time.

5. Calculation of the automatic adjustment factor

This section shows how ActewAGL Distribution has calculated the automatic adjustment factor in accordance with section 1 of Schedule 4 of the access arrangement.

As per Attachment 2, the automatic adjustment factor is given by 0.20%. Its derivation is shown below.

The automatic adjustment factor is given by

Equation 5

$$A_t = \frac{(1 + A'_t)}{(1 + A'_{t-1})} - 1$$

where:

A'_{t-1} is:

zero when $t-1$ refers to Financial Year 2016/17; and

the value of A'_t determined for the Financial Year $t-1$ for all other years;

and

A'_t is:

Equation 6

$$A'_t = \frac{(L_{t-2} + U_{t-2} + C_{t-2} + T_{t-2}) \times [(1 + \text{realWACC}_t) \times (1 + \text{realWACC}_{t-1}) \times (1 + \text{CPI}_{t-1})]}{(1 - X_t) \sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}}$$

where:

t is the Financial Year for which tariffs are being set;

L_{t-2} is the licence fee factor amount, as defined in this Schedule 4, for Financial Year $t-2$;

real WACC_t is the pre-tax real weighted average cost of capital for Financial Year t determined in accordance with the PTRM using the updated return on debt for Financial Year t determined in accordance with clauses 6.1 to 6.24;

$real\ WACC_{t-1}$ is the pre-tax real weighted average cost of capital determined for Financial Year $t-1$;

U_{t-2} is the Unaccounted for Gas (UAG) factor amount, as defined in this Schedule 4, for Financial Year $t-2$;

C_{t-2} is the Carbon Cost factor amount, as defined in this Schedule 4, for Financial Year $t-2$;

T_{t-2} is the Relevant Tax factor amount for Financial Year $t-2$;

CPI_t has the same meaning as set out in clause 7.4;

CPI_{t-1} is the value of CPI_t determined for the Financial Year $t-1$;

X_t has the same meaning as set out in clause 7.4;

p_{t-1}^{ij} has the same meaning as set out in clause 7.4; and

q_{t-2}^{ij} has the same meaning as set out in clause 7.4.

From **Equation 5**, given that $A'_{t-1}=0$ for 2016-17, $A_t = A'_t$. The derivation of the different components of A'_t is described below.

5.1. Calculation of the licence fee factor amount, L_{t-2}

Clause 2.1 of Schedule 4 of the access arrangement sets out the calculation of the licence fee factor amount for Financial Year $t-2$ (i.e. 2015/16). The licence fee adjustment, L_{t-2} , is defined as the difference between the actual licence fee costs for 2015/16 and the corresponding forecast licence fee costs allowed in the AER's final decision for 2015/16.

The actual amount paid by ActewAGL Distribution in licence fees in 2015/16 was [REDACTED], which comprised of the Utilities Network Facilities Tax (UNFT) and the Energy Industry Levy (EIL), both payable to the ACT Government. The UNFT is a charge on owners of utility network facilities, including electricity, water gas and telecommunications, and is charged at a rate per kilometre of infrastructure. The EIL is used to recover the costs of regulating utilities. The amount ActewAGL Distribution forecast to pay in licence fees [REDACTED] was subtracted from the actual amount, to derive the [REDACTED] amount ActewAGL Distribution seeks to pass through the customers.

Table 2 Calculation of the licence fee factor amount

	Actual	Forecast	Difference
UNFT	\$5,877,228	\$5,694,255	\$182,973
EIL	[REDACTED]	\$796,397	[REDACTED]

Total		\$6,490,652	
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Note: Amounts are expressed in 2015/16 dollars.

5.2. Calculation of the UAG factor amount

Clause 2.2 of Schedule 4 of the access arrangement sets out the calculation of the UAG factor amount for Financial Year t-2 (i.e. 2015-16).

ActewAGL Distribution followed the methodology outlined in Clause 2 of Schedule 4 of the access arrangement to derive the amount payable in Unaccounted for Gas. Total gas receipts for 2015/16 in GJ was multiplied by the UAG cost for 2015/16, measured in \$/GJ. This amount was then multiplied by the UAG Target Rate of 1.96 per cent, to derive the figure of [REDACTED]. The forecast amount for UAG of [REDACTED] was then subtracted from [REDACTED], to determine the -\$59,003 figure depicted in Table 3.

Table 3: Calculation of the UAG factor amount

\$ 2015-16	2015-16
Total Gas Receipts in GJ for 2015/16	[REDACTED]
UAG Cost in \$/GJ for 2015/16	[REDACTED]
UAG Target Rate	1.96%
AAD Benchmark costs for purchases of gas as UAG	[REDACTED]
Forecast total UAG costs	[REDACTED]
UAG factor amount, U_{t-2}	-\$59,003

5.3. Calculation of the Carbon Cost factor amount

Clause 2.3 of Schedule 4 of the access arrangement calculates the carbon cost factor amount for 2015/16 as the difference between the actual and forecast cost incurred by ActewAGL Distribution as a result of a Carbon scheme for 2015/16.

The carbon tax legislation was repealed on 17 July 2014, with effect from 1 July 2014. On 1 August 2014, ActewAGL Distribution submitted an application for a negative tax change pass through event as a result of the repeal of the carbon tax. On 17 October 2014, the AER determined that a negative carbon pass through event occurred and approved the negative pass through amount which represented a return to customers of carbon costs already collected by ActewAGL Distribution in its reference tariffs from 1 July to 31 August 2014 and carbon costs for the period 1 September 2014 to 30 June 2015, for which customers would not be charged. ActewAGL Distribution's reference

tariffs were changed from 1 September 2014 to reflect the removal of the carbon price component and no further adjustments were made beyond this time.

5.4. Calculation of the Relevant Tax factor amount

Clause 2.4 of Schedule 4 of the access arrangement calculates the Relevant Tax Factor amount for 2015/16 as the difference between the actual and forecast costs incurred by ActewAGL Distribution in paying any Relevant Tax for 2015/16.

As per Schedule 1 of the access arrangement, a Relevant Tax is defined as any tax other than:

- (a) a tax in the nature of an income tax or a capital gains tax;
- (b) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any Tax;
- (c) stamp duty, or similar taxes and duties;
- (d) the AEMO Fee, the Energy Industry Levy and the Utilities (Network Facilities) Tax; and
- (e) any Tax that replaces or is the equivalent of or similar to any of the taxes referred to above.

ActewAGL Distribution determined that it did not incur any Relevant Tax for the financial year 2015/16.

5.5. Calculation of Weighted Average Capital Cost (WACC)

ActewAGL Distribution used the AER determined pre-tax real WACCs for 2017-18 and 2016-17 that originate from the updated version of the PTRM in AER's final decision.

	2016-17	2017-18
Pre-tax real WACC (%)	4.27	4.25

5.6. Calculation of the CPI_{t-1} adjustment

This section shows how ActewAGL Distribution has calculated the annual CPI adjustment. The value of CPI applicable to the annual tariff variation mechanism is 1.69% (rounded to two decimal places). ActewAGL Distribution calculated this in accordance with clause 7.4

This calculation involves ActewAGL Distribution obtaining the ABS CPI all groups weighted average of 8 capital cities for the December quarter in 2015 and 2014. ActewAGL Distribution then divided the CPI December 2015 index value of 108.4 by the CPI December 2014 index value of 106.6 and subtracted one. Based on this calculation, the CPI_{t-1} is 1.69 per cent.

5.7. Calculation of the P x Q

To calculate the P x Q component of the automatic adjustment factor formula ActewAGL Distribution used:

- T-1 year approved prices. For the 2017-18 variation notice, t-1 prices are the 2016-17 tariffs, as approved by the AER in the final decision. These are the current ActewAGL Distribution prices that are in place until the 2017-18 tariff variation notice is approved by the AER and takes effect.
- T-2 audited quantities. In line with the requirements of clause 7.18 (d) of the access arrangement, and as outlined in the section 4.2.6 of this document, ActewAGL Distribution has used independently audited quantities.

Attachment 1. Gas network reference tariff schedule for ActewAGL Gas Distribution Network in ACT, Queanbeyan and Palerang – Schedule of Charges, Effective 1 July 2017 – attached as a separate document

**Attachment 2. ActewAGL Distribution Tariff
Basket Model spreadsheet (Confidential) –
attached as a separate document**

Attachment 3. Statement of gas quantity inputs– attached as a separate document

**Attachment 4. Regulatory Reporting
Statement (Confidential)** – attached as a separate
document