Gas Access Arrangement Revision

2018-2022

Part B of the Access Arrangement for the Distribution System

Reference Tariffs and Reference Tariff Policy

<u>**Incorporating revisions required by AER final decision 30 November 2017**</u>

mission**zero**

Please contact the indicated person with any inquiries about the document.

Manager – Economic Regulation
AusNet Services
Level 31, 2 Southbank Boulevard
Southbank Victoria 3006
Ph: (03) 9695 6000

Table of Contents

Gas Access Arrangement Revision 2018-2022

1   Haulage Reference Tariffs

1.1   Haulage Reference Tariffs

(a)   Haulage Reference Tariffs for 2018

For Calendar Year 2018, the Haulage Reference Tariffs to apply from 1 January 2018 are the tariffs set out in clause 9 adjusted to comply with the Tariff Control Formula and rebalancing control formula in clause 3 and verified by the Regulator as if clause 4 applied (but for the timing requirements of clause 4.1).

(b)   Introduction of new Haulage Reference Tariffs

(1)   The Service Provider may develop one or more new Haulage Reference Tariffs for application to Users in certain circumstances, providing that any new Haulage Reference Tariff is consistent with the Service Provider's Reference Tariff Policy, as set out in clause 6.

(2)   The Service Provider is required to notify the Regulator in writing of its intent to introduce new Haulage Reference Tariffs or new Haulage Reference Tariff Components at least 60 Business Days prior to the date on which it wishes the new Haulage Reference Tariffs to commence.

(c)   No Meter

A Distribution Supply Point which does not have a Meter is assigned to Haulage Reference Tariff V, unless otherwise agreed between the Service Provider and the relevant User to whom Reference Services are provided at that Distribution Supply Point.

(d)   Distribution Area

The Haulage Reference Tariffs apply to the Distribution System within the Service Provider's Distribution Area. The Distribution Area is divided into two zones as detailed in clause 9.

1.2   Application of Haulage Reference Tariffs

(a)   Assigned Haulage Reference Tariffs

Where the Service Provider is charging a particular Haulage Reference Tariff in respect of Supply at a particular Distribution Supply Point, then the User at that Distribution Supply Point is to be regarded as being "assigned" to that Haulage Reference Tariff.

(b)   Haulage Reference Tariffs for existing Distribution Supply Points

Unless a new Haulage Reference Tariff has been reassigned to a Distribution Supply Point, the Haulage Reference Tariff to apply to a Distribution Supply Point from 1 January 2018 is deemed to be the Haulage Reference Tariff assigned to that Distribution Supply Point as at 31 December 2017.

(c)   Haulage Reference Service provided at a Distribution Supply Point

The Haulage Reference Service provided at a particular Distribution Supply Point is the Haulage Reference Service in respect of which there is a specified Haulage Reference Tariff which is assigned at that Distribution Supply Point.

1.3   Assignment of New Haulage Reference Tariffs and New Haulage Reference Tariff Components

(a)   Change in volume of gas consumed

If, after the initial assignment of a Haulage Reference Tariff to a Distribution Supply Point, the Service Provider becomes aware that:

(1)   the Quantity of Gas withdrawn at that Distribution Supply Point has changed; or

(2)   the User's Customer at that Distribution Supply Point has changed or will change; or

    (3)   the User's Customer at that Distribution Supply Point has changed or will change from being a Residential Customer to a Commercial Customer; or

    (4)   the User's Customer at that Distribution Supply Point has changed or will change from being a Commercial Customer to a Residential Customer,

so that the Haulage Reference Tariff should no longer be assigned to the Distribution Supply Point to which it is currently assigned, the Service Provider may reassign an alternative Haulage Reference Tariff to that Distribution Supply Point.

(b)   Change in demand or Connection characteristics

If the Service Provider believes that a User's demand characteristics or Connection characteristics (or both) have changed such that it is no longer appropriate for that User's Distribution Supply Point to be assigned to the Haulage Reference Tariff to which the User's Distribution Supply Point is currently assigned, then the Service Provider may reassign an alternative Haulage Reference Tariff to that Distribution Supply Point.

(c)   Factors to be considered by the Service Provider

In determining the assignment of a Haulage Reference Tariff to a Distribution Supply Point the Service Provider will take into account:

    (1)   the User's demand and Connection characteristics; and

    (2)   Haulage Reference Tariffs assigned to Distribution Supply Points with the same or materially similar demand and Connection characteristics.

(d)   Notification of proposed reassignment of Haulage Reference Tariff

If, after 1 January 2018, the Service Provider becomes aware that a Haulage Reference Tariff assigned to a Distribution Supply Point should be a different Haulage Reference Tariff, the Service Provider will advise the relevant User accordingly, prior to the reassignment occurring, unless otherwise agreed.

(e)   Terms and Conditions for new and changed Distribution Supply Points

If a new Haulage Reference Tariff is assigned to a Distribution Supply Point or there is a change of User at a Distribution Supply Point, the Service Provider will supply to the relevant User, as soon as practicable after a request from that User, the terms and conditions which will apply to the relevant User at that Distribution Supply Point, and the Haulage Reference Tariff that is assigned to that Distribution Supply Point.

(f)   Notification by User regarding a different Haulage Reference Tariff

Where a User receives notice under clause 1.3(d) that a Haulage Reference Tariff assigned to a Distribution Supply Point should be a different Haulage Reference Tariff, the different Haulage Reference Tariff will be assigned to that Distribution Supply Point unless the User submits a written and reasonable request to the Service Provider to remain on the original Haulage Reference Tariff and the Service Provider approves the request.

(g)   Time period for reassignment

When introducing a new Haulage Reference Tariff and/or Haulage Reference Tariff Component, the Service Provider will assign the new Haulage Reference Tariff and/or Haulage Reference Tariff Component to the relevant Distribution Supply Point within 30 Business Days of the earlier of:

    (1)   the receipt of a written notice that the Regulator has verified the Service Provider's proposed introduction of a new Haulage Reference Tariff and/or Haulage Reference Tariff Component; and

    (2)   the date which is 20 Business Days from the date on which the Regulator received the Service Provider's notification under clause 4.1(c).

(h)   Assignment to Haulage Reference Tariff D or Haulage Reference Tariff M

Where a Haulage Reference Tariff D or Haulage Reference Tariff M is assigned to a Distribution Supply Point, that Haulage Reference Tariff shall apply to that Distribution Supply Point for a minimum period of one year.

Gas Access Arrangement Revision 2018-2022

(i) Additional information required for new Haulage Reference Tariffs and new Haulage Reference Tariff Components

Where the Service Provider is proposing to introduce a new Haulage Reference Tariff or a new Haulage Reference Tariff Component, the Service Provider will submit the following information to the Regulator, at the same time that it submits its Haulage Reference Tariff proposals, and in addition to the information required under clause 4.3:

(1) a parent Haulage Reference Tariff(s), which is the Haulage Reference Tariff(s) currently assigned to those Distribution Supply Points to which the new Haulage Reference Tariff is proposed to apply;

(2) reasonable estimates of the Quantities that would have been distributed in relevant units if the new Haulage Reference Tariff Components had existed in the Calendar Year immediately prior to the current Calendar Year for each new Haulage Reference Tariff Component; and

(3) reasonable estimates of the Quantities that would have been distributed in relevant units if the new Haulage Reference Tariff Components had existed in the Calendar Year immediately prior to the current Calendar Year for each Haulage Reference Tariff Component of the parent Haulage Reference Tariff(s).

(j) Switching rates

Where the Service Provider submits information to the Regulator that the switching rate of Users moving from a given parent Haulage Reference Tariff to a new Haulage Reference Tariff will continue to be above zero from Calendar Year to Calendar Year, the Service Provider will also submit the following information:

(1) the Quantities distributed in relevant units at the relevant Distribution Supply Point where the new Haulage Reference Tariff is already assigned to that Distribution Supply Point;

(2) reasonable estimates of the Quantities distributed in relevant units at those Distribution Supply Points at which the same new Haulage Reference Tariff is expected to apply during the course of the next Calendar Year; and

(3) the Quantities distributed in relevant units at those Distribution Supply Points at which the parent Haulage Reference Tariff continues to apply.

(k) Details of estimates

The Service Provider will provide details of and the basis for all estimates provided under clauses 1.3(i) and (j) to the Regulator, including (but not limited to) the information in clause 1.3(e).

(l) Resubmission of estimates

The Regulator can request that the Service Provider resubmit quantity estimates provided under clauses 1.3(i) and (j) where the Regulator considers the estimates to be incomplete, inconsistent or unsubstantiated. The Regulator must provide reasons for requesting such a resubmission.

(m) Timing of information

The elapsed time between the Regulator requesting that the Service Provider provide additional information under clause 1.3(l), and the Service Provider providing that information to the Regulator does not count towards the 20 Business Days under clause 1.3(g)(2).

1.4 Withdrawal of Haulage Reference Tariffs

(a) Withdrawal of Haulage Reference Tariff

When proposing the withdrawal of an existing Haulage Reference Tariff and/or Haulage Reference Tariff Component, the Service Provider will reassign alternative Haulage Reference Tariffs to all relevant Distribution Supply Points within 30 Business Days of the earlier of:

(1)   the receipt of a written notice that the Regulator has verified the Service Provider's proposed withdrawal of the existing Haulage Reference Tariff and/or Haulage Reference Tariff Component; and

(2)   the date which is 20 Business Days from the date on which the Regulator received the Service Provider's notification under clause 4.1(c).

(b)   Notification of withdrawal of Haulage Reference Tariff

Prior to the withdrawal of the existing Haulage Reference Tariff and/or Haulage Reference Tariff Component, the Service Provider will as soon as practicable notify all affected Users in writing.

(c)   Additional information to be provided to Regulator

When the Service Provider proposes to withdraw a Haulage Reference Tariff, in addition to the information required under clause 4.3, the Service Provider will:

(1)   notify the Regulator in writing of the Haulage Reference Tariffs that will replace the withdrawn Haulage Reference Tariffs;

(2)   where Haulage Reference Tariffs will be reassigned to more than one Distribution Supply Point in Calendar Year t, provide a breakdown of the actual Quantities, in relevant units, that were distributed under each existing Haulage Reference Tariff Component to these Users under the existing parent Haulage Reference Tariffs in Calendar Year $t\text{-}2$; and

(3)   where Haulage Reference Tariffs have been reassigned to more than one Distribution Supply Point in Calendar Year $t\text{-}1$, provide a breakdown of the actual Quantities, in relevant units, that were distributed to these Users under each Haulage Reference Tariff Component which existed immediately prior to the reassignment under the parent Haulage Reference Tariffs that previously existed in Calendar Year $t\text{-}1$.

1.5   Provision of Information on Tariffs by the Distribution Business

(a)   The distribution business will prepare and publish a public Tariff Report, by 1 March of each Calendar Year. The Tariff Report should contain sufficient information to enable distribution customers to understand the basis for the tariff policies adopted by the distribution business.

(b)   The report:

(1)   will be submitted to the Regulator 60 business days prior to the end of the Calendar Year where the Service Provider proposes to introduce new tariffs or amend tariff structures in the subsequent Calendar Year;

(2)   will be submitted to the Regulator 35 business days prior to the end of the Calendar Year where the Service Provider does not propose to introduce new tariffs or amend tariff structures in the subsequent Calendar Year.

2   Ancillary Reference Tariffs

2.1   Existing Ancillary Reference Tariffs

The Ancillary Reference Tariffs for Ancillary Reference Services that will apply from 1 January 2018 are set out in clause 10.

2.2 Adjustments to Ancillary Reference Tariffs

(a) From January 2019 the Service Provider will make annual adjustments to the Ancillary Reference Tariffs in accordance with the formulae below. For the avoidance of doubt, Ancillary Reference Tariffs are not adjusted in accordance with the Tariff Control Formula or rebalancing control formula in clause 3.

(b) The Ancillary Reference Tariff Control Formula for the Calendar Year 2019 to 2022 is:

$$ART_t = ART_{t-1} * (1 + \Delta CPI_t)$$

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;

ΔCPI is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year$_{t-2}$ to the June quarter in Calendar Year$_{t-1}$, calculated using the following method:

> The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year t-1
>
> divided by
>
> the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year t-2
>
> minus 1.

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

3 Haulage Reference Tariff Control Formula

(a) The Tariff Control Formula comprises the principles, procedures and formulae, which apply during the Fifth Access Arrangement Period for:

(1) varying;

(2) withdrawing; and

(3) introducing new,

Haulage Reference Tariffs.

(b) For the avoidance of doubt, the Tariff Control Formula and the rebalancing control formulae do not apply to Ancillary Reference Tariffs.

(c) Whenever the Service Provider proposes to vary, withdraw or introduce any new Haulage Reference Tariff, it will ensure that the proposed charge will be compliant with the relevant Tariff Control Formula set out in clause 3.1 and with the relevant rebalancing control formulae in clause 3.6 to the reasonable satisfaction of the Regulator, and it will comply with the procedures set out in clause 4.

Gas Access Arrangement Revision 2018-2022

3.1 The Tariff Control Formula

3.1.1 Tariff Control Formula

(a) The Tariff Control Formula adopted is consistent with the tariff basket form of price control.

(b) The Tariff Control Formula is:

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

where the Service Provider has n Haulage Reference Tariff categories, each category having up to m Haulage Reference Tariff Components and where:

ΔCPI is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year$_{t-2}$ to the June quarter in Calendar Year$_{t-1}$, calculated using the following method:

> The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year t-1
>
> divided by
>
> the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year t-2
>
> minus 1.

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

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

X_t is the X factor for each year of the Fifth Access Arrangement Period as determined in the PTRM as approved in the full access arrangement decision, and annually revised for the Return on Debt Update calculated for the relevant year in accordance with that approved in the full access arrangement decision;

PT_t is the cost pass through adjustment factor for Calendar Year t as calculated in accordance with clause 3.1.3;

n is the number of different Haulage Reference Tariffs;

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

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 audited Quantity of Haulage Reference Tariff Component j of Haulage Reference Tariff i that was sold in Calendar Year t-2.

3.1.2 Return on Debt Update

(a) Overview

Gas Access Arrangement Revision 2018-2022

The Return on Debt Update is the update to the annual return on debt component of the rate of return included in the PTRM at the time the Regulator made its final decision for the Fifth Access Arrangement Period and is determined in accordance with paragraphs (b) to (e) of this clause 3.1.2. The Averaging Period for each Calendar Year of the Fifth Access Arrangement Period must be used for the purposes of calculating the annual return on debt observation for that year.

(b)   Calculating the return on debt

The annual update of the return on debt component of the rate of return in each Calendar Year of the Fifth Access Arrangement Period, starting from 1 January 2018, is to be calculated as follows:

For 2018 Calendar Year: $kd_{2018} = R_{2018}$

For 2019 Calendar Year: $kd_{2019} = (0.9 \cdot R_{2018}) + (0.1 \cdot R_{2019})$

For 2020 Calendar Year: $kd_{2020} = (0.8 \cdot R_{2018}) + (0.1 \cdot R_{2019}) + (0.1 \cdot R_{2020})$

For 2021 Calendar Year: $kd_{2021} = (0.7 \cdot R_{2018}) + (0.1 \cdot R_{2019}) + (0.1 \cdot R_{2020}) + (0.1 \cdot R_{2021})$

For 2022 Calendar Year: $kd_{2022} = (0.6 \cdot R_{2018}) + (0.1 \cdot R_{2019}) + (0.1 \cdot R_{2020}) + (0.1 \cdot R_{2021}) + (0.1 \cdot R_{2022})$

where:

kd_t is the annual return on debt for Calendar Year t of the Fifth Access Arrangement Period;

R_t is the annual return on debt observation for each Calendar Year t of the Fifth Access Arrangement period calculated in accordance with paragraph (c) below, other than Calendar Year 2018. For Calendar Year 2018, R_{2018} is 4.52 per cent.

(c)   Calculation of the annual return on debt observation

(1)   Overview

(A)   The return on debt observation for each Calendar Year is calculated by automatic application of the following formula. This requires three steps:

Step 1: Calculate the adjusted RBA estimate;

Step 2: Calculate the adjusted BVAL estimate;

Step 3: Calculate the final estimate, where the RBA and BVAL estimates are combined using an arithmetic average.

(B)   The steps in paragraph (c)(1) reflect the approach used by the Regulator to determine the return on debt included in the PTRM at the time the Regulator made its final decision for the Fifth Access Arrangement Period. In the event that data availability changes during the Access Arrangement Period, the formulae below will change to reflect the contingencies set out in the Regulator's final decision for the Fifth Access Arrangement Period.

(C)   For the purpose of this clause 3.1.3(c) only, a business day means a day other than a Saturday, Sunday or a day recognised as a national public holiday or a public holiday in NSW.

(2)   Calculating the adjusted RBA estimate

To calculate the adjusted RBA estimate in Step 1:

(A)   Download RBA table F3—'Aggregate measures of Australian corporate bond yields' from the RBA website.

(B)   From this file, download the 7 and 10 year 'Non-financial corporate BBB-rated bonds—Yield' entries for dates:

(i)   from the most recent published RBA date prior to the commencement of the nominated Averaging Period for debt;

(ii)   to the first published RBA date following the conclusion of the nominated Averaging Period for debt; and

(iii)   all published dates between (i) and (ii).

(C)   Download, from RBA table F16—'Indicative Mid Rates of Australian Government Securities', daily yields on CGSs for dates within the Service Provider's Averaging Period.

(D)   Linearly interpolate between the two nearest bonds straddling 7 years remaining term to maturity, and the two nearest CGS bonds straddling 10 years remaining term to maturity. This is to be done using the following formula:

$$Yield_{interpoltated} = Yield_{lower\ straddle\ bond} + [(Yield_{upper\ straddle\ bond} - Yield_{lower\ straddle\ bond}) \times (Date_{10\ years\ from\ interpolation\ date} - Maturity\ Date_{lower\ straddle\ bond})/ (Maturity\ Date_{upper\ straddle\ bond} - Maturity\ Date_{lower\ straddle\ bond})].$$

(E)   Linearly extrapolate the published RBA 10 year yield (from paragraph (c)(2)(B)) from its published effective term to an effective term of 10 years using the formula below:

$$Yield_{10} = Yield_{10\ year\ published} + [(Spread\ to\ Swap_{10\ year\ published} - Spread\ to\ Swap_{7\ year\ published})/ (Effective\ Term_{10\ year\ published} - Effective\ Term_{7\ year\ published}) \times (10 - Effective\ Term_{10\ year\ published})].$$

(F)   Linearly extrapolate the published RBA 7 year yield (from paragraph (c)(2)(B)) from its published effective term to an effective term of 7 years using the formula below:

$$Yield_{7} = Yield_{7\ year\ published} + [(Spread\ to\ Swap_{10\ year\ published} - Spread\ to\ Swap_{7\ year\ published})/ (Effective\ Term_{10\ year\ published} - Effective\ Term_{7\ year\ published}) \times (7 - Effective\ Term_{7\ year\ published})].$$

(G)   Subtract from the extrapolated 10 year RBA yield on each publication date the interpolated CGS yield on that date. For the 10 year term, use the RBA series as adjusted in paragraph (c)(2)(E). These are the **adjusted RBA 10 year spreads**.

(H)   Obtain daily RBA spread estimates by linear interpolation of the adjusted RBA spreads (from paragraphs (c)(2)(E) and (F)) for both 7 and 10 year terms between the published dates identified in paragraph (c)(2)(B). Use the adjusted RBA spread estimates as calculated in paragraph (c)(2)(D). This is to be done using the following formula:

$$Spread_{interpolated} = Spread_{first\ straddling\ publication\ date} + [(Date_{interpolation} - Date_{first\ straddling\ publication\ date}) \times (Spread_{second\ straddling\ publication\ date} - Spread_{first\ straddling\ publication\ date}) /(Date_{second\ straddling\ publication\ date} - Date_{first\ straddling\ publication\ date})]$$

If the annual return on debt estimate must be finalised before a final published RBA month-end estimate is available, hold the last observed RBA spread constant to the end of the Averaging Period.

Gas Access Arrangement Revision 2018-2022

(I) Add to the daily spreads (from paragraph (c)(2)G)), daily interpolated estimates of the CGS (from paragraph (c)(2)(D)) for all business days in the Service Provider's Averaging Period. Specifically:

    (i) add the 7 year interpolated CGS estimates to the 7 year interpolated RBA spreads. These are the **interpolated RBA daily 7-year yield estimates**;

    (ii) add the 10 year interpolated CGS estimate to the 10 year interpolated RBA spread. These are the **interpolated RBA daily 10-year yield estimates**.

(J) Convert the interpolated RBA daily 7-year yield estimates and the interpolated RBA daily 10-year yield estimates (from paragraph (c)(2)(I)) to effective annual rates, using the formula:

$$Effective\ annual\ rate = \left(\left(1 + \frac{yield}{200}\right)^2 - 1\right) \cdot 100$$

(K) Average the yield estimate for the 10 year RBA yield estimate over all business days in the Service Provider's Averaging Period. This is the **adjusted RBA estimate**.

(3) Calculating the adjusted BVAL estimate

To calculate the adjusted BVAL estimate in Step 2:

(A) For dates after 14 April 2015, download the 10 year Corporate BBB rated Australian BVAL curve (BVCSAB10). For dates before 14 April 2015, download from Bloomberg the 7 year Corporate BBB rated Australian BVAL curve (BVCSAB07 index) for all business days in the Service Provider's Averaging Period.

(B) For dates before 14 April 2015, add to the 7 year yield the difference between the 7 and 10 year daily RBA adjusted yields (as calculated in viii) of the RBA process). This is the **extrapolated daily estimate of the BVAL 10 year yield**.

(C) For all dates, convert the 10 year yields into effective annual rates, using the formula:

$$Effective\ annual\ rate = \left(\left(1 + \frac{yield}{200}\right)^2 - 1\right) \cdot 100$$

(D) Average the extrapolated daily estimates of the BVAL 10 year yield over all business days in the service provider's Averaging Period. This is the **adjusted BVAL estimate**.

(4) Calculating the annual estimate of the return on debt

To calculate the final estimate in Step 3:

(A) Take the simple average of the adjusted RBA estimate (from paragraph (c)(2)(K)) and the adjusted BVAL estimate (from paragraph (c)(3)(D)). This is the **annual estimate of the return on debt**.

(d) Annual return on debt observation where relevant data not available

For any Calendar Year of the Fifth Access Arrangement period (other than Calendar Year 2018) for which an annual return on debt observation cannot be calculated in accordance with paragraph (c) above due to changes in data availability, adjust the approach in accordance with the contingencies set out in the Regulator's final decision for the Fifth Access Arrangement Period.

(e) Notification and Regulator's determination of the annual return on debt observation

   (1) The Regulator will notify the Service Provider of the updated Return on Debt and X factor within 15 Business Days after the end of the Service Provider's Averaging Period.

   (2) In the 'PTRM input' sheet of the PTRM, update the relevant cell for the updated return on debt estimate (kd_t). This is:

For 2018 Calendar Year:	kd_{2018}	Cell G222
For 2019 Calendar Year:	kd_{2019}	Cell H222
For 2020 Calendar Year:	kd_{2020}	Cell I222
For 2021 Calendar Year:	kd_{2021}	Cell J222
For 2022 Calendar Year:	kd_{2022}	Cell K222.

   (3) On the 'X factors' sheet of the PTRM, update the relevant X factor for the 2019–2022 Calendar Years as follows:

For 2019 Calendar Year:	kd_{2019}	Select 'Set X2 (price cap)'
For 2020 Calendar Year:	kd_{2020}	Select 'Set X3 (price cap)'
For 2021 Calendar Year:	kd_{2021}	Select 'Set X4 (price cap)'
For 2022 Calendar Year:	kd_{2022}	Select 'Set X5 (price cap)'.

3.1.3 Pass Through Adjustment Factor

(a) Pass Through Adjustment Factor

PT_t is the pass through adjustment to the Distribution price control in Calendar Year t for the Service Provider and is determined in accordance with paragraph (b) below.

(b) Calculation of the Adjustment Factor

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

where:

t is the year for which tariffs are being set

[Formatted: Font: Italic]

PT_t PT'_{t-1} is:

   (a) zero when Financial Year $t-1$ refers to Calendar Year ending 31 December 2018;

   (b) the value of PT'_t determined in the Calendar Year $t-1$ for all other Calendar Years in the Access Arrangement Period;

PT'_t equals:

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

where:

AP_t is

- (a)   any determined pass through amount that the Regulator approves in whole or in part in Calendar Year t; and/or

- (b)   any pass through amounts arising from any Relevant Pass Through Events (as that term is defined in the Access Arrangement applying to the Service Provider in the Fourth Access Arrangement Period) occurring in Fourth Access Arrangement Period that the Service Provider proposed to pass through in whole or in part in Calendar Year t,

that includes an amount to reflect the time value of money between incurring the costs and recovering the costs, and excludes any amounts already passed through in Haulage Reference Tariffs.

ΔCPI   is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year$_{t\text{-}2}$ to the June quarter in Calendar Year$_{t\text{-}1}$, calculated using the following method:

The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year t-1

divided by

the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in Calendar Year t-2

minus 1.

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

X_t is the X factor for each Calendar Year of the Fifth Access Arrangement Period as determined in the PTRM as approved in the full access arrangement decision, and annually revised for the Return on Debt Update calculated for the relevant year during the Fifth Access Arrangement Period in accordance with that approved in the full access arrangement decision;

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 Quantity of component j of Haulage Reference Tariff i that was sold in Calendar Year t – 2.

3.2   New Haulage Reference Tariffs

(a)   Where the Service Provider is proposing to introduce new Haulage Reference Tariffs and/or new Haulage Reference Tariff Components the q_{t-2}^{ij} term in clause 3.1 will be interpreted in relation to:

- (1)   the reasonable estimates of the quantities that would have been distributed, in relevant units, if the Haulage Reference Tariff Components had existed in Calendar Year t-2 as provided by the Service Provider, in accordance with clause 1.3(i); and

- (2)   the Haulage Reference Tariff Components of the parent Haulage Reference Tariff in Calendar Year t-2 as provided by the Service Provider in accordance with clause 1.3(i).

(b)   Where the Service Provider has introduced new Haulage Reference Tariffs and/or new Haulage Reference Tariff Components in Calendar Year t-1, the p_{t-1}^{ij} term in clause 3.1 will be interpreted in relation to the reasonable estimates of the Quantities that would have been distributed, in relevant units, if the Haulage Reference Tariff Components had existed in Calendar Year t-2, as provided by the Service Provider in accordance with clause 1.3(i).

3.3   Withdrawal of Haulage Reference Tariffs

(a)   Where the Service Provider is proposing to withdraw a Haulage Reference Tariff and to reassign only one other Haulage Reference Tariff to the Distribution Supply Point to which the Haulage Reference Tariff to be withdrawn applied, the p_t^{ij} term in clause 3.1 for the Haulage Reference Tariff that is proposed to be withdrawn will be interpreted in relation to the Haulage Reference Tariff Components of the Haulage Reference Tariff which will be reassigned to that Distribution Supply Point in Calendar Year t, in accordance with information submitted under clause 1.4.

(b)   Where the Service Provider is proposing to withdraw a Haulage Reference Tariff and to reassign more than one other Haulage Reference Tariff to the Distribution Supply Point to which the Haulage Reference Tariff to be withdrawn applied:

   (1)   the p_t^{ij} term in clause 3.1 for the Haulage Reference Tariff that is proposed to be withdrawn will be interpreted separately in relation to the Haulage Reference Tariff Components of each of the Haulage Reference Tariffs which will be reassigned to those Distribution Supply Points in Calendar Year t, in accordance with information submitted under clause 1.4; and

   (2)   the q_{t-2}^{ij} term in clause 3.1 for the Haulage Reference Tariff that is proposed to be withdrawn in Calendar Year t will be the actual Quantities, in relevant units, of each Haulage Reference Tariff Component that were distributed under the parent Haulage Reference Tariff at those Distribution Supply Points to which the same Haulage Reference Tariff has been assigned in Calendar Year t, in accordance with information submitted under clause 1.4; and

   (3)   the q_{t-2}^{ij} term in clause 3.1 for the Haulage Reference Tariff that has been withdrawn in Calendar Year t-1, will be the actual quantities, in relevant units, of each Haulage Reference Tariff Component that were distributed under the parent Haulage Reference Tariff at those Distribution Supply Points to which the same Haulage Reference Tariff has been assigned in Calendar Year t-1, in accordance with information submitted under clause 1.4.

3.4   Haulage Reference Tariff information

Where the Service Provider submits information in accordance with clause 1.3(j) that switching rates of Users moving from a given parent Haulage Reference Tariff to a proposed new Haulage Reference Tariff will continue to be above zero from Calendar Year to Calendar Year, application of the Tariff Control Formula in clause 3.1 will distinguish between:

(a)   Distribution Supply Points to which the new Haulage Reference Tariff has already been assigned, in which case q_{t-2}^{ij} will be based on the actual Quantities distributed, in relevant units, at those Distribution Supply Points to which the new Haulage Reference Tariff has already been assigned and p_t^{ij} is the new Haulage Reference Tariff; and

(b)   Distribution Supply Points to which the new Haulage Reference Tariff is expected to be assigned during Calendar Year t, in which case q_{t-2}^{ij} will be based on the reasonable estimates of the Quantities which would have been distributed at those Distribution Supply Points, as submitted by the Service Provider in accordance with clause 1.3(i), and p_t^{ij} is the new Haulage Reference Tariff.

Gas Access Arrangement Revision 2018-2022

3.5 Rebalancing Controls on Haulage Reference Tariffs

(a)   The Service Provider will maintain Haulage Reference Tariffs between:

   (1)   an upper limit of the cost to bypass the network; and

   (2)   a lower limit of the marginal cost of supply.

(b)   In undertaking any rebalancing, the Service Provider will ensure that the proposed Haulage Reference Tariffs comply with the relevant Rebalancing Control Formula as set out in this clause 3.5.

3.5.1   Rebalancing Control Formula

The Rebalancing Control Formula is:

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

where:

ΔCPI is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in year$_{t-2}$ to the June quarter in year$_{t-1}$, calculated using the following method:

> The ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in year t-1
>
> divided by
>
> the ABS CPI All Groups, Weighted Average of Eight Capital Cities for the June quarter in year t-2
>
> minus 1.

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

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

X_t is the X factor for each Calendar Year of the Fifth Access Arrangement Period as determined in the PTRM as approved in the full access arrangement decision, and annually revised for the Return on Debt Update calculated for the relevant Calendar Year during the Access Arrangement Period in accordance with that approved in the full access arrangement decision;

PT_t is the cost pass through factor for Calendar Year t as calculated in accordance with clause 3.1.3;

n is the number of different Haulage Reference Tariffs;

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

Gas Access Arrangement Revision 2018-2022

p_t^{ij} is the proposed component *j* for 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 audited Quantity of Haulage Reference Tariff Component *j* of Haulage Reference Tariff *i* that was sold in Calendar Year *t* – 2.

3.6   Rebalancing Controls for New and Withdrawn Haulage Reference Tariffs

For the purposes of the application of the rebalancing control formulae as set out in clause 3.5:

(a)   Where the Service Provider proposed to introduce a new Haulage Reference Tariff and/or new Haulage Reference Tariff Components:

         (1)   the term q_{t-2}^{j} in the rebalancing control will be interpreted in relation to the reasonable estimates of the Quantities that would have been sold, in relevant units, if the Haulage Reference Tariff Components existed in Calendar Year *t*-2; and

         (2)   the term p_t^{j} in the rebalancing control will be interpreted in relation to the Haulage Reference Tariff Components of the parent Haulage Reference Tariff in Calendar Year *t*-2.

(b)   Where the Service Provider has introduced new Haulage Reference Tariffs and/or new Haulage Reference Tariff Components in Calendar Year *t*-1, the q_{t-2}^{j} term of the rebalancing control will be in relation to the reasonable estimates of the Quantities that would have been sold, in relevant units, if the Haulage Reference Tariff Components had existed in Calendar Year *t*-2.

(c)   Where the Service Provider proposes to withdraw a Haulage Reference Tariff and reassign those Distribution Supply Points to another Haulage Reference Tariff:

         (1)   the p_t^{j} term in the rebalancing control for the Haulage Reference Tariff that is proposed to be withdrawn will be interpreted in relation to the Haulage Reference Tariff Components of the Haulage Reference Tariff that those existing Distribution Supply Points will be reassigned to in Calendar Year *t*;

         (2)   the rebalancing control on Haulage Reference Tariffs will be applied separately in relation to each of the Haulage Reference Tariffs Distribution Supply Points are reassigned to, and:

                 (A)   the p_t^{j} term in the rebalancing control for the Haulage Reference Tariff that is proposed is to be withdrawn will be interpreted in relation to the Haulage Reference Tariff Components of each of the Haulage Reference Tariffs that those existing Distribution Supply Points will be reassigned to in Calendar Year *t*; and

                 (B)   the q_{t-2}^{j} term in the rebalancing control for the Haulage Reference Tariff that is proposed to be withdrawn will be the breakdown of the actual Quantities, in relevant units, that were sold under each Haulage Reference Tariff Component of the parent Haulage Reference Tariffs to each Distribution Supply Point reassigned to the same Haulage Reference Tariff.

4 Approval of Haulage Reference Tariffs and New Haulage Reference Tariffs

4.1 Submission to the Regulator

(a) The Service Provider will, at least 50 Business Days prior to the commencement of the next Calendar Year, submit proposed Haulage Reference Tariffs to apply from the start of the next Calendar Year for verification of compliance by the Regulator, in accordance with clauses 4.2(a), (b), (c) and (d).

(b) The Service Provider will ensure its proposed Haulage Reference Tariffs or proposed changes to Haulage Reference Tariffs submitted under clause 4.1(a) comply with the Tariff Control Formula and rebalancing control formulae in clause 3.

4.2 Assessment by the Regulator

(a) The Regulator will provide the Service Provider with written notice of whether or not it has verified the Haulage Reference Tariffs proposed by the Service Provider and submitted under clause 4.1(a) as compliant with the Tariff Control Formula and the rebalancing control formula. If the Regulator declines to verify the proposed Haulage Reference Tariffs as compliant, the Regulator must provide a written statement of reasons for that decision.

(b) The proposed Haulage Reference Tariffs will be deemed to have been verified as compliant in writing by the Regulator by the end of 30 Business Days from the date on which the Regulator received the Service Provider's notification under clause 4.1(a) unless the Regulator has notified the Service Provider in writing that it has declined to verify the proposed Haulage Reference Tariffs as compliant. The Regulator may require an extension of a specified duration. The Regulator will notify the Service Provider of the extension and its duration within 30 Business Days of receiving a notification from the Service Provider.

(c) If the Regulator issues a written notice to the Service Provider that it has declined to verify proposed Haulage Reference Tariffs and/or Haulage Reference Tariff Components (including but not limited to any new Haulage Reference Tariff and/or any new Haulage Reference Tariff Component) as compliant for a Calendar Year t, then:

(1) if the relevant left-hand side of the price control formula set out in clause 3.1 is >1 then the Haulage Reference Tariffs applying in Calendar Year $t-1$ are scaled up by the relevant left-hand side of the price control formula set out in clause 3.1; or

(2) if the relevant left-hand side of the price control formula set out in clause 3.1 is <1 then the Haulage Reference Tariffs applying in Calendar Year t-1 are scaled down by the relevant left-hand side of the price control formula set out in clause 3.1.

(d) If the Regulator has notified the Service Provider in writing that it has declined to verify as compliant the withdrawal of any existing Haulage Reference Tariffs and/or the withdrawal of any existing Haulage Reference Tariff Components proposed for Calendar Year t, then:

(1) if the relevant left-hand side of the price control formula set out in clause 3.1 is >1 then the Haulage Reference Tariffs applying in Calendar Year t-1 are scaled up by the relevant left-hand side of the price control formula set out in clause 3.1; or

(2) if the relevant left-hand side of the price control formula set out in clause 3.1 is <1 then the Haulage Reference Tariffs applying in Calendar Year t-1 are scaled down by the relevant left-hand side of the price control formula set out in clause 3.1.

(e) The Service Provider may provide additional information and resubmit or revise its proposed Haulage Reference Tariffs in accordance with clause 4.1(a) if the Regulator declines to verify as compliant proposed Haulage Reference Tariffs under clause 4.2(a) provided that if, in a Calendar Year, changes to Haulage Reference Tariffs have been verified as compliant by the Regulator, the Service Provider will notify in writing all Users affected by the changes as soon as practicable.

4.3   Information Required from the Service Provider

(a)   At the same time as submitting proposed Haulage Reference Tariffs to the Regulator, the Service Provider will also provide to the Regulator, information demonstrating that the proposed Haulage Reference Tariffs are, to the extent relevant, consistent with the Tariff Control Formula and rebalancing control formula in clause 3.

(b)   In respect of the annual variations of Reference Tariffs, the Service Provider will include a statement to support the gas quantity inputs in the tariff variation formula. The statement will be independently audited or verified and the quantity input will reflect the most recent actual annual quantities available at the time of tariff variation assessment.

4.4   Default Haulage Reference Tariffs for new Calendar Year t

(a)   If the Service Provider does not, at least 50 Business Days prior to the commencement of the next Calendar Year t submit proposed Haulage Reference Tariffs to apply from the start of the next Calendar Year t in accordance with clause 4.1(a) then:

(1)   where the left-hand side of the Tariff Control Formula to be applied for Calendar Year t is greater than one, the Haulage Reference Tariffs applying in Calendar Year t-1 will be scaled up by the left-hand side of the Tariff Control Formula to be applied for Calendar Year t and will apply for Calendar Year t and the Haulage Reference Tariff Components applying in Calendar Year t-1 will be scaled up and applied accordingly; and

(2)   where the left-hand side of the Tariff Control Formula to be applied for Calendar Year t is less than one, the Haulage Reference Tariffs applying in Calendar Year t-1 will be scaled down by the left-hand side of the Tariff Control Formula to be applied for Calendar Year t and will apply for Calendar Year t and the Haulage Reference Tariff Components applying in Calendar Year t-1 will be scaled down and applied accordingly,

until such time as the Regulator has, or been deemed to have, verified Haulage Reference Tariffs and/or Haulage Reference Tariff Components for Calendar Year t as compliant in response to a submission by the Service Provider.

5   Calculation of Charges for Haulage Reference Tariffs

Haulage Reference Tariffs are charged in accordance with the calculations described below.

5.1   Distribution Fixed Tariff Components

The Distribution Fixed Tariff Components and consumption ranges shown in clause 9, as applicable, are daily amounts. The Distribution Fixed Tariff Component or consumption range applied to calculate a Charge for a billing period in Calendar Year t shall be the Distribution Fixed Tariff Component applying in Calendar Year t or consumption range shown in clause 9, as applicable, multiplied by the number of days in the billing period.

5.2   Distribution Volume Tariff Components

(a)   Distribution Volume Tariff Components are Charged according to the actual GJs of Gas withdrawn in the billing period, or an estimate of the GJs of Gas withdrawn in the billing period which is acceptable to the Service Provider.

(b)   Where some of the days in the billing period are in the Peak Period, the GJs of Gas withdrawn in the Peak Period are:

$$GPP = TAG \times \frac{PPBP}{TBP}$$

where:

GPP is defined as the GJs of Gas withdrawn in the Peak Period;

TAG is defined as the total actual GJs of Gas withdrawn in the billing period, or an estimate of the total GJs of Gas withdrawn in the billing period which is acceptable to the Service Provider;

PPBP is defined as the number of days in the billing period which are in the Peak Period; and

TBP is defined as the total number of days in the billing period.

5.3 Distribution Demand Tariff Components

(a) Distribution Demand Tariff Components are charged according to the following formula:

$$MC = \frac{EAC - CBTD}{RBP}$$

where:

MC is the charge for a particular month in Regulatory Year *t*.

EAC is the estimated annual charge calculated by applying the relevant Haulage Reference Tariff Components to EAD;

CBTD is the sum of the charges for all prior billing periods of Regulatory Year *t*;

RBP is the remaining billing periods in Regulatory Year *t*, as set out below:

Month	RBP
January	12
February	11
March	10
April	9
May	8
June	7
July	6
August	5
September	4
October	3
November	2
December	1

EAD is:
    (1) for billing periods between January and September, the higher of:
        (A) the forecast Annual MHQ for Regulatory Year *t*; and
        (B) the Annual MHQ, as measured to date during Regulatory Year *t*,
        where the forecast Annual MHQ for Regulatory Year *t* is either:
        (C) the actual Annual MHQ for Regulatory Year *t-1*; or
        (D) a Quantity agreed between the Service Provider and the User;
    (2) for billing periods between October and December, the actual Annual MHQ for Regulatory Year *t*.

Gas Access Arrangement Revision 2018-2022

(b)   Where a User's Customer withdraws Gas at a Distribution Supply Point and ceases to withdraw Gas at that Distribution Supply Point in a month:

(1)   the Service Provider may charge the User in respect of that Distribution Supply Point, for the whole of the month in which the Customer ceased withdrawal of Gas;

(2)   the Service Provider will not charge the User in respect of that Distribution Supply Point, for any month after the month in which the Customer ceased withdrawal of Gas; and

(3)   where another Customer starts to withdraw Gas at that Distribution Supply Point, the Quantity of forecast highest MHQ for the year for that Distribution Supply Point must be agreed between the Service Provider and the relevant User in respect of that Distribution Supply Point.

(c)   Where a User's Customer withdraws Gas at a Distribution Supply Point and ceases to be a Customer of that User during a month and becomes:

(1)   a Customer of another User; or

(2)   a User,

the Service Provider will charge:

(3)   the User from whom the Customer purchases its Gas at that Distribution Supply Point in that month; or

(4)   the Customer as a User in that month,

respectively, for that month.

5.4   Unmetered Haulage Reference Tariff Components

Where Haulage Reference Tariff V has been assigned to a Distribution Supply Point under clause 1.1(c) because it is an unmetered Distribution Supply Point, there is deemed to be no withdrawal of Gas at the Distribution Supply Point for charging purposes. For the avoidance of doubt, in such circumstances, Commercial Haulage Reference Tariff V is deemed to apply and any applicable fixed Haulage Reference Tariff Component may be charged as a fixed charge.

5.5   Natural Gas Extension Project Haulage Reference Tariffs

Tariffs apply to Distribution Supply Points where the Distribution Zone is as listed in clause 9.

6   Reference Tariff Policy

This clause 6 sets out the principles that are to be used to determine a Reference Tariff (a Reference Tariff Policy).

6.1   CPI - X Price Path

The CPI - X price path approach is consistent with the fixed principle in clause 7.2(a). The Service Provider adopts this approach.

6.2   New Facilities Investment

(a)   The Service Provider may at its discretion undertake Capital Expenditure that does not satisfy the requirements of the New Capital Expenditure Criteria under the National Gas Rules. The Extensions / Expansions Policy in clause 5.6 of Part A of this Access Arrangement explains how Capital Expenditure in relation to a New Facility which is to be treated as part of the Covered Pipeline will affect Reference Tariffs.

(b)   Clause 6.3 below sets out the principles of a Speculative Capital Investment Account which the Service Provider may operate in relation to Capital Expenditure that does not satisfy the requirements of the New Capital Expenditure Criteria under the National Gas Rules.

Gas Access Arrangement Revision 2018-2022

6.3 Speculative Capital Expenditure Account

In accordance with rule 84 of the National Gas Rules, the amount of the Speculative Capital Expenditure Account for the Service Provider at any time is equal to:

(a)   the difference between the Capital Expenditure and the amount which satisfies the requirements of the New Capital Expenditure Criteria under the National Gas Rules, less any amount the Service Provider notifies the Regulator (at the time the expenditure is incurred) that it has elected to recover through a surcharge under rule 83 of the National Gas Rules; plus

(b)   an annual increase in that amount calculated on a compounded basis at a risk adjusted rate of return approved by the Regulator; less

(c)   any part of the Speculative Capital Expenditure Account previously added to the Capital Base due to the type and volume of services provided using the increase in Capacity attributable to the New Facility change such that any part of the Speculative Capital Expenditure Account would then satisfy the requirements of the New Capital Expenditure Criteria under the National Gas Rules.

6.4 Incentive Mechanisms

Rule 98 of the National Gas Rules provides for an Access Arrangement to include an incentive mechanism to encourage efficiency in the provision of services by the Service Provider. An incentive mechanism may provide for carrying over increments for efficiency gains and decrements for losses of efficiency from one Access Arrangement Period to the next and must be consistent with the revenue and pricing principles.

6.4.1   General principles

(a)   The incentive arrangements that are to apply to cost-related efficiencies achieved by, and innovation initiatives sought by, the Service Provider, and the adjustment to preserve the incentive to meet efficient growth in demand are a combination of:

(1)   a tariff basket form of price control;

(2)   the carryover that would result in the Service Provider retaining the reward or penalty associated with an operating expenditure efficiency gain or loss for five years after the year in which the gain or loss was achieved; and

(3)   the carryover that would result from the Service Provider retaining into the Sixth Access Arrangement Period, 30 percent of the Net Present Value (NPV) of any capital expenditure efficiencies gains or losses realised during the Fifth Access Arrangement Period.

(b)   There would be no claw-back of gains that have already been made (or losses that have been incurred) during the Fifth Access Arrangement Period.

6.4.2   Operating Expenditure Incentive Mechanism

An efficiency carryover mechanism will apply to operating expenditure. It will operate in the following way:

(a)   The incremental efficiency gain (or loss) for 2018 will be calculated using:

$$I_{2018} = (F_{2018} - A_{2018}) - [(F_{2017} - A_{2017}) - (F_{2015} - A_{2015})]$$

where:

I_{2018} is the incremental efficiency gain (or loss) for 2018

F_{2018} is the forecast operating expenditure for 2018

A_{2018} is the actual operating expenditure for 2018

F_{2017} is the forecast operating expenditure for 2017

Gas Access Arrangement Revision 2018-2022

A_{2017} is the actual operating expenditure for 2017

F_{2015} is the forecast operating expenditure for 2015

A_{2015} is the actual operating expenditure for 2015

(b)   The incremental efficiency gain (or loss) for 2019 to 2022 will be calculated using:

$$I_i = (F_i - A_i) - (F_{i-1} - A_{i-1})$$

where:

I_i is the efficiency gain (or loss) in year i of the access arrangement period

F_i is the forecast operating expenditure in year i of the access arrangement period

A_i is the actual operating expenditure in year i of the access arrangement period

F_{i-1} is the forecast operating expenditure in year i–1 of the access arrangement period

A_{i-1} is the forecast operating expenditure in year i–1 of the access arrangement period

(c)   Actual operating expenditure in the final year of the access arrangement period, 2022, is to be estimated using:

$$A_{2022}{}^* = F_{2022} - (F_b - A_b) + non\text{-}recurrent\ efficiency\ gain_b$$

where:

$A_{2022}{}^*$ is the estimate of operating expenditure for 2022

F_{2022} is the forecast operating expenditure for 2022

F_b is the forecast operating expenditure for the base year used to forecast operating expenditure in the Sixth Access Arrangement Period

A_b is the actual operating expenditure for the base year used to forecast operating expenditure in the Sixth Access Arrangement Period

Non-recurrent efficiency gain$_b$ is the adjustment made to base year operating expenditure used to forecast operating expenditure for the access arrangement period expected to commence 1 January 2023 to account for operating expenditure associated with one-off factors.

(d)   To ensure efficiency gains or losses made in 2022 are retained for five years, operating expenditure for the Sixth Access Arrangement Period should be forecast in a manner consistent with the estimate for opex in 2022, $A_{2022}{}^*$, in paragraph (c) above. This provides the Service Provider the same reward had the expenditure level in 2022 been known.

(e)   For the avoidance of doubt, the incremental efficiency gains (or losses) are carried over from year to year in real dollars to ensure that these gains (or losses) are not eroded by inflation. The price indices used in this calculation are to be consistent with those used to forecast operating expenditure for the Sixth Access Arrangement Period.

(f)   Increments or decrements from the summation of annual efficiency gains or losses calculated in accordance with the approved incentive mechanism in the Access Arrangement Period will give rise to an additional 'building block' in the calculation of the Total Revenue amounts for each year of the Sixth Access Arrangement Period.

(g)   The following costs will be excluded from the operation of the efficiency carryover mechanism:

    (1)   movements in provisions;
    (2)   losses on scrapping of assets;

Gas Access Arrangement Revision 2018-2022

(3) any cost category that is not forecast using a single year revealed cost approach in the Sixth Access Arrangement Period. These costs may include debt raising costs and unaccounted for gas expenses;

(4) any other activity that the Service Provider and the Regulator agree to exclude from the operation of the efficiency carryover mechanism.

(h) The forecast operating expenditure amount for each year of the Applicable Access Arrangement Period will be adjusted to include any Determined Pass Through Amounts or other AER approved expenditure arising from Cost Pass Through Events which apply in respect of that year.

(i) Where the Service Provider changes its approach to classifying costs as either capital expenditure or operating expenditure during the Access Arrangement Period, the Service Provider will adjust the forecast operating expenditure in the access arrangement information (amended to reflect the AER's final decision on this access arrangement) so that the forecast expenditures are consistent with the capitalisation policy changes.

(j) If there is a change in the Service Provider's approach to classifying costs as either capital expenditure or operating expenditure, the Service Provider must provide to the Regulator a detailed description of the change and a calculation of its impact on forecast and actual operating expenditure.

(k) For the avoidance of doubt, the forecast expenditure amounts that are used as the basis for measuring efficiencies are equal to the forecast operating cost for that year as shown in the table below, which exclude the costs listed in clause 6.4.2(g)(1)-(4).

Approved forecast operating expenditure for the efficiency carryover mechanism ($ million, 2017)

	2015	2016	2017	2018	2019	2020	2021	2022
Approved forecast opex	49.2	50.3	51.5	52.2	52.8	53.5	54.5	55.2

Note: excludes debt raising costs

6.4.3 Capital Expenditure Incentive Mechanism

The Capital Expenditure Sharing Scheme (**CESS**) operates as follows:

(a) The annual efficiency gain or loss under the scheme will be calculated by subtracting the Service Provider's actual capex from the approved capex allowance (both net of contributions) in each year of the Access Arrangement Period. For the final year (and in some instances the penultimate year) an estimate of actual capex will be used.

(b) For the purpose of calculating the annual efficiency gain or loss, the approved capex allowance is to be adjusted to take into account a change in the scope of activities in accordance with the approach outlined below or for any approved cost pass-through event.

(c) The efficiency gain for year one is calculated as:

Year 1 efficiency gain = capex allowance for Year 1 – actual capex in Year 1

(d) The efficiency gain for each year will be discounted into its Net Present Value (NPV) at the end of the Access Arrangement Period. In doing so, it is assumed that capex occurred in the middle of the year. To calculate the total efficiency gain the annual efficiency gains in NPV terms are added:

Total efficiency gain = NPV year 1 efficiency gain + NPV year 2 efficiency gain + NPV year 3 efficiency gain + NPV year 4 efficiency gain + NPV year 5 efficiency gain.

(e) The above calculations are represented by the following equation:

Gas Access Arrangement Revision 2018-2022

$$Total\ efficiency\ gain = \sum_{n=1}^{p} \frac{1}{(1+WACC)^{n-p-0.5}} \times (F_n - A_n)$$

where:

n is the Access Arrangement year;

WACC is the average of the nominal weighted average cost of capital that are applied during each year of the Access Arrangement Period;

p is the length of the Access Arrangement Period;

F_n is the capex allowance for year n;

A_n is the actual capex for year n.

(f)   A sharing factor of 30 per cent will apply to the total efficiency gain or loss. This means the Service Provider will bear 30 per cent of any loss and will retain 30 per cent of any gain. The remaining 70 per cent will be returned to gas pipeline users.

Service Provider's sharing factor = 30%

Service Provider's share = total efficiency gain x 30%

(g)   The CESS takes into account benefits or costs that have already accrued to the Service Provider during the Access Arrangement Period in order to ensure that the power of the incentive is the same in each regulatory year. This is the financing benefit of any underspend and the financing cost of any overspend.

(h)   Capex is assumed to be incurred in the middle of each regulatory year and would be adjusted to end of year terms. In the ~~year~~ case of ~~the~~ an underspend, the Service Provider will recover~~—~~ a financing benefit (in the year following an underspend) equal to the underspend, in the preceding years, multiplied by WACC.~~only half a year of benefit. In the following years, the Service Provider will retain a full year of benefit calculated as the underspend multiplied by the WACC. This is represented by the following equation:~~

$$Year\ of\ financing\ benefit = [1+WACC)^{0.5} - 1] \times (F_n - A_n) + \sum_{j=1}^{n-1} WACC \times (F_j - A_j)$$

~~where:~~

~~j is a regulatory year in the current Access Arrangement Period prior to year n~~

~~F_j is the capex allowance for year j~~

~~Aj is actual capex for year j~~

(i)   The financing benefit from preceding years will be compounded, namely, the financing benefit for each year will be discounted to its NPV at the end of the Access Arrangement Period. In doing so it is assumed that ~~A discount factor is applied to the benefits from each year to put the financing benefits in constant terms. The discount rate is calculated on the basis that~~ financing benefits accrue at the end of the year. To calculate the total financing benefit, the annual ~~The discounted~~ financing benefits in NPV terms are summed. ~~from each year are then summed to get a net financing benefit for the Access Arrangement Period.~~ This is calculated using the following equation:

$$Net\ financing\ benefit = \sum_{n=1}^{p} \frac{1}{1+WACC^{n-p}} \times year\ n\ financing\ benefit$$

(j)   The CESS reward or penalty payable to the Service Provider is calculated by subtracting the net financing benefit from the Service Provider's share of the cumulative efficiency gain:

CESS reward = (Service Provider share – net financing benefit) x CPF

where:

> *CPF* is the Contingent Payment Factor calculated as:
>
> (1) if the Service Provider's share > net financing benefit, and
>> (A) if the asset performance index (API) > ~~96.146~~100, = 1;
>> (B) if ~~74.977~~80 < API < ~~96.146~~100, CPF = (API – ~~74.977~~80) / (~~96.146~~100 – ~~79.278~~80); and
>> (C) if API < ~~74.977~~80, CPF = 0, or
> (2) if the Service Provider's share is ≤~~<~~ net financing benefit, CPF = 1;
>
> *API* is the Asset Performance Index calculated for the Fifth Access Arrangement Period in accordance with Annexure A.

(k) The CESS reward or penalty will be applied as an additional building block adjustment to the Service Provider's revenue during the Sixth Access Arrangement Period.

(l) Actual capex for the final year of the Fifth Access Arrangement Period will not be available when the rewards or penalties for the CESS are calculated for that Access Arrangement Period. Instead, an estimate of capex will be used to calculate the efficiency gains or losses for the final year.

(m) Prior to the revisions submission date for the Seventh Access Arrangement Period, actual capex data will be available for the final year of the Fifth Access Arrangement Period. Where the Service Provider's actual capex differs from the capex estimate used to calculate the CESS, an adjustment will be made to account for the difference. The adjustment for the final year of the Fifth Access Arrangement Period will be:

$$Final\ year\ adjustment = (A_p^* - A_p) \times \left[\frac{NSP\ sharing\ factor - 1}{(1 + WACC)^{-0.5}}\right] + 1$$

where:

A_{p^*} is the estimate of actual capex in the final year of the Access Arrangement Period that has been used to initially calculate the CESS rewards or penalties;

A_p is actual capex in the final year of the Access Arrangement Period.

(n) CESS payments will be adjusted where the Service Provider defers capex in the Fifth Access Arrangement Period and:

(1) the amount of the deferred capex in the Fifth Access Arrangement Period is material; and

(2) the amount of the estimated underspend in capex in the Fifth Access Arrangement Period is material; and

(3) total approved forecast capex in the Sixth Access Arrangement Period is materially higher than it is likely to have been if a material amount of capex was not deferred in the Fifth Access Arrangement Period.

If the AER determines that an adjustment will be made, the adjustment is the present value of the estimated marginal increase in forecast capex in the Sixth Access Arrangement Period attributable to capex deferred in the Fifth Access Arrangement Period.

(o) Actual capex will be adjusted to remove any expenditure that is not rolled in to the Service Provider's regulatory asset base used to determine revenue over the Fifth Access Arrangement Period.

(p) A discount rate will be applied to account for the time value of money. This adjustment will also be required for the penultimate year of the Access Arrangement Period where finalised actual capex figures are not available before finalising the regulatory determination.

Gas Access Arrangement Revision 2018-2022

6.5 Depreciation for establishing the capital base as at 1 January 2023

(a) The depreciation schedule (straight-line) for establishing the opening capital base as at 1 January 2023 will be based on forecast ~~operating~~ capital expenditure at the asset class level approved for the Fifth Access Arrangement Period.

7 Fixed Principles

7.1 General

(a) Rule 99 of the National Gas Rules provides that a Full Access Arrangement may include certain principles that may be fixed for a stated period.

(b) A fixed principle approved before the commencement of the National Gas Rules or approved by the Regulator under the National Gas Rules is binding on the Regulator and the Service Provider for the period for which the principle is fixed. The Regulator may vary or revoke a fixed principle at any time with the Service Provider's consent.

€ Each fixed principle will apply for different periods as described in this clause 7.

(d) The period during which each fixed principle may not be changed is the Fixed Period (**Fixed Period**).

7.2 Adoption of Fixed Principles

In approving revisions to this Access Arrangement the Regulator is to adopt the fixed principles as set out below:

(a) The Regulator will use incentive based regulation adopting a C–I - X approach and not rate of return regulation.

This fixed principle will apply until the end of the Fifth Access Arrangement Period.

(b) The Regulator will ensure that any mechanism for varying or adjusting the Haulage Reference Tariffs approved for the Fifth Access Arrangement Period will, to the extent required to give full effect to such variation or adjustment, be carried forward into the Sixth Access Arrangement Period.

This fixed principle will apply until the end of the Sixth Access Arrangement Period.

(c) Where a Relevant Pass Through Event occurs during an Access Arrangement Period but the impact of that Relevant Pass Through Event has not been fully recovered or reflected in adjusted Haulage Reference Tariffs and Haulage Reference Tariff Components prior to the end of that Access Arrangement Period, then the amount of the impact not fully recovered or reflected will be recovered or reflected in the next Access Arrangement Period by an adjustment to the Haulage Reference Tariffs and Haulage Reference Tariff Components for that next Access Arrangement Period.

This fixed principle will apply until the end of the Fifth Access Arrangement Period.

8 Procedure for a Relevant Pass Through Event Variation in Reference Tariffs

(a) The Service Provider may notify the Regulator of a Relevant Pass Through Event within 90 Business Days of the Relevant Pass Through Event occurring where the costs would lead to a Positive Pass Through Amount and must notify the Regulator of a Relevant Pass Through Event within 90 Business Days of the Relevant Pass Through Event occurring where the costs would lead to a Negative Pass Through Amount.

(b) If the Service Provider gives such a notice then, when the costs of the Relevant Pass Through Event incurred are known (or able to be estimated to a reasonable extent), then those costs shall be notified to the AER. When making a notification to the AER, the Service Provider will provide the Regulator with a statement, signed by an authorised officer of the

Gas Access Arrangement Revision 2018-2022

Service Provider, verifying that the costs of the Relevant Pass Through Event are net of any payments made by an insurer or third party which partially or wholly offsets the financial impact of that event (including self insuran<u>ce)</u>€.

(c)   The Regulator must notify the Service Provider of its decision to approve or reject the proposed variations to its Reference Tariffs within 90 Business Days from the later of the date it receives the Service Provider's statement above, and the date it receives any additional information required by the Regulator. The Service Provider must provide the Regulator with such additional information as the Regulator reasonably requires for the purpose of making a determination under this clause 8 within the time reasonably specified by the Regulator in a notice provided to the Service Provider by the Regulator for that purpose.

(d)   If the Regulator is satisfied that the making of a determination in respect of a Relevant Pass Through Event involves issues of such complexity or difficulty that the 90 Business Day time limit should be extended, the Regulator may, by written notice to the Service Provider, extend the time limit by a further period of up to 60 Business Days. The Regulator must give written notice to the Service Provider of that extension not later than 10 Business Days before the expiry of the 90 Business Day time limit and such notice must set out the length of the extension and the reason the extension is re€<u>qui</u>red.

(e)   Subject to the approval of the Regulator under the NGR, Reference Tariffs may be varied after one or more Relevant Pass Through Event(s) occurs.

(f)   Any such variation will take effect from the next 1 January. In making its decision on whether to approve the proposed Relevant Pass Through Event variation, the Regulator must take into account the following:

(1)   whether the costs to be passed through are for the delivery of Pipeline Services;

(2)   whether the costs are incremental to costs already allowed for in Reference Tariffs;

(3)   whether the costs to be passed through meet the relevant National Gas Rules criteria for determining the building block for total revenue in determining Reference Services;

(4)   the efficiency of the Service Provider's decisions and actions in relation to the risk of the Relevant Pass Through Event occurring, including whether the Service Provider has failed to take any action that could reasonably be taken to reduce the magnitude of the costs incurred as a result of the Relevant Pass Through Event and whether the Service Provider has taken or omitted to take any action where such action or omission has increased the magnitude of the costs; and

(5)   any other factors the Regulator considers relevant and consistent with the NGR and NGL.

Gas Access Arrangement Revision 2018-2022

9 Haulage Reference Tariffs – 1 January 2018

The structures and proposed indicative tariff levels for each tariff for the period commencing 1 January 2018 are outlined in the following tables. The Service Provider reserves the right to revise these tables for the period 1 January 2018 to 31 December 2018 in accordance with the Regulator's final decision.

9.1 Central Zone

Postcodes: 3003, 3008, 3011, 3012, 3013, 3015, 3016, 3018, 3019, 3020, 3021, 3022, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3030, 3031, 3032, 3033, 3034, 3036, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3055, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3073, 3211, 3212, 3213, 3214, 3215, 3216, 3217, 3218, 3219, 3220, 3221, 3222, 3223, 3224, 3225, 3226, 3228, ~~3331~~, 3335, 3336, 3337, 3338, 3427, 3428, 3429, 3750

Tariff V Residential (TNVDC)

Distribution Fixed Tariff Component		$0.~~2980~~3045 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	~~8.6732~~8.4884	~~2.2743~~2.2259
> 0.1 – 0.2	~~5.2034~~5.0925	~~1.8861~~1.8459
> 0.2 – 1.4	~~0.9098~~0.8904	~~0.8654~~0.8470
> 1.4	~~0.7142~~0.6990	~~0.2976~~0.2913

Tariff V Non Residential (TNVNC)

Distribution Fixed Tariff Component		~~$0.3206~~ $0.3138/day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	~~1.4438~~1.4752	~~1.3706~~1.4004
> 0.1 – 0.2	~~1.3748~~1.4048	~~0.9586~~0.9794
> 0.2 – 1.4	~~1.2297~~1.2564	~~0.7922~~0.8094
> 1.4	~~0.9228~~0.9429	~~0.7541~~0.7705

Tariff M (TNMC)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	~~802.5646~~820.0341
> 10 – 50	~~764.3472~~780.9847
> 50	~~159.1212~~162.5848

Tariff D (D)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	~~366.3028~~374.2761
> 10 – 50	~~348.8597~~356.4533
> 50	~~169.3677~~173.0543

9.2 West Zone

Postcodes: ~~3241,~~ 3249, 3250, 3266, 3277, 3280, 3282, 3300, 3305, 3340, 3342, 3350, 3352*, 3355, 3356, 3357, 3358, 3377, 3380, 3400, 3401, 3430, 3437, 3444, 3450, 3451, 3460, 3461, 3464, 3465, ~~3467~~, 3550, 3551*, 3555, 3556

Tariff V Residential (TNVDW)

Distribution Fixed Tariff Component		$0.~~2980~~3045 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	~~4.8323~~4.9375	~~1.5154~~1.5484

Tariff V Non Residential (TNVNW)

Distribution Fixed Tariff Component		$0.~~3138~~3206 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	~~2.3643~~2.4158	~~0.9852~~1.0066

Gas Access Arrangement Revision 2018-2022

> 0.1 – 0.2	3.4637 3.5391	1.3474 1.3767
> 0.2 – 1.4	1.1155 1.1398	0.8070 0.8246
> 1.4	1.0624 1.0855	0.1566 0.1600

> 0.1 – 0.2	1.9911 2.0345	0.8298 0.8478
> 0.2 – 1.4	1.0948 1.1186	0.4487 0.4585
> 1.4	0.4024 0.4112	0.3314 0.3386

Tariff M (TNMW)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	802.5646 820.0341
> 10 – 50	764.3472 780.9847
> 50	159.1212 162.5848

Tariff D (D)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	366.3028 374.2761
> 10 – 50	348.8597 356.4533
> 50	169.3677 173.0543

Gas Access Arrangement Revision 2018-2022

9.3   Adjoining Central Zone

Postcodes: 3227, 3331

Tariff V Residential (TNVDAC)

Distribution Fixed Tariff Component		$0.29803045 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	12.111512.3751	5.62895.7514
> 0.1 – 0.2	8.71538.9050	3.40073.4747
> 0.2 – 1.4	3.13533.2035	2.98583.0508
> 1.4	2.98583.0508	2.84282.9047

Tariff V Non Residential (TNVNAC)

Distribution Fixed Tariff Component		$0.31383206 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	5.0665 5.4017	4.8252 5.1444
> 0.1 – 0.2	4.82505.1442	4.58164.8847
> 0.2 – 1.4	4.59024.8938	4.35864.6469
> 1.4	4.35824.6465	4.15064.4252

Tariff M (TNMAC)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	802.5646820.0341
> 10 – 50	764.3472780.9847
> 50	159.1212162.5848

Tariff D (D)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	366.3028374.2761
> 10 – 50	348.8597356.4533
> 50	169.3677173.0543

9.4   Adjoining West Zone

Postcodes: 3260, 3241, 3284, 3352*, 3363, 3364, 3431, 3434, 3435, 3437, 3438, 3440, 3441, 3442, 3467, 3551*

Tariff V Residential (TNVDAW)

Distribution Fixed Tariff Component		$0.29803045 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	8.45538.6393	5.13845.2503
> 0.1 – 0.2	7.08677.2410	3.85863.9426
> 0.2 – 1.4	3.65603.7356	2.94803.0122
> 1.4	3.48143.5572	2.80772.8688

Tariff V Non Residential (TNVNAW)

Distribution Fixed Tariff Component		$0.31383206 /day

Consumption Range (GJ/day)	Distribution Volume Tariff component	
	Peak Period ($/GJ)	Off-peak Period ($/GJ)
0-0.1	5.98736.1176	4.60824.7085
> 0.1 – 0.2	5.61415.7363	4.38874.4843
> 0.2 – 1.4	4.71784.8205	4.07174.1604
> 1.4	4.02514.1127	3.83333.9168

Gas Access Arrangement Revision 2018-2022

Tariff M (TNMAW)   Tariff D (D)

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	802.5646820.0341
> 10 – 50	764.3472780.9847
> 50	159.1212162.5848

Annual MHQ (GJ/hr)	Distribution Demand Tariff component ($/MHQ)
0-10	366.3028374.2761
> 10 – 50	348.8597356.4533
> 50	169.3677173.0543

Formatted: Font: 8 pt
Formatted: Font: 8 pt
Formatted: Font: 8 pt
Formatted: Font: 8 pt
Formatted: Font: 8 pt
Formatted: Font: 8 pt

* Notes

(a) Postcode 3055 is shared with Envestra, AusNet Services Distribution Supply Points are in Galtes Crescent, Southam Street, Morrow Street, Hopetoun Avenue, Moreland Road, and Flannery Court.

(b) Postcode 3551 is supplied under both West Zone and Adjoining West Zone. Adjoining West Zone rates apply to Distribution Supply Points west of Sparrowhawk Road and south of the Calder Highway and all Distribution Supply Points west of Maiden Gully Road.

(c) Postcode 3352 is supplied under both West Zone and Adjoining West Zone. Adjoining West Zone rates apply to Distribution Supply Points in Forest Street, Gillies Road, and Olliers Road north of Western Freeway.

Billing Parameters

(a) Distribution tariffs are charged in accordance with the billing parameters outlined in Part C of the *Access Arrangement* by AusNet Gas Services Pty Ltd (formerly TXU Networks (Gas) Pty Ltd) as varied by licence condition on 7 October 2004**.**

(b) **DOMESTIC –** Domestic tariffs will be applied to premises where the predominant consumption of gas is for non-commercial or non industrial residential purposes.

(c) **NON DOMESTIC –** Non Domestic tariffs will be applied to all premises where the predominant consumption of gas is for commercial or industrial purposes.

(d) **TARIFF M** – A separate Operations & Maintenance (O&M) charge is not applicable to Tariff M customers. Customers may still be charged unrecovered infrastructure costs (LCC) where applicable.

Gas Access Arrangement Revision 2018-2022

10   Initial Ancillary Reference Tariffs – 1 January 2018

Ancillary Reference Tariff	Price (exclusiveinclusive of GST)
Disconnection Disconnection by the carrying out of work being the use of locks or plugs at a Metering Installation in order to prevent the withdrawal of Gas at the Distribution Supply Point. *Disconnection means the carrying out of work to prevent the withdrawal of Gas at a Distribution Supply Point.*	$58.41
Reconnection of Meter Reconnection by turning on Supply, including the removal of locks or plugs used to isolate Supply or reinstallation of a Meter if it has been removed, performance of a safety check and the lighting of appliances where necessary. *Turn On of service to a Distribution Supply Point which has previously been disconnected*	$58.41
Special Meter Reads Meter reading for a DSP in addition to the scheduled meter readings that form part of the Haulage Reference Services. *Undertaken at the request of the User or Customer, not part of the periodic meter read schedule.*	$9.05
Meter and gas installation test	$175.23

Annexure A – Asset Performance Index

The Asset Performance Index is calculated for the Fifth Access Arrangement period as follows:

(1) Calculate the arithmetic average of the annual unplanned SAIDI for all customers for each of the four Calendar Years from 1 January 2018 to 31 December 2021, measured for each year *t* as follows:

$$Unplanned\ SAIDI_t = \frac{\sum_{i=1}^{12} OUD_i^t}{\sum_j^{12} C_j^t / 12}$$

where:

$\sum_{i=1}^{12} OUD_i^t$ is the summation of the total number of unplanned minutes off supply for all customers on the Service Provider's network sourced from quarterly reports submitted to Energy Safe Victoria for the 12 months in Calendar Year *t*;

$\sum_j^{12} C_j^t / 12$ is arithmetic average of total customers of the Service Provider sourced from annual reports submitted to Energy Safe Victoria over the 12 months in Calendar Year *t*.

(2) Calculate the arithmetic average of the annual unplanned SAIFI for all customers for each of the four Calendar Years from 1 January 2018 to 31 December 2021, measured for each year *t* as follows:

$$Unplanned\ SAIFI_t = \frac{\sum_{i=1}^{12} OUF_i^t}{\sum_j^{12} C_j^t / 12}$$

Where:

$\sum_{i=1}^{12} OUF_i^t$ is the summation of the total number of unplanned outages for all customers on the Service Provider's network sourced from quarterly reports submitted to Energy Safe Victoria for the 12 months in Calendar Year *t*

$\sum_j^{12} C_j^t / 12$ is the arithmetic average of total customers of the Service Provider sourced from annual reports submitted to Energy Safe Victoria over the 12 months in Calendar Year *t*.

(3) Calculate the arithmetic average of the annual publicly reported gas leaks for mains of the Service Provider for each of the four Calendar Years from 1 January 2018 to 31 December 2021, as reported to Energy Safe Victoria, adjusted to remove leaks identified as a result of leak surveys.

(4) Calculate the arithmetic average of the annual publicly reported gas leaks for services of the Service Provider for each of the four Calendar Years from 1 January 2018 to 31 December 2021, as reported to Energy Safe Victoria.

(5) Calculate the arithmetic average of the annual publicly reported gas leaks for meters of the Service Provider for each of the four Calendar Years from 1 January 2018 to 31 December 2021, as reported to Energy Safe Victoria.

(6) Convert each of the averages from the measures in paragraphs (1), (2), (3), (4) and (5) above into index scores using the following formula:

Gas Access Arrangement Revision 2018-2022

$$Index_n = 200 - \left(\frac{Actual_n}{Target_n}\right) \times 100$$

where:

$Index_n$ is the index score for each measure n = 1,2,3,4,5 corresponding to the measures in paragraphs (1), (2), (3), (4) and (5) above respectively;

$Actual_n$ is the arithmetic average of the actual performance for each measure n = 1,2,3,4,5 calculated as per paragraphs (1), (2), (3), (4) and (5) above;

$Target_n$ is the target performance for each measure n = 1,2,3,4,5 as follows:

Unplanned SAIDI	n = 1	$Target_1$ = 891.633
Unplanned SAIFI	n = 2	$Target_2$ = 20.519
Mains leaks	n = 3	$Target_3$ = 0.090
Services leaks	n = 4	$Target_4$ = 5.520
Meter leaks	n = 5	$Target_5$ = 15.986

(7)   Calculate the weighted average of the index scores calculated in paragraph (6) above for each of the measures n = 1,2,3,4,5 according to the following weights:

Unplanned SAIDI	25.0%
Unplanned SAIFI	25.0%
Mains leaks	20.4%
Services leaks	23.0%
Meter leaks	6.6%

The resulting average is the **Asset Performance Index**.