



DRAFT DECISION
Australian Gas Networks
Victoria and Albury gas access
arrangement
2018 to 2022

Attachment 11 – Reference
tariff variation mechanism

July 2017

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165

Email: AERInquiry@aer.gov.au

Note

This attachment forms part of the AER's draft decision on the access arrangement for Australian Gas Networks' Victoria and Albury gas distribution networks for 2018-22. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 - Services covered by the access arrangement

Attachment 2 - Capital base

Attachment 3 - Rate of return

Attachment 4 - Value of imputation credits

Attachment 5 - Regulatory depreciation

Attachment 6 - Capital expenditure

Attachment 7 - Operating expenditure

Attachment 8 - Corporate income tax

Attachment 9 - Efficiency carryover mechanism

Attachment 10 - Reference tariff setting

Attachment 11 - Reference tariff variation mechanism

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Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
ATO	Australian Tax Office
capex	capital expenditure
CAPM	capital asset pricing model
CESS	Capital Expenditure Sharing Scheme
CPI	consumer price index
DRP	debt risk premium
ECM	(Opex) Efficiency Carryover Mechanism
ERP	equity risk premium
Expenditure Guideline	Expenditure Forecast Assessment Guideline
gamma	Value of Imputation Credits
MRP	market risk premium
NGL	National Gas Law
NGO	national gas objective
NGR	National Gas Rules
NPV	net present value
opex	operating expenditure
PTRM	post-tax revenue model
RBA	Reserve Bank of Australia
RFM	roll forward model
RIN	regulatory information notice
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STTM	Short Term Trading Market
TAB	Tax asset base
UAFG	Unaccounted for gas
WACC	weighted average cost of capital
WPI	Wage Price Index

11 Reference tariff variation mechanism

This attachment sets out our consideration of the reference tariff variation mechanism proposed by Australian Gas Networks (AGN) for its Victoria and Albury gas distribution networks. The reference tariff variation mechanism:

- permits building block revenues to be recovered smoothly over the access arrangement period subject to any differences between forecast and actual demand
- accounts for actual inflation
- accommodates other reference tariff adjustments that may be required, such as for an approved cost pass through event
- sets administrative procedures for the approval of any proposed changes to reference tariffs.

11.1 Annual reference tariff variation mechanism

11.1.1 Draft decision

We do not approve AGN's proposed haulage reference tariff variation mechanism for the 2018–22 access arrangement period. Specifically, there are aspects of the proposed tariff variation mechanism formula we do not approve.

We do not approve AGN's proposed CPI escalation adjustment. Our draft decision changes the timing of the CPI escalation adjustment to reduce the administrative burden that occurs by applying AGN's proposed approach. The draft decision approach also allows greater transparency in the annual tariff variation proposal.

We also do not approve AGN's proposed combined single adjustment factor for inclusion in the tariff variation mechanism formula. The combined adjustment factor makes provision to adjust AGN's revenues in relation to a number of possible but not yet known annual costs. Our draft decision has not approved AGN's proposal because we either:

- make provision for these costs in AGN's operating expenditure forecast
- not approve the proposed costs
- account for the costs through an alternative adjustment mechanism.

Our draft decision also makes minor modifications to AGN's proposed formula to be consistent with the formulas applied by other gas distributors.

We approve AGN's proposed tariff variation mechanism for ancillary reference services.

The reasons for our draft decision are set out in section 11.1.5.

11.1.2 AGN's proposal

AGN proposed to maintain several aspects of its current reference tariff variation mechanism for the 2018-22 access arrangement period. Notably, it proposed to maintain:

- the existing annual tariff variation mechanism in the form of weighted average price cap formula for its haulage reference services¹
- a price cap tariff formula for ancillary reference services²
- administrative processes for the approval of variations to haulage and ancillary reference tariffs.³

AGN also proposed the following revisions to the reference tariff variation mechanism applied in the current access arrangement:⁴

- modify the annual haulage reference tariff variation formula to:⁵
 - combine the current license fee and pass through adjustment factors into a single combined adjustment factor.
 - also include in the combined factor proposed new adjustments for the Energy Safety Victoria levy, potential carbon emissions scheme costs and costs relating to the proposed network innovation scheme
- include annual X factor updates in the formula to implement the annual update to the return on debt as result of the adoption of a trailing average approach to determining the cost of debt⁶
- increase the rebalancing control constraint from two per cent to five per cent.⁷

It also proposes to have the ability to change, introduce or withdraw haulage reference tariffs over the 2018–22 access arrangement period.⁸ Our draft decision consideration of this issue is discussed in attachment 10–Reference tariff setting.

11.1.3 AER's assessment approach

Under the National Gas Rules (NGR), a reference tariff variation mechanism for an access arrangement:

¹ AGN, *Final plan: Access arrangement information for our Victoria and Albury natural gas distribution networks: 2018 to 2022*, December 2016, pp.172-173. (AGN, *Final plan*, December 2016.)

² AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, p. 17.

³ AGN, *Final plan*, December 2016, p.172.

⁴ AGN, *Final plan*, December 2016, pp. 172-174.

⁵ AGN, *Final plan*, December 2016, p. 173.

⁶ AGN, *Final plan*, December 2016, p. 172, AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, pp. 10, 13–16.

⁷ AGN, *Final plan*, December 2016, p. 174.

⁸ AGN, *Final plan*, December 2016, p. 174.

- must be designed to equalise (in present value terms):
 - forecast revenue from reference services over the access arrangement period and
 - the portion of total revenue allocated to reference services for access arrangement period.
- may provide for variation of a reference tariff:
 - in accordance with a schedule of fixed tariffs or
 - in accordance with a formula set out in the access arrangement or
 - as a result of a cost pass through for a defined event or
 - by the combination of two or more of these operations.⁹

A formula for varying reference tariffs may (for example) provide for variable caps on the revenue to be derived from a particular combination of reference services; or tariff basket price control; or revenue yield control; or a combination of all or any of these factors.¹⁰ However, the reference tariff variation mechanism must give us adequate oversight and powers to approve reference tariff variations.¹¹

We must have regard to various factors in deciding whether an access arrangement's reference tariff variation mechanism is appropriate. These are:

- the need for efficient reference tariff structures
- the possible effects of the reference tariff variation mechanism on administrative costs
- the regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed reference tariff variation mechanism
- the desirability of consistency between regulatory arrangements for similar services
- any other relevant factor.¹²

Having regard to these, we considered the implications of the proposed reference tariff variation mechanism for efficient tariff structures and administrative costs on natural gas consumers, potential users and AGN. In doing so we took into account the nature and scope of pipeline reference services to which reference tariffs are applicable. Our assessment also included a comparison of:

- the proposed reference tariff variation mechanism arrangements with those in AGN's current access arrangement

⁹ NGR, rr. 92(2), 97(1).

¹⁰ NGR, r. 97(2).

¹¹ NGR, r. 97(4).

¹² NGR, r. 97(3).

- other recent gas distribution access arrangement decisions (and electricity determinations under the NER)
- consistency in approach across the provision of similar services.

We assessed the potential impact of AGN's proposal on incentives for pipeline operation in a manner consistent with the national gas objectives and with the revenue and pricing principles.¹³ We also judged the implications of AGN's proposed reference tariff variation mechanism for effective risk management that would be in the long term interests of consumers of natural gas.

11.1.4 Interrelationships

The haulage reference tariff variation mechanism has interrelationships with the total revenue AGN can earn, the services it provides to its customers to recover those revenues and the tariffs it charges for the use of those services.

AGN's haulage reference tariffs are adjusted annually by the application of a weighted average price cap formula. The X factor in the weighted average price cap formula is revised annually to reflect the updates to the return on debt as a result of the adoption of a trailing average approach to determining the cost of debt.

AGN's haulage reference tariffs are derived from the total revenue requirement after consideration of demand for each tariff category. This means the tariffs we determine (including the means of varying the tariffs from year to year) are the binding constraint across the 2018–22 access arrangement period, rather than the total revenue requirement set out in our decision.

Our draft decision on:

- AGN's total revenue requirement is set out in the Overview attachment
- the WACC annual adjustment is set out in attachment 3—Rate of return and X factors are discussed in the Overview attachment
- the services AGN will offer to customers over the 2018–22 access arrangement period is set out in attachment 1—Services covered by the access arrangement
- the tariffs AGN will charge for the provision of these services is set out in attachment 10—Reference tariff setting.

11.1.5 Reasons for draft decision

We do not approve AGN's proposed haulage reference tariff variation mechanism for the 2018–22 access arrangement period. Specifically, there are aspects of the proposed tariff variation mechanism formula we do not approve.

¹³ Including NGR, r. 97(3)(e).

We approve AGN's proposed tariff variation mechanism for its ancillary reference services.

The following section sets out the reasons for our draft decision.

Revenue equalisation

An annual reference tariff variation mechanism must be designed to equalise (in present value terms) the building block costs associated with reference services and the portion of total revenue allocated to reference services.¹⁴

While we generally consider AGN's proposed haulage reference services annual reference tariff variation mechanism complies with rule 92(2) there are aspects of it we do not approve. For these aspects, we require AGN to amend its proposed access arrangement to reflect our draft decision. These revisions and our reasons are set out below.

Further, the quantum of AGN's proposed reference tariffs must be revised to reflect our draft decision on total revenue and forecast demand. The changes in total revenue and forecast demand are outlined in the respective sections of this draft decision.

Annual haulage reference tariff variation mechanism

We approve AGN's proposal to maintain a weighted average price cap formula as the tariff variation mechanism for its haulage reference services. We note a weighted average price cap is a form of tariff basket price control, which is compliant with the NGR.¹⁵

Stakeholders considered consistent regulatory approaches for haulage reference services desirable and did not consider there was justification for a departure from a weighted average price cap at this time.¹⁶

We agree it is desirable to apply consistent regulatory arrangements for similar services across jurisdictions.¹⁷ The continuation of a weighted average price cap formula for AGN's haulage reference service tariffs allows this consistency as this type of formula is applied universally by gas distributors as the tariff variation mechanism to their haulage reference service tariffs.

The application of a common tariff variation mechanism leads to reduced complexity and administrative burden for us and other stakeholders through standardisation of modelling approaches, incentive schemes and consultation requirements. These

¹⁴ NGR, r. 92(2).

¹⁵ NGR, r. 97(2).

¹⁶ Consumer Challenge Panel (CCP11), *Response to proposals from AGN, AusNet and Multinet for the 2018–22 Access Arrangements*, 3 March 2017, p. 86; Origin Energy, *Victorian gas access arrangement review 2018–22 — Response to gas distribution businesses' proposals*, 17 February 2017, p. 3.

¹⁷ NGR, r. 97(3)(d).

uniform aspects of the regulatory framework may also assist customers and other interest groups' understanding and involvement in access arrangement processes.

Annual haulage reference tariff variation formula

We do not approve some aspects AGN's proposed annual reference tariff variation formula.¹⁸

AGN's proposed weighted price cap formula included a number of additions to the formula applied in its current access arrangement. The additions were annual adjustments for costs relating to the Energy Safety Victoria levy, potential carbon emissions schemes and its proposed network innovation scheme.¹⁹ AGN also proposed to make these adjustments through a combined adjustment factor, which also included annual adjustments for licence fees and approved cost pass throughs. The proposed formula contained:²⁰

- a consumer price index (CPI) escalation adjustment
- an X factor adjustment²¹
- a combined adjustments factor which allows for the adjustments for the pass through of costs relating to:
 - annual license fees charged to AGN by the Victorian and New South Wales governments
 - Energy Safety Victoria levy charged to AGN by the Victorian government
 - costs incurred by AGN in connection with a carbon emission scheme (such as the carbon safeguard mechanism under the *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act))
 - network innovation allowance expenditure
 - approved cost pass through events.

Our draft decision consideration of each of these adjustments is set out below.

¹⁸ AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, pp. 9–12.

¹⁹ AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, p. 11.

²⁰ AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, pp. 9–12.

²¹ The X factor measures the real rate of change in annual expected revenue from one year to the next. A negative X factor represents a real increase in revenue. Conversely, a positive X factor represents a real decrease in revenue.

Consumer price index

We do not approve AGN's proposed CPI escalation adjustment. Our draft decision changes the timing of the CPI escalation adjustment to reduce the administrative burden that would occur by applying AGN's proposed approach. Our draft decision also allows greater transparency in the annual tariff variation proposal.

AGN proposed the continuation of the CPI escalation adjustment as applied in the current access arrangement period.²² This adjustment is calculated based on movements between annual September quarter CPI published by the Australian Bureau of Statistics (ABS). However, the September quarter CPI is typically released after AGN is required to submit its annual tariff variation proposal—50 business days before the tariffs commence. Therefore, AGN has had to either delay the submission of its proposal or submit a proposal with a 'placeholder' CPI until the actual CPI is known and then submit a supplementary proposal. This process is administratively inefficient for AGN and us.

To address this issue, our draft decision adopts CPI escalation based on the movement between annual June quarter CPI movements. This approach allows the actual CPI escalation to be known prior to AGN submitting its annual tariff variation proposal. Therefore, AGN can submit a completed proposal compliant with the timelines of its access arrangement which reduces the administrative burden of the current approach. Without the need to provide a placeholder or supplementary proposal will also allow greater transparency in the annual tariff variation proposal. Our draft decision approach to calculating CPI escalation is consistent with the approach undertaken by other gas and electricity distributors.

We are also aware that gas retailers require approximately six weeks to incorporate network tariff changes into their billing systems and to give adequate notice to stakeholders.²³ Our draft decision approach to calculating CPI escalation will ensure this can occur before the tariffs commence.

X factor adjustment

We approve AGN's proposed X factor adjustment definition which has been revised to include annual revisions to reflect the updates to the return on debt consequent to the adoption of a trailing average approach to determining the cost of debt.²⁴

The annual update to the X factor in this manner is consistent with the X factor application by other gas and electricity distributors across jurisdictions.²⁵ Further discussion on this adjustment can be found in attachment 3—rate of return—which

²² AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, p. 10.

²³ For example, see: Origin Energy, *Submission on Australian Gas Networks (South Australia) access arrangement proposal 2016–21*, 10 August 2015, p. 7.

²⁴ AGN, *Final plan*, December 2016, p. 172; AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, pp. 10, 13–16.

²⁵ NGR, r. 97(3)(d).

discusses the WACC annual adjustment and the Overview attachment—which details issues relating to X factors.

Combined adjustments factor

We do not approve AGN's proposed combined adjustment factor for inclusion in the weighted average price cap formula. The combined adjustment factor makes provision to adjust AGN's revenues in relation to a number of possible but not yet known annual costs. Our draft decision has not approved AGN's proposal because we have either:

- made provision for these costs in AGN's operating expenditure forecast
- not accepted the proposed costs
- will account for the costs through an alternative adjustment mechanism.

We do not approve provision in the weighted average price cap formula to adjust for annual costs relating to the:

- annual license fees charged to AGN by the Victorian and New South Wales governments
- Energy Safety Victoria levy charged to AGN by the Victorian government.

Our draft decision has included in the operating expenditure forecast for AGN for the annual costs relating to these two elements. Therefore, the provision to make annual revenue adjustments for these costs is not required as they are already provided for in our draft decision total revenue requirement. Discussion on these cost elements can be found in attachment 7—operating expenditure.

We also do not approve provision in the weighted average price cap formula to adjust for annual costs relating to network innovation allowance expenditure. Our draft decision does not approve AGN's proposal to introduce a network innovation scheme to which these costs relate. Therefore, annual adjustments for these costs are not required. Discussion on the network innovation scheme can be found in attachment 6—capital expenditure.

Similarly, we do not approve provision in the weighted average price cap formula to adjust for costs in connection with a carbon emission scheme. AGN's adjustment factor provides for it to recover 'any costs incurred by AGN in connection with a carbon emission scheme (such as the Carbon Safeguard Mechanism under the National Greenhouse Energy Reporting Act 2007).'²⁶

The NGER Act establishes the safeguard mechanism,' which requires the operators of certain facilities to keep carbon emissions below a baseline level. An emitter has a range of options for keeping their emissions down, including purchasing carbon credits and surrendering them to offset their emissions, or generating carbon credits by carrying out a project under the Emission Reduction Fund (ERF). Alternatively, an

²⁶ AGN, *Final plan*, December 2016, p. 173.

emitter can apply for their baseline to be changed (e.g. in response to increased demand), or seek a longer monitoring period to allow additional time to reduce emissions. An emitter can also seek an exemption in the case of a natural disaster or criminal activity.²⁷

AGN is subject to the NGER Act in respect of its Victorian and Albury distribution system,. If it appears that emissions are likely to exceed the threshold, AGN would need to decide whether to purchase and surrender carbon credits, generate carbon credits under the ERF, or pursue one of the additional options in the NGER Act.

AGN has not been established that the alternatives to purchasing carbon credits are unavailable or inapplicable to AGN. Aside from carbon credits, the safeguard mechanism incentivises carbon emitters to reduce emissions through operational measures. Carbon emitters may also seek a lower emission benchmark or a longer reporting period to prevent an excess emission situation from arising. The service provider is far better placed than its customers to identify the least cost option (or combination of options) to ensure compliance with the NGER Act safeguard mechanism. It would have little incentive to seek out the least cost option if we approved its proposed NGER pass through as it could simply pass these costs through to customers. We approve provision in the weighted average price cap formula to adjust revenues for AER approved cost pass through events. However for consistency with the formulas applied to other gas distributors, our draft decision includes a separate pass through adjustment mechanism for these costs. The pass through adjustment factor is set out below in figure 11.3.

Minor modifications

Our draft decision has also made editorial amendments to AGN's proposed weighted average price cap formula, to be consistent with the presentation of this formula as applied by other gas distribution networks. These modifications have not altered the application of the tariff variation mechanism. We consider consistency across distributors will assist stakeholders understanding of annual tariff variation mechanisms.

The most significant amendment is the swapping of left and right hand sides of the formula. Other amendments relate to the definitions for some mechanism factors.

Our draft decision for AGN's annual reference tariff variation mechanism formula is set out in figure 11.1.

²⁷ <http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism>, accessed 23 May 2017.

Figure 11.1 Annual haulage reference tariff variation formula

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

where:

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities from 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 one.

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

t is the year for which tariffs are being set.

X_t is the X factor for each year of the 2018–22 access arrangement period as determined in the PTRM as approved in the AER's final decision, and annually revised for the return on debt update calculated for the relevant year during the access arrangement period in accordance with that approved in the AER's final decision.

PT_t is the cost pass through factor for year t calculated as outlined in figure 11.3

n is the number of different reference tariffs

m is the different components, elements or variables ("components") comprised within a reference tariff

p_t^{ij} is the proposed component j of reference tariff i in year t

p_{t-1}^{ij} is the prevailing component j of reference tariff i in year t-1

q_{t-2}^{ij} is the audited quantity of component j of reference tariff i that was sold in year t-2 (expressed in the units in which that component is expressed (e.g. GJ)).

Rebalancing control formula

We approve the general structure of the rebalancing control formula proposed by AGN.

However, we do not approve AGN's proposal to increase the rebalancing constraint from two per cent to five per cent. AGN's justification for the proposed increase is to achieve greater flexibility in addressing matters as they arise during the next access arrangement period, such as the potential to align prices across its tariff zones.²⁸

We note the proposed increase in the rebalancing constraint could lead to increased price volatility and potential price shocks to consumers during the access arrangement period. Such outcomes are not consistent with the national gas objective (NGO).²⁹ Such volatility and price shocks would create uncertainty for downstream users which, in turn, may be detrimental to the efficient investment in and utilisation of pipeline assets. We consider that such outcomes are inconsistent with the revenue and pricing principles (RPP).³⁰ A reference tariff control should preferably result in a price path with a reasonable degree of certainty and predictability.

We also note AGN's proposal stated that because its customers did not support the alignment of tariffs across AGN's tariff zones it decided against tariff alignment.³¹ Therefore, it is inconsistent to increase the rebalancing constraint in order to allow this alignment to occur through annual tariff variation proposals over the 2018–22 access arrangement period. Moreover it is less transparent. We do not support such an indirect approach to aligning tariff zones given the lack of support for this outcome from AGN's customers which AGN has accepted.

We also query the cost reflectivity of tariffs by aligning tariff zones. AGN's proposal sets out that customers are grouped together based on similar characteristics (and therefore cost drivers) where the location of customer is a key characteristic.³² Therefore, the alignment of tariff zones appears to lend itself to less cost reflectivity of tariffs and increased probability of cross subsidisation across customers in different zones. Such outcomes are not consistent with the national gas objective (NGO).³³

Our considerations are supported by Red Energy and Lumo Energy which stated that the proposed rebalancing constraint increase may lead to significant price increases and it is not convinced the benefits of tariff zone alignment would outweigh the costs.³⁴

We also note the proposed increase in the rebalancing constraint is inconsistent with AGN's current arrangements; the arrangements for the other Victorian gas distributors; and our recent decisions for the Queensland and South Australia gas distributors. We

²⁸ AGN, *Final plan*, December 2016, p. 174.

²⁹ NGL, s. 23.

³⁰ NGL, s. 24(3)(c).

³¹ AGN, *Final plan*, December 2016, p. 169.

³² AGN, *Final plan*, December 2016, p. 168.

³³ NGL, s. 23.

³⁴ Red Energy and Lumo Energy, *Australian Gas Networks Access Arrangement*, 6 March 2017, p. 3.

consider consistency in regulatory approaches across distributors and jurisdictions to be desirable.³⁵ Consistency leads to reduced complexity and administrative burden for us and other stakeholders as well as assist customers and other interest groups' understanding of the operation of tariff variation mechanisms.

For the above mentioned reasons we do not approve amending the rebalancing constraint from two per cent to five per cent. We consider that a rebalancing constraint of two per cent is appropriate for the 2018–22 access arrangement period.

We have also made the two per cent explicit in the rebalancing control formula rather than defined by the Y factor, as AGN proposes.³⁶ We have done this to be consistent with the presentation of this adjustment in the rebalancing control mechanisms applied by other gas distributors. Consistent approaches across distributors will assist stakeholders' understanding of annual tariff variation mechanisms.

Our draft decision rebalancing control formula is set out in figure 11.2.

Figure 11.2 Rebalancing control formula

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

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities from 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 one.

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

t is the year for which tariffs are being set.

X_t is the X factor for each year of the 2018–22 access arrangement period as determined in the PTRM as approved in the AER's final decision, and annually revised

³⁵ NGR, r. 97(3)(d).

³⁶ AGN, *Attachment 14.2: Network pricing, formulae and efficiency*, December 2016, p. 13.

for the return on debt update calculated for the relevant year during the access arrangement period in accordance with that approved in the AER's final decision.

PT_t is the cost pass through factor for year t calculated as outlined figure 11.3.

n is the number of different reference tariffs.

m is the different components, elements or variables ("components") comprised within a reference tariff

p_t^{ij} is the proposed component j of reference tariff i in year t

p_{t-1}^{ij} is the prevailing component j of reference tariff i in year t-1

q_{t-2}^{ij} is the audited quantity of component j of reference tariff i that was sold in year t-2 (expressed in the units in which that component is expressed (e.g. GJ)).

Pass through factor formula

We have included in the reference tariff variation mechanism formula a pass through adjustment factor consistent with that we have applied to other gas distribution networks.

Inclusion of an adjustment factor to accommodate AER approved cost pass through events enables a simple and transparent method for cost recovery and pass through of these costs to customers. The pass through adjustment factor formula is set out in figure 11.3.

Figure 11.3 Pass through adjustment factor formula

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

where:

t is the year for which tariffs are being set

PT_t is:

- (a) zero when financial year t-1 refers to year 2018
- (b) the value of PT'_t determined in the year t-1 for all other years in the access arrangement period

and

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

where

AP_t is:

- (a) any determined pass through amount that the AER approves in whole or part in 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 AGN in the immediately prior access arrangement period) occurring in the immediately prior access arrangement period that AGN proposed to pass through in whole or in part in 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 reference tariffs.

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities from 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 one.

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

X_t means the X factor for each year of the 2018–22 access arrangement period as determined in the PTRM as approved in the AER's final decision, and annually revised for the return on debt update calculated for the relevant year during the access arrangement period in accordance with that approved in the AER's final decision

p_{t-1}^{ij} is the prevailing component j of reference tariff i in year t-1

q_{t-2}^{ij} is the audited quantity of component j of reference tariff i that was sold in year t-2 (expressed in the units in which that component is expressed (e.g. GJ)).

Annual ancillary reference tariff variation formula

We approve AGN's proposed annual ancillary reference tariff variation formula which is consistent with that of the current access arrangement. However, we have changed the definition of the CPI to be consistent with that applied in the annual reference tariff variation formula.

We have also amended the definitions of the other mechanism factors to be consistent with other gas distributors. Consistent approaches across distributors will assist stakeholders understanding of annual tariff variation mechanisms. These amendments have not altered the application of the tariff variation mechanism.

Our draft decision ancillary reference tariff variation formula is set out in figure 11.4.

Figure 11.4 Ancillary reference tariff variation formula

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

where:

t is the year for which tariffs are being set

ART_t is the reference tariff that will apply to an ancillary reference service in year t

ART_{t-1} is the reference tariff applicable to an ancillary reference service in year $t-1$

ΔCPI_t is the annual percentage change in the ABS CPI All Groups, Weighted Average of Eight Capital Cities from 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 one.

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

11.2 Cost pass through mechanism

The inclusion of a pass through mechanism recognises a service provider can be exposed to risks beyond its control, which may have a material impact on costs. A cost pass through enables a distributor to recover (that is, pass through) the costs of defined unpredictable, high cost events.

11.2.1 Draft decision

We accept:

- the Service Standard Event, Tax Change Event, Terrorism Event, Insurer Credit Risk Event, Insurance Cap Event, and Natural Disaster Event as proposed by AGN
- the inclusion of a Regulatory Change Event and a Network User Failure Event subject to the amendments set out in section 11.2.5.

However, we do not consider there is an ongoing need for AGN's proposed National Energy Customer Framework Event, which is adequately covered by the Regulatory Change Event and the Service Standard Event.

We have also set out minor amendments to clarify how the materiality threshold for pass through events is to be calculated.

11.2.2 AGN's proposal

AGN's proposed the same set of events approved for the current, 2013–17 access arrangement period, excepting the removal of the mains replacement pass through event that applied in the current period, which AGN notes is no longer required:³⁷

- Regulatory Change Event
- Service Standard Event
- Tax Change Event
- Terrorism Event
- Network User Failure Event
- Insurer Credit Risk Event
- Insurance Cap Event
- Natural Disaster Event
- National Energy Customer Framework (NECF) event.

AGN has not proposed changes to the materiality threshold of one per cent of smoothed forecast revenue that applies to these events, or to the factors identified in the access arrangement as relevant to the AER's assessment of a pass through application.³⁸

³⁷ AGN, *Final plan*, December 2016, p. 175.

³⁸ AGN - *Access Arrangement for our Victorian and Albury natural gas distribution networks 1 January 2018 to 31 December 2022* - 20161222, pp. 12, 15; AGN - *Attachment 15.2 - Summary of Changes to the Access Arrangement Document including Terms and Conditions* - December 2016, pp. 3-4.

11.2.3 Assessment approach

The NGR state that a reference tariff variation mechanism may provide for the variation of a reference tariff:³⁹

as a result of a cost pass through for a defined event (such as a cost pass through for a particular tax).

As a component of the reference tariff variation mechanism, a cost pass through mechanism must be assessed having regard to the matters in rule 97(2)⁴⁰ and must give us adequate oversight and power to approve reference tariff variations.⁴¹

We must approach this assessment in a manner likely to contribute to the achievement of the National Gas Objective (NGO),⁴² which states that the purpose of the NGL is to promote efficient investment, operation and use of natural gas services for the long term interest of consumers with regard to price, quality, safety and security of supply.⁴³

In addition, we must take into account the Revenue and Pricing Principles (RPPs) whenever we exercise discretion in approving or making those parts of an access arrangement relating to a reference tariff.⁴⁴ The RPPs state that the service provider should be provided with a reasonable opportunity to recover at least the efficient costs incurred in providing reference services and complying with a regulatory obligation or requirement.⁴⁵ They also provide incentives to promote economic efficiency.⁴⁶ Together, the RPPs promote a balance between the economic costs and risks of the potential for under and over investment by a service provider, to promote efficient investment.⁴⁷

In the context of pass through events, the RPPs require us to have particular regard to the impact on price, quality, safety, reliability and security of supply that may arise as a result of any change in the efficient operation of, and ability and incentive of, a service provider to invest in its network.⁴⁸

Our decision on the cost pass through mechanism includes a decision on what categories of event to approve.⁴⁹ In approaching this part of our task we also take into account the following considerations:⁵⁰

³⁹ NGR, r. 97(1)(c)

⁴⁰ In summary: efficient reference tariff structures; administrative costs; prior regulatory arrangements; consistency between regulatory arrangements; any other relevant factor.

⁴¹ NGR, r. 97(3).

⁴² NGL, s. 28(1)(a).

⁴³ NGL, s. 23.

⁴⁴ NGL, s. 28(2)(a).

⁴⁵ NGL, s. 24(2).

⁴⁶ NGL, s. 24(3).

⁴⁷ NGL, s. 24(6).

⁴⁸ NGL, s. 23; See also AEMC 2012, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, Sydney, p. 6.

⁴⁹ NGR, r. 97(1)(c).

1. whether the type of event covered by another category of pass through event;
2. whether the nature or type of event can be clearly identified at the time the access arrangement is approved for the service provider;
3. whether a prudent service provider could reasonably prevent an event of that nature or type from occurring or substantially mitigate the cost impact of such an event;
4. whether the relevant service provider could insure against the event, having regard to:
5. the availability (including the extent of availability in terms of liability limits) of insurance against the event on reasonable commercial terms; or
6. whether the event can be self-insured on the basis that: it is possible to calculate the self-insurance premium; and the potential cost to the relevant service provider would not have a significant impact on the service provider's ability to provide network services.

These considerations appear in the National Electricity Rules (NER), where they guide the regulator's decision on whether to approve additional categories of pass through event beyond those already included in the NER.⁵¹ We consider they are consistent with the factors referred to in NGR (r. 97(2)), and pertinent to our examination of the degree to which a proposed category of event is likely to contribute to the achievement of the NGO.⁵²

The Australian Energy Market Commission (AEMC) described the purpose of these considerations as:

to incorporate and reflect the essential components of a cost pass through regime. It was intended that in order for appropriate incentives to be maintained, any nominated pass through event should only be accepted when event avoidance, mitigation, commercial insurance and self-insurance are unavailable. That is, a cost pass through event is the least efficient option for managing the risk of unforeseen events.⁵³

that a pass through event should only be accepted when it is the least inefficient option and event avoidance, mitigation, commercial insurance and self-insurance are found to be inappropriate. That is, it is included after

⁵⁰ NGR, r. 97(3)(e).

⁵¹ NER, cll. 6.5.10(b), 6A.6.9(b); NER Chapter 10: Glossary, definition of 'nominated pass through event considerations'.

⁵² NGR, r. 100(1).

⁵³ AEMC 2012, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, Sydney, p. 19.

ascertaining the most efficient allocation of risks between a service provider and end customers.⁵⁴

We consider viewing pass throughs as a ‘last resort’ and accepting them only when event avoidance, mitigation and avoidance are unavailable, is consistent with the RPPs and will contribute to the achievement of the NGO. This approach maintains the incentives on service providers to use market based mechanisms to mitigate the cost impacts that would arise if the event is triggered.⁵⁵ In turn, this promotes the efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers with respect to price.⁵⁶

We also look to promote consistency in our approach pass through categories across our electricity determinations and gas access arrangements.⁵⁷

11.2.4 Interrelationships

Tariffs are derived from the total revenue requirement after consideration of demand for each tariff category. AGN operates under a weighted average price cap. This means the tariffs we determine (including the means of varying the tariffs from year to year) are the binding constraint across the 2016–21 access arrangement period, rather than the total revenue requirement set in our decision.⁵⁸ Except as provided by a reference tariff variation mechanism, a reference tariff is not to vary during the course of an access arrangement period.⁵⁹

In assessing and approving a reference tariff variation mechanism, we consider the potential impact of the proposed mechanism on the service provider's incentives under the access arrangement to operate its network—and manage its risks—in a manner consistent with the NGO and RPPs.⁶⁰

The pass through component of the reference tariff variation mechanism is also interrelated with other parts of this decision, in particular with the forecast opex⁶¹ and capex⁶² and rate of return⁶³ included in our forecast revenue requirement. These

⁵⁴ AEMC 2012, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, Sydney, p. 20.

⁵⁵ NGL, s. 24(3); AEMC 2012, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, Sydney, p. 8.

⁵⁶ NGL, s. 23; AEMC 2012, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, Sydney, p. 8.

⁵⁷ See NGR r. 97(2)(d) and (e).

⁵⁸ Where actual demand across the 2016–21 access arrangement period varies from the demand forecast in the access arrangement, APTNT's actual revenue will vary from the revenue allowance determined in our decision. In general, if actual demand is above forecast demand, APTNT's actual revenue will be above forecast revenue, and vice versa.

⁵⁹ NGR, r. 97(5).

⁶⁰ NGL, ss. 23, 24.

⁶¹ See Attachment 7 (Operating expenditure) to this draft decision.

⁶² See Attachment 6 (Capital expenditure) to this draft decision.

⁶³ See Attachment 3 (Rate of return) to this draft decision.

interrelationships require us to balance the incentives in the various parts of our decision.

Pass through events are one way, but not the only way, in which service providers can manage their risks under an access arrangement. For systemic risks, service providers are compensated through the allowed rate of return. Service providers also face business-specific, or residual, risks. Service providers are compensated for the prudent and efficient management of these risks through the forecast opex and capex we include in our forecast revenue requirement for strategies such as:

- prevention (avoiding the risk)
- mitigation (reducing the probability and impact of the risk)
- insurance (transferring the risk to another party)
- self-insurance (putting aside funds to manage the likely costs associated with a risk event).

An efficient business will manage its risk by employing the most cost effective combination of these strategies. In order to maintain appropriate incentives under an access arrangement, we only accept pass through events where we are satisfied that event avoidance, mitigation, commercial insurance and self-insurance under approved forecasts of prudent and efficient opex and capex are either unavailable or inappropriate.⁶⁴

For smaller expenditure a service provider should generally utilise its existing expenditure allowance or reprioritise its work program rather than seeking approval of a pass through.⁶⁵ This is reflected in the materiality threshold that applies to applications for cost pass through under the approved access arrangement.⁶⁶

Cost pass through amounts approved in an access arrangement period are added to forecast opex for the purpose of calculating efficiency carryover amounts under the efficiency carryover mechanism in the approved access arrangement.⁶⁷

11.2.5 Reasons for draft decision

This section sets out our reasons for:

⁶⁴ This is consistent with the AEMC's conclusions in its review of the NER pass through arrangements. See: AEMC 2012, *Cost pass through arrangements for Network Service Providers, Rule Determination*, 2 August 2012, Sydney, pp. 19–20.

⁶⁵ This is consistent with the AEMC's conclusions in its review of the NER pass through arrangements. See: AEMC 2012, *Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Final Rule Determination*, 29 November 2012, Sydney, p. 186.

⁶⁶ AER, *Approved Access Arrangement for the Amadeus Gas Pipeline - 1 July 2016 to 30 June 2021*, May 2016, cl. 4.7.3, Definition of 'materiality threshold'.

⁶⁷ AER, *Approved Access Arrangement for the Amadeus Gas Pipeline - 1 July 2016 to 30 June 2021*, May 2016, cl. 8.1(i); See Attachment 9 (Efficiency carryover mechanism) to this draft decision.

- approving AGN’s proposed: service standard, tax change, terrorism, insurer credit risk, insurance cap, natural disaster events as currently defined
- not approving AGN’s proposed regulatory change and network user failure events as currently defined, and requiring amendments to the definitions
- not approving AGN’s proposed National Energy Customer Framework Event
- requiring an amendment to clarify how the materiality threshold for pass through events is to be calculated.

As set out below we have taken into account the considerations discussed in sections 11.2.3 and 11.2.4 in assessing the pass through events proposed by AGN.

Service standard event, tax change event, terrorism, insurer credit risk event, insurance cap event, natural disaster event

We accept the Service Standard Event, Tax Change Event, Terrorism Event, Insurer Credit Risk Event, Insurance Cap Event and Natural Disaster Event as proposed by AGN. These events are consistent with events we have approved in other gas access arrangement decisions, including that for AGN’s South Australian gas distribution network.⁶⁸

The purpose of the cost pass through mechanism is to offer protection to service providers, from uncontrollable events that impact on the costs to the business. It is not intended to recover all costs a business would otherwise be expected to absorb. In general, we consider cost pass through events should only apply where the event has a material impact on costs. Events that have a small or non-material impact on costs should be considered to be part of the general costs and risks of doing business and service providers should not be able to pass them on.

Provided AGN has taken appropriate measures to prevent the event from occurring and mitigate its impact, we consider sharing the remaining risk between AGN and its customers by way of these pass through provisions is likely to best achieve the NGO, particularly with regard to the longer term interest of consumers with respect to price.

Regulatory change event

Our draft decision is to accept AGN’s proposed Regulatory Change Event with the amendment to the definitions set out in Table 11.1 below. AGN’s current access arrangement includes a regulatory change event and AGN proposed this event continue to apply for the 2018-22 regulatory control period.

⁶⁸ AER, *Final Decision: Australian Gas Networks 2016-21*, Attachment 11- Reference tariff variation mechanism, pp 7-9; AER, *Final Decision: Jemena Gas Networks 2015-20*, Attachment 11- Reference tariff variation mechanism, pp 6-8.

AGN's proposed definition of this event is consistent with its current arrangement. However, in more recent decisions,⁶⁹ including our final decision on AGN's South Australian gas distribution network, we have made amendments to this definition to specify that a change in regulatory obligation or requirement must "substantially" affect the manner in which reference services are provided to qualify for pass through. We consider these more recent definitions should apply to AGN's Victorian access arrangement also. This will provide consistency in the treatment of common risks between AGN's South Australia and Victoria gas access arrangements, between AGN and other Victorian gas networks, and between gas and electricity network services providers.⁷⁰

Network user failure event

Our draft decision is to require AGN to replace the proposed Network User Failure Event with a Retailer Insolvency Event as defined in Table 11.1.

AGN's current access arrangement includes a Network User Failure Event which applies where an existing user of its network becomes insolvent or is unable to continue to supply gas to its customers and those customers are transferred to another user, which materially increases the costs to AGN of providing its reference service.⁷¹ This definition is consistent with that which applied in the current, 2013–17 access arrangement period.

Including an event of this type in the access arrangement for the 2018–22 period will place AGN in a similar position to gas distributors in NECF jurisdictions. Rule 520 of the NGR, which does not apply in Victoria because the NECF has not taken effect in Victoria, provides for the pass through of certain costs incurred by a distributor when a retailer becomes insolvent.

We approved an event dealing with retailer insolvency in the recent determinations for the five Victorian electricity distribution network service providers. In those determinations we defined the pass through event to refer directly to the equivalent pass through event applying in the NECF jurisdictions.⁷²

Referring directly to the NECF pass through event is also appropriate for the Victorian gas distributors' access arrangements. It ensures close alignment with the risk

⁶⁹ See AER, Draft decision for ActewAGL Distribution Access Arrangement 2016 to 2021, Attachment 11 –Reference tariff variation mechanism, November 2015, p.11–24. AER, Draft Decision for Amadeus Gas Pipeline Access Arrangement 2016–21, Attachment 11– Reference tariff variation mechanism, November 2015, p. 11–18. AER, Draft Decision for Australian Gas Networks Access Arrangement 2016 to 2021, Attachment 11 –Reference tariff variation mechanism, November 2015, p.11-23.

⁷⁰ Our approved definition is consistent with the prescribed regulatory change event that applies to distribution and transmission network service providers under the NER.

⁷¹ AGN - Final Plan - Access Arrangement Information for our Victorian and Albury natural gas distribution networks 2018-2022 - 20161222, p. 176.

⁷² E.g. AER, Final Decision for United Energy Distribution Determination 2016 to 2020, Attachment 15–Pass Through Events, May 2016, p.15–09.

allocation in NECF jurisdictions, including as to the scope of the event, and is also drafted to ensure any changes to the NGR prescribed retailer insolvency event during the access arrangement period will apply consistently to Victorian gas distributors as they take effect.

We consider that it is preferable for AGN and other Victorian gas distributors to apply the same definition for this type of nominated pass through event. This will ensure that costs and risks incurred for this type of event are consistent across the businesses.

National Energy Customer Framework Event

Our draft decision is to not approve the proposed NECF Event.

The NECF Event covers certain costs associated with the introduction of the NECF in Victoria. We approved this event in AGN's current access arrangement.

However, on further review, we now consider any cost adjustments caused by a future implementation of the NECF in Victoria would be covered as appropriate by the Regulatory Change Event and the Service Standard Event. This is consistent with our decision in Victorian electricity distributors' determination in 2016.⁷³ It also puts AGN in the same position regarding any future transition to the NECF as network businesses in other jurisdictions that have adopted the NECF, where that transition was managed in the same way as other regulatory changes.

Materiality threshold

Our draft decision includes minor amendments to the definition of the 'materiality threshold' in section 4.5 of AGN's proposed access arrangement⁷⁴, to clarify that:

- The relevant starting point for the calculation of the materiality threshold is the smoothed forecast revenue specified in the AER's final decision on the access arrangement (not that submitted to us by AGN in its Access Arrangement Information);
- The calculation of one per cent applies to smooth revenue in each year (and not over all years) in which the costs are incurred.

11.3 Revisions

The required revisions are set out in table 11.1 below.

⁷³ E.g. AER, *Final Decision for United Energy Distribution Determination 2016 to 2020, Attachment 15–Pass Through Events*, May 2016, p.15–10.

⁷⁴ AGN - Access Arrangement for our Victorian and Albury natural gas distribution networks 1 January 2018 to 31 December 2022 - 20161222 p. 15.

Table 11.1 – Revisions to AGN's proposed access arrangement

Reference	Amendment
Revision 11.1	Amend clauses 4.4.1, 4.4.2, 4.6.3 and Annexure D in the AGN proposed access arrangement to be consistent with figure 11.1, figure 11.2, figure 11.3 and figure 11.4 in our draft decision.
Revision 11.2	<p>Revise the definition of 'Regulatory change event' as follows: 'Regulatory Change Event' means: A change in a regulatory obligation or requirement that: falls within no other category of Cost Pass Through Event; and occurs during the course of an access arrangement period; and <u>substantially</u> affects the manner in which AGN provides Reference Services; and materially increases or materially decreases the cost of providing those services.</p>
Revision 11.3	<p>Replace the proposed 'Declared retailer of last resort event' with the following: Retailer Insolvency Event means: The occurrence of an event where: (a) a Retailer of Last Resort (RoLR) Event as defined in section 122 of the National Energy Retail Law has occurred; and (b) Service Provider 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 (c) the costs are not recoverable by Service Provider 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.</p> <p>Note for the avoidance of doubt, in making a determination on a Retailer Insolvency Event, the AER will have regard to, amongst other things, the extent to which Service Provider has taken steps to minimise the costs associated with its responsibilities in a RoLR Event, both prior to, and after, the RoLR Event was triggered.</p>
Revision 11.4	Remove the National Energy Customer Framework event and associated references and definitions from the Access Arrangement.
Revision 11.5	<p>Revise the definition of the materiality threshold as follows: Materiality threshold is defined as:</p>

Reference	Amendment
	For the purpose of any defined event, an event is considered to materially increase or decrease costs where that event has an impact of one per cent of the smoothed forecast revenue specified in the <u>AER's final decision on this Access Arrangement</u> , in the <u>year</u> of the access arrangement period that the costs are incurred.
