

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

Attachment 2 - Capital base

July 2017



#### © Commonwealth of Australia 2017

This work is copyright. In addition to any use permitted under the Copyright Act 1968, all material contained within this work is provided under a Creative Commons Attributions 3.0 Australia licence, with the exception of:

- the Commonwealth Coat of Arms
- the ACCC and AER logos
- any illustration, diagram, photograph or graphic over which the Australian Competition and Consumer Commission does not hold copyright, but which may be part of or contained within this publication. The details of the relevant licence conditions are available on the Creative Commons website, as is the full legal code for the CC BY 3.0 AU licence.

Requests and inquiries concerning reproduction and rights should be addressed to the:

Director, Corporate Communications Australian Competition and Consumer Commission GPO Box 4141, Canberra ACT 2601

or publishing.unit@accc.gov.au.

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 AGN's 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

Attachment 12 - Non-tariff components

Attachment 13 - Demand

Attachment 14 - Other incentive schemes

# **Contents**

No	te			2-2
Со	nten	its		2-3
Sh	orte	ned forn	ns	2-4
2	Ca <sub>l</sub>	oital bas	se	2-5
	2.1	Draft d	ecision	2-5
	2.2	AGN's	proposal	2-6
	2.3	Assess	sment approach	2-8
		2.3.1	Interrelationships	2-9
	2.4	Reasor	ns for draft decision	.2-11
		2.4.1 period	Roll forward of capital base during the 2013–17 access arrang	
		2.4.2 period	Projected capital base during the 2018–22 access arrangemen	
		2.4.3 arranger	Capital base at the commencement of the 2023–27 access ment period	. 2-15
	2.5	Revisio	ons	.2-16

# **Shortened forms**

Shortened form	Extended form				
AER	Australian Energy Regulator				
АТО	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				

## 2 Capital base

The capital base roll forward accounts for the value of AGN's regulated assets over the access arrangement period. The opening capital base value for a regulatory year within the access arrangement period is rolled forward by indexing it for inflation, adding any conforming capex, and subtracting depreciation and other possible factors (for example, disposals or customer contributions). Following this process, we arrive at a closing value of the capital base at the end of the relevant year. The opening value of the capital base is used to determine the return of capital (regulatory depreciation) and return on capital building block allowances.

This attachment sets out our draft decision on AGN's opening capital base as at 1 January 2018 for the 2018–22 access arrangement period. It also sets out our draft decision on AGN's projected capital base for the 2018–22 access arrangement period.

#### 2.1 Draft decision

We determine AGN's opening capital base to be \$1602.8 million (\$ nominal) as at 1 January 2018. The difference of \$12.7 million between this amount and AGN's proposal reflects amendments in the roll forward models (RFMs) to correct some input and modelling errors. AGN has confirmed that these are errors that should be corrected.

Table 2.1 summarises our draft decision on the roll forward of AGN's capital base during the 2013–17 access arrangement period.

2-5 Attachment 2 – Capital base | Draft decision - AGN Victoria and Albury gas access arrangement 2018–22

The term 'rolled forward' means the process of carrying over the value of the capital base from one regulatory year to the next.

Table 2.1 AER's draft decision on AGN's capital base roll forward for the 2013–17 access arrangement period (\$million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	1152.2	1237.0	1331.4	1439.5	1511.9
Net capex	103.0	113.1	128.5	105.8	121.1
Indexation of capital base	23.1	26.7	30.7	21.6	19.6
Less: straight-line depreciation	41.3	45.4	51.1	55.0	58.4
Closing capital base	1237.0	1331.4	1439.5	1511.9	1594.2
Difference between estimated and actual capex in 2012					6.3
Return on difference for 2012 capex					2.4
Opening capital base as at 1 January 2018					1602.8

Source: AER analysis.

We determine a projected closing capital base of \$1960.5 million (\$ nominal) as at 31 December 2022. This is \$16.7 million (\$ nominal) less than that proposed by AGN, a reduction of 0.8 per cent. Our draft decision on the forecast closing capital base reflects the updated opening capital base at 1 January 2018 (section 2.4.1), and our draft decisions on the expected inflation rate (attachment 3), forecast depreciation (attachment 5) and forecast capex (attachment 6).

Table 2.2 sets out the projected roll forward of the capital base during the 2018–22 access arrangement period.

Table 2.2 AER's draft decision on AGN's projected capital base roll forward for the 2018–22 access arrangement period (\$million, nominal)

	2018	2019	2020	2021	2022
Opening capital base	1602.8	1681.3	1776.1	1858.6	1927.5
Net capex	118.7	141.0	137.4	115.3	84.1
Indexation of capital base	39.3	41.2	43.5	45.5	47.2
Less: straight-line depreciation	79.5	87.4	98.4	92.0	98.3
Closing capital base	1681.3	1776.1	1858.6	1927.5	1960.5

Source: AER analysis.

## 2.2 AGN's proposal

AGN proposed an opening capital base as at 1 January 2018 of \$1615.6 million (\$ nominal). This amount is calculated by rolling forward the opening capital bases as at 1 January 2013 for its Victorian and Albury distribution networks of \$1158.0 million

(\$ nominal).<sup>2</sup> This is done by adding actual net capex, removing approved forecast depreciation and adding inflation indexation on the opening capital bases in each year of the 2013–17 access arrangement period. The capital bases over the 2013–17 access arrangement period are calculated in separate RFMs for each network, consistent with the separate 2013–17 access arrangements. For the 2018–22 access arrangement period (in which both networks will be under a single access arrangement) a consolidated model will be used. However, separate data on the capital base of the Albury tariff zone must be maintained, consistent with the direction issued to AGN.<sup>3</sup>

AGN's proposed capital base roll forward during the 2013–17 access arrangement period is shown in Table 2.3.

Table 2.3 AGN's combined proposed capital base roll forward during the 2013—18 access arrangement period (\$million, nominal)

	2013	2014	2015	2016	2017
Opening capital base	1158.0	1244.7	1341.2	1438.2	1507.5
Net capex	103.1	113.2	128.0	105.7	121.8
Indexation of capital base	25.0	28.7	20.2	18.6	36.0
Less: straight-line depreciation	41.3	45.4	51.1	55.0	58.4
Closing capital base	1244.7	1341.2	1438.2	1507.5	1606.9
Difference between estimated and actual capex in 2012					6.2
Return on difference for 2012 capex					2.4
Opening capital base as at 1 January 2018					1615.6

Source: AGN - Attachment 1.7 - Victoria Roll Forward Model - December 2016 - Public; AGN - Attachment 1.8 - Albury Roll Forward Model - December 2016 - Public.

AGN proposed a projected closing capital base as at 31 December 2022 of \$1977.2 million (\$ nominal). AGN determined this value by adjusting the closing value at 31 December 2017 for forecast net capex (attachment 6), depreciation (attachment 5) and expected inflation (attachment 3). The projected roll forward of the capital base during the 2018–22 access arrangement period is shown in Table 2.4.

The opening capital bases for the Victorian and Albury distribution networks at 1 January 2013 were \$1031.3 million and \$34.3 million respectively.

<sup>&</sup>lt;sup>3</sup> AER, Direction to AGN to consolidate access arrangements for AGN's Victorian and Albury Networks, 23 March 2016, p. 2.

Table 2.4 AGN's proposed projected capital base roll forward during the 2018–22 access arrangement period (\$million, nominal)

	2018	2019	2020	2021	2022
Opening capital base	1615.6	1691.5	1783.4	1871.6	1943.3
Net capex	117.3	139.5	138.9	116.9	83.8
Indexation of capital base	38.6	40.4	42.6	44.7	46.4
Less: straight-line depreciation	80.1	88.0	93.3	90.0	96.3
Closing capital base	1691.5	1783.4	1871.6	1943.3	1977.2

Source: AGN - Attachment 1.9 - Victoria and Albury Post Tax Revenue Model - December 2016 - Public.

AGN proposed to use forecast depreciation to determine the opening capital base as at 1 January 2023, consistent with the approach applied in the access arrangement for the 2013–17 period.<sup>4</sup>

## 2.3 Assessment approach

Our approach to assessing AGN's projected capital base is consistent with that adopted in previous gas decisions made under the NGR.<sup>5</sup> In accordance with rule 77(2) and rule 78 of the NGR, we applied three steps to calculate the projected capital base:

- First, we confirm the value of the opening capital base for the first year of the 2013—17 access arrangement period (in this case, 1 January 2013). This includes making an adjustment to account for any difference between actual and estimated capex in the final year of the previous access arrangement period (in this case, 2012). This adjustment must also remove any benefit or penalty associated with any difference between the estimated and actual capex for that year.<sup>6</sup> We note that this adjustment is subject to any further changes made in our assessment of conforming capex for 2012.
- Second, the opening capital base as at 1 January 2013 is rolled forward to determine the closing capital base as at 31 December 2017. This closing capital base is also used as the value of the opening capital base for the access arrangement period as at 1 January 2018. This involves:<sup>7</sup>

AGN, AER-AGN - Email exchange - 'Confirmation of AGN's proposal to use forecast depreciation to determine opening capital base as at 1 January 2023 - 20170106 – PUBLIC', 6 January 2017.

<sup>&</sup>lt;sup>5</sup> For example, AER, *Final decision: Jemena Gas Networks (NSW) access arrangement 2015*–20, June 2015; AER, *Final decision: ActewAGL access arrangement 2016*–21, May 2016; AER, *Final decision: Australian Gas Networks (SA) access arrangement 2016*–21, May 2016.

<sup>&</sup>lt;sup>6</sup> NGR, r. 77(2)(a).

<sup>&</sup>lt;sup>7</sup> NGR, r. 77(2).

- adding conforming actual capex for each year—this requires assessing the capex and determining that it is consistent with the provisions of the 2013—17 access arrangement and data from audited annual reporting regulatory information notices, as well as the definition of 'conforming capital expenditure' in the NGR<sup>8</sup>
- removing depreciation for each year based on the approach approved for the 2013–17 access arrangement
- removing any capital contributions during the 2013–17 access arrangement period<sup>9</sup>
- adding any speculative capex or redundant assets that were reused during the 2013–17 access arrangement period
- removing any redundant assets and disposals during the 2013–17 access arrangement period
- indexing the roll forward each year for actual inflation.
- Third, the capital base is projected over the 2018–22 access arrangement period by rolling forward the opening capital base as at 1 January 2018 to 31 December 2022. This involves performing the following on the opening capital base:<sup>10</sup>
  - adding forecast conforming capex for each year, net of any forecast capital contributions
  - removing forecast depreciation for each year
  - removing the forecast value of assets to be disposed of during the 2018–22 access arrangement period
  - indexing the capital base of the roll forward each year for expected inflation.

## 2.3.1 Interrelationships

The level of the capital base substantially impacts the service provider's revenue and the price consumers pay. It is an input into the determination of the return on capital and depreciation (return of capital) allowances. Factors that influence the capital base will therefore flow through to these building block components and the annual building block revenue requirement. Other things being equal, a higher capital base increases both the return on capital and depreciation allowances. In turn, it increases the service provider's revenue, and prices for its services.

The capital base is determined by various factors, including:

<sup>&</sup>lt;sup>8</sup> NGR, r. 77(2).

<sup>&</sup>lt;sup>9</sup> NGR, r. 82(3).

<sup>&</sup>lt;sup>10</sup> NGR, r. 78.

The size of the capital base also impacts the benchmark debt raising cost allowance. However, this amount is usually relatively small and therefore not a significant determinant of revenues overall.

- the opening capital base (meaning the value of existing assets at the beginning of the access arrangement period)
- net capex<sup>12</sup>
- depreciation
- indexation adjustment so the capital base is presented in nominal terms, consistent with the rate of return.

The opening capital base depends on the value of existing assets as well as actual conforming net capex, actual inflation outcomes and depreciation in the past.

The capital base when projected to the end of the access arrangement period may increase due to forecast new capex and the indexation adjustment. The size of the indexation adjustment depends on expected inflation (which also affects the nominal rate of return or WACC) and the size of the capital base at the start of each year.

Depreciation reduces the capital base. The depreciation allowance depends on the size of the opening capital base, the forecast net capex and the depreciation schedules applied to the assets.

We maintain the capital base in real terms by indexing for inflation. A nominal rate of return (WACC) is multiplied by the opening capital base to produce the return on capital building block. By convention, the indexation adjustment is offset against depreciation to prevent double counting of inflation in the capital base and WACC, which are both presented in nominal terms. This reduces the apparent size of the depreciation building block that feeds into the annual building block model for setting revenue. The implications of our approach to indexing the value of the capital base on revenues are discussed further in attachment 5.

Figure 2.1 shows the key drivers of the change in the capital base over the 2018–22 access arrangement period as proposed by AGN. Overall, the closing capital base at the end of the 2018–22 access arrangement period would be 22.4 per cent higher than the opening capital base at the start of that period based on the proposal, in nominal terms. The proposed forecast net capex increases the capital base by about 36.9 per cent, while expected inflation increases it by about 13.2 per cent. Forecast depreciation, on the other hand, reduces the capital base by about 27.7 per cent.

\_

Net capex is gross capex less disposals and capital contribution.

<sup>&</sup>lt;sup>13</sup> NGR, r. 87.

If the asset lives are extremely long, such that the capital base depreciation rate is lower than the inflation rate, then negative regulatory depreciation can emerge. The indexation adjustment is greater than the capital base depreciation in such circumstances. Please also refer to section 5.3.1 of attachment 5 of this draft decision for further explanation of the offsetting adjustment to the depreciation.

3.000.0 +596.4 2,500.0 1,977.2 2,000.0 +212.8 -447.7 1,615.6 \$millions, 1,500.0 nominal 1,000.0 500.0 0.0 Opening capital Inflation Capex Depreciation Closing capital base (2018) base (2022)

Figure 2.1 Key drivers of changes in the capital base (\$million, nominal)

Source: AER analysis.

The capital base would rise by 11.3 per cent in real terms over the 2018–22 access arrangement period based on AGN's proposal. The depreciation amount also largely depends on the opening capital base (which in turn depends on capex). Figure 2.1 shows forecast net capex is the largest driver of the increase in the capital base. Refer to attachment 6 for the discussion on forecast capex.

A ten per cent increase in the opening capital base causes revenues to increase by about two per cent. However, the impact on revenues of the annual change in capital base depends on the source of the capital base change, as some drivers affect more than one building block cost.<sup>15</sup>

### 2.4 Reasons for draft decision

We determine an opening capital base value of \$1602.8 million (\$ nominal) as at 1 January 2018, a reduction of \$12.7 million (or 0.8 per cent) from the proposed value. We forecast a closing capital base value of \$1960.5 million (\$ nominal) by 31 December 2022. This represents a reduction of \$16.7 million or 0.8 per cent compared

If capex causes the capital base increase, then return on capital, depreciation, and debt raising costs all increase too. If a reduction in depreciation causes the capital base increase, revenue could increase or decrease. In this case, the higher return on capital is offset (perhaps more than offset) by the reduction in depreciation allowance. Inflation naturally increases the capital base in nominal terms. However, the real impact from changing the inflation forecast is inconsequential as revenues are updated annually by actual inflation and the X factor, which is generally unaffected by the assumed forecast inflation rate.

to AGN's proposal. AGN has confirmed that these amendments reconcile the models AGN submitted with the intent of its proposal and that these are errors that should be corrected. The reasons for our decision are discussed below. We are satisfied each of these amendments is necessary having regard to the requirements of the NGR.

# 2.4.1 Roll forward of capital base during the 2013–17 access arrangement period

To determine the opening capital base as at 1 January 2018 we have assessed AGN's proposed roll forward of its capital base over the 2013–17 access arrangement period. In doing so we reviewed the key inputs of AGN's proposed RFMs, such as asset lives, actual conforming net capex, inflation and rate of return. We found these were generally correct and reconciled with relevant data sources such as annual regulatory reporting accounts and approved decision models for the 2013–17 access arrangement period. However, we consider there should be adjustments made to AGN's proposed RFM inputs for 2012 actual capex and the indexation approach applied to rolling forward the capital base. These amendments are discussed further below, and result in a draft decision opening capital base at 1 January 2018 of \$1602.8 million, a reduction of \$12.7 million or 0.8 per cent from the proposed value.

#### 2.4.1.1 Actual capex in 2012

AGN's asset class allocation of 2012 gross capex in its proposed RFM did not match its annual reporting accounts for that year. We issued AGN with an information request regarding this discrepancy and AGN advised that the proposed allocation was incorrect. It confirmed that the allocation of capex in the 2012 annual reporting accounts should be used in the RFM.<sup>16</sup>

We also sought information from AGN about a formula change made to the AER's standard RFM template for its Victoria network RFM. The change results in the true-up between actual and estimated capex for 2012 being accounted for twice in the RFM. AGN confirmed in its response to our information request that this was an error in its proposal and the standard approach should be used. Our draft decision therefore corrects this error in the RFM and applies the standard approach to rolling forward the capital base.

# 2.4.1.2 Conforming capital expenditure in 2012 and the 2013–17 access arrangement period

Our assessment of conforming capex is set out in capex attachment 6. In determining the opening capital base as at 1 January 2018, we assessed whether AGN's proposed

<sup>&</sup>lt;sup>16</sup> AGN, *IR#09 Response (Part B)*, 7 March 2017.

The standard RFM approach uses forecast 2012 capex to roll-forward the capital base from 2012 to 2013 and then trues-up the difference between actual and estimated capex at the end of the access arrangement period.

AGN, IR#09 Response (Part A), 3 March 2017.

capex amounts for 2012 and the 2013–17 access arrangement period are properly accounted for in the capital base roll forward.

We accept AGN's proposed actual capex as conforming capex during the period 2012 to 2017. Therefore, we accept that actual conforming capex has been properly accounted for in the proposed capital base roll forward consistent with the requirements of the NGR. However, we note that the proposed capex for 2016 and 2017 are estimates. Therefore, the 'approved' capex in this draft decision for 2016 and 2017 are placeholder amounts. We expect AGN will provide actual capex for 2016 in its revised proposal and the 2017 capex estimates may be revised based on more up to date information. We will assess whether the actual capex for 2016 is conforming capex in our final decision. We will undertake the assessment of whether the 2017 amount is conforming capex as part of the next access arrangement review.

#### 2.4.1.3 Indexing the capital base for actual inflation

AGN's proposed RFM used a partially-lagged approach to indexing the capital base. Under the partially-lagged approach, two aspects of the RFM indexation use a one-year lagged inflation series (straight-line depreciation and new capex), but one aspect uses the actual (non-lagged) inflation outcomes (opening RAB).<sup>20</sup> This approach is not consistent with the approach used in previous access arrangements for AGN, where the Essential Services Commission applied the all-lagged approach.<sup>21</sup> We consider that consistency across periods is desirable to ensure the same unbroken inflation series is used to preserve the real value of its assets. We discussed this issue in more detail in previous electricity determinations.<sup>22</sup>

We raised this issue with AGN in an information request and AGN responded noting that it had intended to propose the all-lagged approach to indexation, consistent with the treatment in previous access arrangements.<sup>23</sup> Our draft decision corrects AGN's RFM to implement the all-lagged approach to indexing the capital base.

\_

<sup>&</sup>lt;sup>19</sup> NGR, r. 77(2)(b).

Note that, the actual (non-lagged) inflation series is lagged by three months. The three months lag reflects a practical delay to allow for the publication of CPI data and implementation in the annual tariff approval process. For the 2018–22 access arrangement period our draft decision is to adopt a six month lagged inflation series for annual tariff approvals. This additional inflation lag will apply when rolling forward the capital base for actual inflation at the next access arrangement determination.

Under this approach, a one year lagged inflation series is used to index all components of the capital base roll forward. Note that, as per the previous footnote, the one year lagged inflation series is lagged by one year and three months to allow for publication of CPI data and pricing implementation.

For example: AER, Final decision AusNet distribution determination - Attachment 2 - Regulatory asset base, May 2016, pp. 11–13; AER, Final decision CitiPower distribution determination - Attachment 2 - Regulatory asset base, May 2016, pp. 11–12; AER, Final decision Jemena distribution determination - Attachment 2 - Regulatory asset base, May 2016, pp. 11–12; Final decision Powercor distribution determination - Attachment 2 - Regulatory asset base, May 2016, pp. 11–12; Final decision United Energy distribution determination - Attachment 2 - Regulatory asset base, May 2016, pp. 11–12

<sup>&</sup>lt;sup>23</sup> AGN, IR#09 Response (Part A), 3 March 2017 and follow up phone conversation on 7 March 2017.

# 2.4.2 Projected capital base during the 2018–22 access arrangement period

We forecast AGN's capital base at 31 December 2022 to be \$1960.5 million (\$ nominal). This represents a reduction of \$16.7 million (or 0.8 per cent) from AGN's proposal, reflecting our draft decision on the inputs to the determination of the projected capital base. To determine the forecast capital base for AGN, we amended the following PTRM inputs:

- We reduced AGN's opening capital base as at 1 January 2018 by \$12.7 million
   (\$ nominal) or by 0.8 per cent to reflect the corrections required in this attachment.
- We increased AGN's proposed forecast net capex for the 2018–22 access arrangement period by \$0.2 million (\$ nominal). Our assessment of the proposed forecast capex is set out in attachment 6.
- We increased AGN's proposed forecast regulatory depreciation allowance for the 2018–22 access arrangement period by \$4.1 million (\$ nominal) or 1.7 per cent.<sup>24</sup> Our assessment of the proposed forecast depreciation is set out in attachment 5.

Figure 2.2 shows the key drivers of the change in AGN's capital base over the 2018–22 access arrangement period for this draft decision. Overall, the closing capital base at the end of the 2018–22 access arrangement period is forecast to be 22.3 per cent higher than the opening capital base at the start of that period, in nominal terms. The approved forecast net capex increases the capital base by about 37.2 per cent, while expected inflation increases it by about 13.5 per cent. Forecast depreciation, on the other hand, reduces the capital base by about 28.4 per cent.

\_

Regulatory depreciation is the net total of straight-line depreciation and inflation indexation of the capital base.

3,000.0 +596.6 2,500.0 1,960.5 2,000.0 +216.7 -455.6 1,602.8 \$millions, 1,500.0 nominal 1,000.0 500.0 0.0 Inflation Closing capital Opening capital Capex Depreciation base (2018) base (2022)

Figure 2.2 Key drivers of changes in the capital base (\$ million, nominal)

Source: AER analysis.

# 2.4.3 Capital base at the commencement of the 2023–27 access arrangement period

The capital base at the commencement of the 2023–27 access arrangement period will be subject to adjustments consistent with the NGR.<sup>25</sup> The adjustments for AGN include (but are not limited to) actual inflation and approved depreciation over the 2018–22 access arrangement period.

We accept AGN's proposal to establish the opening capital base as at 1 January 2023 using the depreciation schedules based on forecast capex over the 2018–22 access arrangement period. We approved such an approach in our recent gas decisions. This approach is also consistent with the approach outlined in our *Access Arrangement Guideline*. The amount of the forecast depreciation is to be approved by us in the final decision for the 2018–22 access arrangement period.

We note AGN's access arrangement for the 2018–22 period contains 'Fixed Principle A' regarding the adjustments to establish the capital base at the commencement of an access arrangement. We accept that this fixed principle applies until the end of 2032,

AGN, AER-AGN - Email exchange - 'Confirmation of AGN's proposal to use forecast depreciation to determine opening capital base as at 1 January 2023 - 20170106 – PUBLIC', 6 January 2017.

<sup>&</sup>lt;sup>25</sup> NGR, r. 77(2).

AER, Final Decision Amadeus Gas Pipeline, Attachment 2 – Capital base, May 2016, p.11; AER, Final Decision Australian Gas Networks, Attachment 2 – Capital base, May 2016, p.11.

AER, Final access arrangement guideline, March 2009, pp. 61–62.

which is the approved fixed period.<sup>29</sup> It refers to an adjustment for depreciation but does not specifically provide for the use of forecast or actual capex. To this end, we consider the access arrangement should further provide for the capital base as at 1 January 2023 is to be established using the approved depreciation schedules (straight-line) based on forecast capex at the asset class level.<sup>30</sup> Having regard to the capital base as determined in the preceding access arrangement, we consider this approach will provide for a forecast of depreciation over the 2018–22 access arrangement period that provides for continuity and consistency in determining depreciation from one access arrangement to the next.<sup>31</sup>

#### 2.5 Revisions

We require the following revisions to make the access arrangement proposal acceptable:

Make all necessary amendments to reflect this draft decision on the roll forward of the capital base for the 2013–17 access arrangement period, as set out in Table 2.1

Make all necessary amendments to reflect this draft decision on the projected capital base for the 2018–22 access arrangement period, as set out in Table 2.2

Insert the following provision:

4.13. Depreciation for establishing the capital base as at 1 January 2023

Revision 2.3:

The depreciation schedule (straight-line) for establishing the opening capital base as at 1 January 2023 will be based on forecast capital expenditure at the asset class level approved for the 2018–22 access arrangement period.

<sup>&</sup>lt;sup>29</sup> NGR, r. 99(3).

<sup>30</sup> NGR, r. 90.

<sup>&</sup>lt;sup>31</sup> NGL, s. 24(4) and s. 28(2)(a)(i)...