FINAL DECISION
Australian Gas Networks (SA)
Access Arrangement

2021 to 2026

Attachment 4
Regulatory depreciation

April 2021

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's final decision on the access arrangement that will apply to Australian Gas Networks (SA) ('AGN') for the 2021–26 access arrangement period. It should be read with all other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 2 – Capital base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency carryover mechanism

Attachment 11 – Non-tariff components

Attachment 12 – Demand

Attachment 13 – Capital expenditure sharing scheme

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4 Regulatory depreciation

When determining the total revenue for AGN, we include an amount for the depreciation of the projected capital base (otherwise referred to as 'return of capital').[1] Regulatory depreciation is used to model the nominal asset values over the 2021–26 access arrangement period and the depreciation amount in the total revenue requirement.[2]

This attachment outlines our final decision on AGN's annual regulatory depreciation amount for the 2021–26 period. It also presents our final decision on the proposed depreciation schedules, including an assessment of the proposed standard asset lives[3] used for forecasting depreciation.

4.1 Final decision

Our final decision determines a regulatory depreciation amount of $322.9 million ($nominal) for AGN for the 2021–26 access arrangement period. This represents a decrease of $33.2 million (or 9.3 per cent) from AGN's revised proposed regulatory depreciation amount of $356.1 million ($nominal). The key reasons for the decrease compared to the revised proposal are:

- we corrected an input error in AGN's revised proposed depreciation module, which reduced the regulatory depreciation amount by about $20 million from the revised proposed amount, all else being equal
- we made revisions to the opening capital base as at 1 July 2021, which reduced the regulatory depreciation amount by $7.3 million
- a higher expected inflation rate for the 2021–26 period determined for the final decision when compared to the revised proposal value, which reduced the regulatory depreciation amount by $3.9 million.

In coming to our final decision on AGN's straight-line depreciation:

- we accept AGN's existing asset classes, the straight-line method and the standard asset lives used to calculate the regulatory depreciation amount, which is consistent with our draft decision
- we accept AGN's revised proposal to use the year-by-year tracking method to calculate real straight-line depreciation for its existing assets, consistent with our draft decision. However, we have corrected an input error in AGN's revised proposed depreciation module. We have also updated the inflation input for 2020–

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1 NGR, r. 76(b).

2 The regulatory depreciation amount is the net total of the straight-line depreciation less the inflation indexation of the capital base.

3 The term 'standard asset life' may also be referred to as 'standard economic life', 'asset life', 'economic asset life' or 'economic life'.

21 with actual CPI, and updated the 2019–20 and 2020–21 capex and capital contributions inputs in the depreciation module for a number of asset classes

- we accept AGN's revised proposed accelerated depreciation amount of $245.1 million for the residual value of the mains and inlets assets that have been replaced or are forecast to be replaced by 30 June 2026 (replaced assets)
- we made determinations on other components of AGN's revised proposal which also affect the forecast regulatory depreciation amount. Specifically, they relate to:
    - the opening capital base as at 1 July 2021 (attachment 2)
    - expected inflation rate (attachment 3)
    - forecast capex (attachment 5) including its effect on the projected capital base over the 2021–26 period.[4]

Table 4.1 sets out our final decision on AGN's regulatory depreciation amount over the 2021–26 period.

Table 4.1 AER's final decision on AGN's regulatory depreciation amount for the 2021–26 access arrangement period ($ million, nominal)

	2021–22	2022–23	2023–24	2024–25	2025–26	Total
Straight-line depreciation	91.8	96.7	103.9	102.3	108.5	503.1
Less: indexation on opening capital base	34.0	35.1	36.2	37.0	37.9	180.2
Regulatory depreciation	**57.7**	**61.6**	**67.7**	**65.3**	**70.5**	**322.9**

Source: AER analysis.

In the draft decision, we reduced the proposed regulatory depreciation amount by $56.5 million (or 17.8 per cent). This reduction was mainly due to our amendments to AGN's proposed accelerated depreciation of its replaced assets.

AGN's revised proposed regulatory depreciation amount is $356.1 million, which is about $94.3 million (or 36 per cent) higher than the draft decision. This difference is driven by AGN's revised proposed accelerated depreciation amount for replaced assets, expected inflation, and is also caused by an input error in the revised proposed depreciation module.

In the draft decision, we applied a placeholder expected inflation rate of 2.37 per cent per annum for our revenue modelling in the PTRM as the 2020 review of the treatment of inflation (inflation review) was still underway. AGN's revised proposal adopted a placeholder expected inflation rate of 1.95 per cent per annum, based on the approach

[4] Capex enters the capital base net of forecast disposals and capital contributions. It includes equity raising costs (where relevant) and the half-year WACC to account for the timing assumptions in our PTRM. Our final decision on the capital base (attachment 2) also reflects our updates to the WACC for the 2021–26 period.

set out in the inflation review's final position paper. The revised proposal's expected inflation rate results in an increase of $34.1 million to the regulatory depreciation amount from the draft decision. For this final decision, we apply an expected inflation rate of 2.0 per cent that has been determined based on the method set out in the latest version of the PTRM, which implemented the inflation review's final position. This reduced the forecast regulatory depreciation amount by $3.9 million (or 1.1 per cent) from the revised proposed amount, all else being equal. Our final decision on the expected inflation is discussed in attachment 3.

The sections below discuss our review of AGN's revised proposed depreciation module that applies the year-by-year tracking depreciation approach, the accelerated depreciation amount for replaced assets, and our final decision on the standard asset lives for the 2021–26 period.

4.1.1 Year-by-year tracking depreciation approach

For this final decision, we accept AGN's revised proposal to use the year-by-year tracking approach to calculate the forecast straight-line depreciation amounts for its asset values as at 1 July 2021. This approach (in addition to grouping assets by type via asset classes) tracks the asset classes on a year-by-year basis to implement straight-line depreciation. This is consistent with AGN's initial proposal and our draft decision.

In our draft decision, we corrected some modelling input issues in the proposed depreciation module used for implementing the year-by-year tracking approach. AGN's revised proposal adopted all our draft decision changes. It has also updated the 2019–20 and 2020–21 capex inputs, consistent with its revised proposed RFM.

In our review of AGN's revised proposed depreciation module we found that the inputs for the closing capital base as at 30 June 2021 were inconsistent with the revised proposed RFM. As a result, the total revised forecast regulatory depreciation amount has been overstated by about $20 million for the 2021–26 period, all else being equal. Therefore, for this final decision, we have updated the closing capital base inputs in the depreciation module to be consistent with the final decision RFM. AGN has agreed with this approach in its response to our information request on this issue.[5]

Consistent with our final decision on the capital base roll forward (attachment 2), we have updated the inflation input for 2020–21 with actual CPI, and updated the 2019–20 capex and capital contributions inputs in the depreciation module for a number of asset classes to be consistent with the annual RIN. We also accepted AGN's update to its estimated IT capex for 2020–21 after submitting its revised proposal.[6] These amendments reduced the regulatory depreciation amount by about $7.3 million from the revised proposal, all else being equal.

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5 AGN, *Response to IR#025 – RFM and depreciation module inputs*, February 2021.

6 AGN, *Information request #023 – IT Investment Plan*, March 2021, pp. 2–4.

4.1.2 Accelerated depreciation for replaced assets

For this final decision, we accept AGN's revised proposed accelerated depreciation amount of $245.1 million as at 1 July 2021 for its replaced mains and inlet assets.

In the draft decision we accepted, in principle, that once assets are replaced and removed from service, accelerated depreciation of the residual value of the assets is appropriate to reflect their reduced economic life. However, we reduced the proposed accelerated depreciation amount of $251.5 million by $49 million (or 17.8 per cent) to reflect our draft decision capex assessment of AGN's mains replacement program. Specifically:

- we questioned whether the High-density polyethylene mains and inlets that had been replaced by the insertion method (i.e. new but smaller High-density polyethylene mains are inserted inside of the old mains) are more akin to asset modification such that they may still be providing some residual service for the purpose of ongoing gas transportation. Therefore, in the draft decision, we excluded these assets for the purpose of accelerated depreciation
- we reduced the accelerated depreciation amount to reflect the reduction we made to the 2021–26 forecast mains replacement capex.

We also amended AGN's proposed remaining asset lives for the accelerated depreciation asset classes. AGN's revised proposal has adopted this aspect of the draft decision.

AGN's revised proposed accelerated depreciation amount is $245.1 million, which is $42.6 million higher than our draft decision, but $6.4 million lower than its initial proposal. AGN submitted that the High-density polyethylene mains and inlets replaced using the insertion method play no role in the ongoing delivery of gas haulage services, and do not provide any additional asset management support to the new mains.[7] As such, it stated that these assets should be added back to the accelerated depreciation amount. AGN has also amended the accelerated depreciation amount to reflect its revised forecast mains replacement capex.

AGN engaged GHD to provide an expert report on the ongoing role of the replaced High-density polyethylene mains and inlets.[8] GHD noted that the old mains sections that remain have been cut out every 10 to 15 metres during the insertion process such that it is no longer a continuous pipe and does not have any structural integrity.

We have considered the new information submitted by AGN in its revised proposal regarding the insertion method. We have also sought advice from our expert consultant (Zincara) for the capex assessment on this matter. Zincara's view is that GHD's findings are largely reasonable. Zincara agreed that the large cut outs made to enable

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7 AGN, *Revised Final Plan 2021–26, Attachment 9.3 - Response to Draft Decision on Capital Base,* 13 January 2021, pp. 5–6.

8 AGN, *Revised Final Plan 2021–26, Attachment 9.4 - Ongoing role of replaced HDPE pipelines,* 13 January 2021.

the insertion means that the old mains do not form a continuous pipeline, which therefore cannot provide gas haulage services and do not provide any additional containment of leaks.[9] Accordingly, we consider it reasonable to include the High-density polyethylene mains and inlets replaced by the insertion method in the accelerated depreciation amount of replaced assets. For more information on our assessment of the mains replacement program, please see attachment 5.

We also accept the total revised proposed accelerated depreciation amount as we have accepted revised proposed forecast mains replacement program in full. Therefore, no further adjustment to the revised proposed accelerated depreciation amount is required.

4.1.3 Standard asset lives

For this final decision, we accept AGN's revised proposed standard asset lives for its asset classes in respect of the forecast capex to be incurred for the 2021–26 period. They are consistent with AGN's initial proposal and our draft decision. We note that AGN's initial proposal did not propose any accelerated depreciation on its pipeline assets in response to the uncertainty about the future use of gas networks. It submitted that this issue is better addressed in subsequent access arrangement periods. AGN has maintained this position in its revised proposal.[10] Consistent with our draft decision, we consider that AGN's approach for maintaining its current standard asset lives for its pipeline assets remains appropriate.

The future of natural gas is a live issue, particularly as renewable energy becomes cheaper and is increasingly becoming the choice of consumers. Whilst South Australian customers are still demanding gas and AGN continues to connect customers[11] and support its network operations, gas networks across Australia are facing an evolving landscape with the growing support for reducing carbon emissions by moving away from natural gas use for homes and businesses. This is occurring at varying speeds in different regions driven primarily by state government policy. This issue of uncertainty was considered by the CCP24,[12] acknowledging:

> AGN, along with other gas distribution network businesses, faces fundamental questions about the future of the gas network, driven by jurisdictional governments moving towards net zero emissions policies in a timeframe considerably less than the asset lives of a significant part of the businesses' asset base.[13]

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9 For a more detailed analysis and discussion on our assessment of the insertion method, please see our final decision for capex (Attachment 5, pages 14–15).

10 AGN, *Revised Final Plan 2021–26, Attachment 9.3 - Response to Draft Decision on Capital Base,* 13 January 2021, p. 1.

11 Despite the increase in customer numbers the average, total consumption over the 2021−26 period is forecast to continue the declining trend of the current period.

12 CCP24, *Advice to Australian Energy Regulator on Australian Gas Networks Final Plan for AGN Gas Networks (South Australia) Access Arrangement 2021-26,* 10 August 2020.

13 CCP24, *Advice to Australian Energy Regulator on Australian Gas Networks Final Plan for AGN Gas Networks (South Australia) Access Arrangement 2021-26*, 10 August 2020, p. 3.

AGN's proposal recognised the need to innovate and consider alternatives to natural gas to sustain investments over time. AGN is responding to uncertainties regarding the future of natural gas by conducting research into renewable gases. However, given the uncertainty surrounding natural gas and the future viability of alternative fuels, AGN is not making fundamental changes, such as a move to accelerated depreciation[14] in the next period. AGN's customers are interested in the future of gas, future energy mixes and the potential for renewable gas and have shown support for AGN's approach.[15] This is in contrast to other gas networks, for example the ACT's Evoenergy gas network, where there is a stronger mandate to reduce reliance on natural gas and hence a more pressing need to consider changes in the next period.[16]

We consider AGN has taken a sound approach to the uncertainties on its network. This is consistent with what we have heard from stakeholders, including CCP24 and Origin Energy, who support AGN's decision not to seek accelerated depreciation for the 2021–26 period and would like to see further stakeholder engagement on the future use of gas networks.[17]

To this end, and in recognition of the importance of the gas market and our role in determining network access arrangements, we have elevated consideration of future gas market issues in our strategic priorities list and will advance this discussion with consumers, industry, market bodies and government stakeholders this year.

Table 4.2 sets out our final decision on the standard asset lives for AGN over the 2021–26 access arrangement period. We are satisfied the standard asset lives approved in this final decision will result in a depreciation schedule that reflects the depreciation criteria of the NGR.[18]

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14 Accelerated depreciation is one response to the challenge of gas supply in an emissions constrained environment. Accelerated depreciation seeks to recoup the cost of future investments from its customers over a shorter period of time. Accelerated depreciation is usually adopted when assets are not being utilised.

15 AGN, *Final Plan, Attachment 5.1 – Stage 1 Engagement Report,* 1 July 2020, p. 5; SAFRRA, *Submission to AER on AGN's Revised Proposal and AER's Draft Decision 2021–26*, 17 February 2021, p. 3.

16 AER, *Draft decision, Evoenergy 2016–21 access arrangement*, Overview, November 2020, pp. 9–11.

17 CCP24, *Advice to Australian Energy Regulator on Australian Gas Networks Revised Final Plan for AGN Gas Networks (South Australia) Access Arrangement 2021–26*, 17 February 2021, p. 5 and CCP24, *Advice to Australian Energy Regulator on Australian Gas Networks Final Plan for AGN Gas Networks (South Australia) Access Arrangement 2021–26, 10 August 2020*, p. 11; Also see CCP24, *Advice to the Australian Energy Regulator on Australian Gas Networks South Australia Draft Plan for Access Arrangement 2021–26, 5 June 2020*, pp. 31–50; Origin Energy, *Response to AER draft decision and revised access arrangement proposal for AGN (SA) 2021–26*, 17 February 2021, p. 2.

18 NGR, r. 89(1).

Table 4.2 AER's final decision on AGN's standard asset lives (years)

Asset class	Standard asset life
Mains	60
Inlets	60
Meters	15
Telemetry	20
IT system	5
Other distribution system equipment	40
Other	10
Low pressure mains depreciation	n/a
Low pressure inlets depreciation	n/a

Source: AER analysis.

n/a not applicable. We have not assigned a standard asset life to the 'Low pressure mains depreciation' and 'Low pressure inlets depreciation' asset classes because they were specifically created to accelerate the depreciation of existing assets being replaced, and there is no forecast capex allocated to these asset classes.

4.2 Assessment approach

We did not change our assessment approach for regulatory depreciation from our draft decision. Attachment 4 (section 4.3) of our draft decision details that approach.[19]

[19] AER, *Draft decision, Australian Gas Networks access arrangement 2021–26, Attachment 4 – Regulatory depreciation*, November 2020, pp. 7–13.

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
CCP/CCP24	Consumer Challenge Panel, sub-panel 24
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
PTRM	post tax revenue model
RIN	regulatory information notice
RFM	roll forward model