FINAL DECISION
Jemena Gas Networks (NSW) Ltd
Access Arrangement

2020 to 2025

Attachment 4
Regulatory depreciation

June 2020

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 Jemena Gas Networks (NSW) Ltd ('JGN') for the 2020–25 access arrangement period. It should be read with all other parts of our final decision.

As a number of issues were settled at the draft decision stage or required only minor updates, we have not prepared all attachments. The final decision attachments have been numbered consistently with the equivalent attachments to our draft decision. In these circumstances, our draft decision reasons form part of this final decision.

Our final decision includes the following attachments:

Overview

Attachment 1 – Services covered by the access arrangement

Attachment 2 – Capital base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

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Attachment 13 – Capital expenditure sharing scheme

Contents

Shortened forms

Shortened form	Extended form
ACCC	Australian Competition & Consumer Commission
ADGSM	Australian Domestic Gas Security Mechanism
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGN	Australian Gas Networks
Capex	Capital expenditure
CCP/CCP19	Consumer Challenge Panel, sub-panel 19
CESS	Capital expenditure sharing scheme
CORE	Core Energy
COAG	Council of Australian Governments
CPI	Consumer price index
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
GSOO	Gas Statement of Opportunities
HP	High pressure
Incenta	Incenta Economic Consulting
JGN	Jemena Gas Networks (NSW) Ltd
MP	Medium pressure
NCC	National Competition Council
NER	National Electricity Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NPV	Net present value
NSW	New South Wales
PIAC	Public Interest Advocacy Centre
PTRM	Post-tax revenue model
RPP	Revenue and pricing principles
WACC	Weighted average cost of capital

4 Regulatory depreciation

When determining the total revenue for JGN, we include an allowance 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 2020–25 access arrangement period and the depreciation allowance in the total revenue requirement.[2]

This attachment outlines our final decision on JGN's annual regulatory depreciation allowance for the 2020–25 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 allowance of $444.2 million ($ nominal) for JGN for the 2020–25 access arrangement period. This represents a reduction of $0.6 million (or 0.1 per cent) from JGN's revised proposed regulatory depreciation allowance of $444.8 million ($ nominal). It is $32.8 million (or 8 per cent) higher than the regulatory depreciation allowance determined in the draft decision. The key reason for the increase compared to our draft decision is due to our lower final decision expected inflation rate for the 2020–25 period.

The regulatory depreciation allowance is the net total of the straight-line depreciation less the inflation indexation of the capital base. The straight-line depreciation is impacted by our decision on JGN's opening capital base (attachment 2), forecast capital expenditure (capex) (attachment 5) and asset lives. Our final decision straight-line depreciation for JGN is $22.4 million lower that its revised proposal. This is mainly due to our decision to not accept JGN's proposed lower standard asset lives for new expenditure on pipeline assets.

The indexation on the capital base is impacted by our decision on JGN's opening capital base (attachment 2), forecast capex (attachment 5) and the expected inflation rate (attachment 3). Our final decision indexation on JGN's projected capital base is $21.8 million lower than its revised proposal. This is largely because of our lower final decision expected inflation rate for the 2020–25 period of 2.27 per cent per annum compared to JGN's revised proposed expected inflation rate of 2.38 per cent per annum. The decrease in indexation has largely offset the decrease in straight-line depreciation (since indexation is deducted from the straight-line depreciation).

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1 NGR, r. 76(b).

2 The regulatory depreciation allowance 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'.

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

- We accept JGN's revised proposed straight-line method to calculate regulatory depreciation, which is consistent with our draft decision.
- We accept JGN's revised proposed standard asset lives for the majority of its asset classes. However, we do not accept JGN's proposed reductions to the standard asset lives for new expenditure on 'Trunks',[4] 'HP mains', MP mains' and 'MP services'. Our final decision is to maintain the current standard asset lives for these asset classes, which is consistent with our draft decision.
- We accept JGN's revised proposal to apply the year-by-year tracking approach for implementing straight-line depreciation for its existing assets, consistent with our draft decision.[5] In accepting this approach, we have updated the year-by-year tracking calculations with actual consumer price index (CPI) data for 2019–20 which is now available.
- We accept JGN's revised proposed residual value of existing pigging and inline inspection costs for accelerated depreciation, consistent with our draft decision. However, we have updated these costs for 2019–20 actual CPI which has marginally decreased the residual value of existing pigging and inspection costs to $13.1 million.[6]

Table 4.1 sets out our final decision on JGN's regulatory depreciation allowance over the 2020–25 period.

Table 4.1 AER's final decision on JGN's regulatory depreciation allowance for the 2020–25 access arrangement period ($ million, nominal)

	2020–21	2021–22	2022–23	2023–24	2024–25	Total
Straight-line depreciation	150.1	162.4	173.1	185.9	174.3	845.7
Less: indexation on opening capital base	75.5	78.2	80.8	82.7	84.4	401.5
Regulatory depreciation	**74.6**	**84.2**	**92.3**	**103.1**	**89.9**	**444.2**

Source: AER analysis.

[4] This includes the 'Trunk Wilton-Sydney', 'Trunk Sydney-Newcastle' and 'Trunk Wilton-Wollongong' asset classes. We note that JGN has not proposed any forecast capex for these asset classes for the 2020–25 access arrangement period.

[5] This approach (in addition to grouping assets by type via asset classes) tracks the asset classes on a year-by-year basis.

[6] The residual value was $13.2 million in JGN's revised proposal.

Standard asset lives for 2020–25 period

For this final decision, we accept the majority of JGN's revised proposed standard asset lives. However, we do not accept JGN's revised proposed reductions to the standard asset lives for new expenditure in the following (pipeline) asset classes:

- 'Trunks' and 'HP mains' asset classes (proposed reduction to 50 years from the current 80 years)
- 'MP mains' and 'MP services' asset classes (proposed reduction to 30 years from the current 50 years).

In the draft decision, we accepted JGN's proposed standard asset life of 15 years (reduced from the current 20 years) for the 'Contract meters', 'Tariff meters' and 'Meter reading devices' asset classes. This is because we considered that JGN's proposed standard asset life reflects the expected economic life of the assets allocated to these asset classes. Further, the proposed standard asset life better aligned with those applied by other gas distributors for similar asset classes. Our final decision confirms this position and we therefore accept the shortened standard asset life of 15 years for these meter asset classes. We note that these asset classes contain approximately 21 per cent of JGN's revised proposed forecast capex for the 2020–25 period.

In the draft decision, we did not accept JGN's proposed reductions to the standard asset lives for new pipeline assets (it did not propose any changes to existing pipeline asset lives). In its revised proposal, JGN retained its proposed reductions to the standard asset lives for these asset classes. Table 4.2 sets out JGN's revised proposed changes to the standard asset lives and shows that about 62 per cent of its total revised proposed forecast capex for the 2020–25 period is allocated to these asset classes.

Table 4.2 JGN's revised proposed reductions to pipeline standard asset lives (years)

Asset class	Current standard asset lives	Revised proposed standard asset lives	Percentage of total forecast capex allocated to asset class
Trunk Wilton-Sydney Trunk Sydney-Newcastle Trunk Wilton-Wollongong	80	50	0%
HP mains	80	50	13%
MP mains MP services	50	30	49%

Source: JGN, *2020–25 Access Arrangement Proposal – Attachment 12.1 – PTRM*, January 2020.

JGN's proposal for reducing the economic lives of its pipeline asset classes is based on the concern that its network may not continue to operate in the long term. In response to this concern, JGN has proposed to recover new capex from consumers

more rapidly than the current approach. JGN proposed to do so by shortening the standard asset lives of its pipeline assets by 20 to 30 years. JGN submitted that this will reduce its risk associated with its new investments and preserve efficient investment incentives. This approach would result in higher prices for consumers in the short to medium term. Its impact in the long run would depend on how demand ultimately develops.

JGN's primary justification for this proposal is based on statements by the NSW Government proposing to move to net carbon zero by 2050 and its recent plan to lower greenhouse gases in NSW by 35 per cent by 2030. JGN has anticipated these announcements, along with its submissions about forecast gas supply, will result in substantial reductions in the use of gas in NSW and consequently the ongoing use of its network. It stated that failure to accept its proposal could see it curtail investment.

We have carefully considered JGN's submissions but we do not agree that its proposed reductions to the standard asset lives are warranted in this final decision. We have allowed accelerated depreciation under the National Gas Rules (NGR) where assets have become stranded in the past. We have also allowed a more limited number of cases where assets were expected to become stranded at a given date.

However, in JGN's case we do not agree with its assessment of the timing and extent of asset stranding on its network. While government mandated carbon emission policies could result in possible stranding of gas pipelines, there is currently limited evidence to suggest that the NSW Government is taking steps to discourage gas usage under its decarbonisation plans. If there is, at a later point in time, sufficient evidence that the expected economic life of JGN's pipeline assets are significantly shorter than their technical life, there are options available under the regulatory framework to provide JGN a reasonable opportunity to recover its efficient investment.

Appendix A of this Attachment sets out our detailed reasoning for not accepting JGN's proposed shorter asset lives for its pipeline assets, but in brief our key observations are:

1. The NSW Government has not adopted a position which is likely to end use of gas in NSW by 2050. Its plan provides a NSW economy-wide target for decarbonisation with no specific policies directed at curtailing gas consumption. Further, it has recently entered into a bilateral agreement with the Commonwealth Government to support the supply and development of gas in NSW.[7]
2. The Australian Energy Market Operator's (AEMO) latest forecasts show that gas consumption for residential and commercial consumers in NSW will remain stable until 2039 under all scenarios.[8]

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7 Prime Minister, Premier of New South Wales, *Media Release: NSW energy deal to reduce power prices and emissions*, 31 January 2020, accessed at https://www.pm.gov.au/media/nsw-energy-deal-reduce-power-prices-and-emissions

8 AEMO, *2020 GSOO Publication– Gas Annual Consumption Total – Residential and Commercial – NSW*, March 2020, accessed at http://forecasting.aemo.com.au/Gas/AnnualConsumption/Total

3. There are potential opportunities for gas pipelines in assisting in the shift to a lower carbon future. The NSW Government is planning to set a target of up to 10 per cent hydrogen in the gas network by 2030 and has recognised the commercialisation of hydrogen as a key priority in its *Net Zero Plan Stage 1: 2020–2030*.[9]
4. JGN's forecast capex proposal is based on a 'business as usual' approach which is not consistent with an expectation of declining demand across its entire network. In particular, over 50 per cent of JGN's forecast capex relates to new demand (connections and augmentation), with many of these assets proposed to be subject to accelerated depreciation.[10]

Overall, based on the available evidence, we expect JGN's network to continue to provide services beyond 2050 with the assets in question continuing to be used beyond that time. Accordingly, we consider that JGN's proposed pipeline standard asset lives would result in a depreciation schedule that:

- would not be depreciated over the economic life of the pipeline asset classes.[11] This is because the proposed reductions to the standard asset lives do not reflect the expected economic lives of the assets associated with these asset classes. We consider that there is not sufficient evidence that the economic lives of the assets allocated to these asset classes would be significantly shorter than their current standard asset lives. Therefore, the depreciation schedule for these asset classes should not be adjusted as the proposed reduced standard asset lives do not reflect the expected economic lives for these asset classes.[12]
- would not lead to tariffs varying, over time, in a way that promotes efficient growth in the market for reference services.[13] This is because there is insufficient evidence that the proposed shorter standard asset lives would reflect the expected economic lives of these asset classes. Therefore, JGN's proposed reduction to the standard asset lives, based on the evidence provided, is likely to result in network tariffs being set above the efficient cost for providing reference tariffs in the access arrangement period.

Overall, we are not satisfied that the proposed reductions to the standard asset lives will promote the long term interests of consumers and contribute to the achievement of the National Gas Objective (NGO).

Table 4.3 sets out our final decision on the standard asset lives for JGN over the 2020–25 access arrangement period. We are satisfied the standard asset lives approved in this final decision will result in a depreciation schedule that reflect the

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9 NSW Government Department of Planning, Industry and Environment, *Net Zero Plan Stage 1: 2020–2030*, March 2020, p. 30.

10 JGN, *2020–25 Revised proposal – Attachment 8.3 – Incenta – Using asset lives to manage stranded asset risks,* January 2020, p. 9; JGN, *2020–25 Revised proposal – Attachment 4.1 – Capex Model*, January 2020.

11 NGR, r. 89(1)(b).

12 NGR, r. 89(1)(c).

13 NGR, r. 89(1)(a).

depreciation criteria of the NGR, taking into account the NGO, and revenue and pricing principles (RPP).

Table 4.3 AER's final decision on the standard asset lives (years)

Asset class	Standard asset life
Trunk Wilton-Sydney	80.0
Trunk Sydney-Newcastle	80.0
Trunk Wilton-Wollongong	80.0
Contract meters	15.0
Fixed plant – distribution	50.0
HP mains	80.0
HP services	50.0
MP mains	50.0
MP services	50.0
Meter reading devices	15.0
Country POTS	50.0
Tariff meters	15.0
Computers – IT infrastructure	5.0
Fixed plant	10.0
Furniture	10.0
Land	n/a
Low value assets	10.0
Mobile plant	10.0
Vehicles	6.0
Existing pigging and inspection costs	n/a
Leasehold improvements	10.0
Buildings	48.0
Software – Inhouse[a]	5.0
Equity raising costs[b]	40.3

Source: AER analysis.

a This asset class was previously named 'Software'. It has been renamed for clarity.

b For this final decision, the forecast capex determined for JGN does not meet a level to trigger any benchmark equity raising costs. JGN has calculated the standard asset life for equity raising costs based on the weighted average of the standard asset lives of the asset classes (using the net forecast capex as weights). This is consistent with the approach we have applied in our recent decisions for other network service providers.

	Therefore, we have updated the standard asset life for this asset class to reflect our final decision on the forecast capex and standard asset lives for the asset classes.
n/a	Not applicable. We have not assigned a standard asset life to the 'Land' asset class because it is a non-depreciating asset. We have not assigned a standard asset life to the 'Existing pigging and inspection costs' asset class as we do not expect any forecast capex to be allocated to it for the 2020–25 period. This is because the pigging and inspection costs will be expensed going forward from the start of the 2020–25 period. Instead, the residual value for this asset class will be fully depreciated over the 2020–25 period.

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.[14]

[14] AER, *JGN 2020–25 Access arrangement – Draft decision – Attachment 4 – Regulatory depreciation*, November 2019, pp. 9–13.

A Accelerated depreciation of pipeline assets

This Appendix discusses the key concerns raised by JGN and its consultants, and sets out our assessment of these matters. We have considered all the material presented by JGN in respect of its proposal for reducing the standard asset lives of its pipeline asset classes. The additional information submitted by JGN and its consultants for the revised proposal has not persuaded us to change our position from the draft decision.

A.1 Stranding risk and the depreciation criteria

JGN's consultant Incenta Economic Consulting (Incenta) stated that the AER has accepted that 'stranded asset risk is not compensated via the [regulatory] regime'.[15] However, we consider that there is effectively no stranding risk from underutilised assets in the current regulatory regime.[16] Although an asset may become unused (or underutilised) on one part of the network, other consumers in other areas will continue to cover the residual costs of these assets.[17] We are also required by the NGR to allow the business to recover the full costs of its assets,[18] and apply a net present value (NPV) neutral approach so the business is compensated for its investment.

A normal expected return is achieved through the return on capital allowance we approve. As discussed in the draft decision, we consider the difference in exposure to systematic risk between gas pipelines and electricity network businesses are sufficiently similar to reasonably justify the same rates of return across electricity and gas networks.[19] We consider that our rate of return allowance promotes consumers' long term interests by providing sufficient incentive for efficient investment.

JGN noted rule 85 of the NGR on capital redundancy as a source of stranding risk within the regulatory framework.[20] We consider that there would be a narrow range of circumstances in which this rule would be used─in particular, we might consider stranding assets under rule 85 if a significant proportion of the capital base was impacted and we were satisfied the assets in question would become completely unused by a given date. Given the integrated nature of networks, it is unlikely a significant proportion will become completely unused at the same time.

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15 JGN, *2020–25 Revised proposal – Attachment 8.3 – Incenta – Using asset lives to manage stranded asset risks,* January 2020, p. 3.

16 We have argued a similar position in respect of electricity networks. AER, *Final decision, AusNet Services transmission determination 2017–2022 Attachment 5 – Regulatory depreciation*, April 2017, p. 10.

17 Stranding risk is a feature of competitive markets. Some regulatory approaches attempt to replicate competitive market outcomes. In this matter, however, our approach does not. The risk is shared between consumers so as to encourage long term investment.

18 NGR, r. 89(1)(b).

19 AER, *JGN 2020–25 Access arrangement – Draft decision – Attachment 4 – Regulatory depreciation*, November 2019, p. 18.

20 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, fn. 29 and table 3-3.

Although it is possible to develop a mechanism under the NGR that shares some costs of potential declining demand while allowing the recovery of the costs of the assets over their economic life, we have not had to consider such a mechanism to date and do not expect to develop such a mechanism for JGN for the foreseeable future, given the evidence discussed below.[21] The possibility that such a mechanism may be used in the future, of itself, does not require immediate action to be taken. There is a threshold of certainty to be met before we head down that path. The circumstances in which such a mechanism is needed is likely to require far broader issues to be addressed beside the depreciation profile.

JGN and Incenta also stated the NGR allowed depreciation to act as a dynamic factor.[22] Energy Networks Australia (ENA) supported JGN's view on this issue.[23] JGN's proposal would raise the level of real straight-line depreciation on the asset classes in question by between 60 to 67 per cent. JGN has not justified the significance of these changes based on the nature of the specific assets as required by the depreciation criteria but rather focused on the overall impact on its revenues (about 1 per cent per annum for the next thirty years, which JGN submitted as modest). JGN's revised proposal suggested demand would end for each of the pipeline asset classes at different times from 2050 to 2075.[24] Existing assets are proposed to reach the end of their technical lives, with the longest lived asset expected to expire in 2100. It would be inconsistent with the depreciation criteria[25] to approve some economic lives based on an expectation of demand ceasing by 2050, but then allowing other economic lives for similar assets to continue to 2100.[26]

Having a dynamic depreciation allowance provides little certainty to consumers who are making their own long-term decisions in response to prices, and can create future cash flow problems for the business. The experience in the UK is informative in this regard. It was observed that the proportion of assets subject to accelerated depreciation increased in one decision in part because of previous accelerated depreciation had worsened future cash flows.[27]

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21 Incenta also observed we had never proposed such a mechanism. JGN, *2020–25 Revised proposal – Attachment 8.3 – Incenta – Using asset lives to manage stranded asset risks,* January 2020, fn.13.

22 JGN, *2020–25 Revised Proposal – Attachment 8.3 – Incenta – Using asset lives to manage stranded asset risks,* January 2020, p. 4; JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 33.

23 ENA, *Submission on JGN 2020–25 access arrangement*, 13 February 2020, p. 1.

24 These dates are based on considering assets acquired at the start and end of the 2020–25 access arrangement period and using the longest and shortest proposed standard asset life for the asset classes in question. For example, HP mains assets acquired in 2019–20 are proposed to reach the end of their economic lives in 2100.

25 NGR, r. 89(1)(b).

26 A consistent approach could have argued demand for all assets (new and existing) will end in 2050. The revenue impact of such a consistent approach is greater than the current proposal which relies on a similar argument that demand eases by 2050. Assessment of forecast capex would also be significantly impacted by such a proposal, with the current proposal already giving rise to inconsistencies, as discussed in section A.4.

27 AER, *Access arrangement final decision, APA GasNet Australia (Operations) Pty Ltd, 2013–17, Part 2*, March 2013 pp. 115–116.

Submissions also expressed concerns with viewing depreciation in a dynamic manner. Origin Energy stated it would be particularly concerned if a situation was to arise where the economic lives of assets are continuously reviewed in response to potential upcoming events.[28] It stated that this would not only be destabilising for industry and consumers but would also add unnecessary complexity and uncertainty to the regulatory process.[29] TRAC partners were also concerned the approach would be applied to existing assets in subsequent reviews and noted that during consumer engagement JGN indicated that this was very likely.[30]

A.2 Evidence for declining demand

In the draft decision, we stated there was insufficient evidence to support the forecast outcomes or approaches JGN proposed at this time. No additional information provided by JGN since the draft decision provides us with greater certainty or alternative approaches to consider. A number of submissions also suggested there was too much uncertainty to change existing approaches and introduce accelerated depreciation at this time.[31]

We have previously allowed accelerated depreciation in a number of circumstances.[32] However, we do expect the proposal to be targeted and well supported by appropriate evidence. As we have stated in other decisions,[33] and will do so again here, there is a significant burden of proof needed for demand factors to dominate a decision on the relevant economic lives of assets. In this regard, capex is typically only approved by us on the basis that the asset will be used for its technical life.[34] We need convincing evidence of a significant and persistent decrease in demand to consider a broad approach to accelerated depreciation for an entire network.[35] Our assessment of the key evidence presented by JGN is below.

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28 Origin Energy, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 2.

29 We consider that JGN's approach would indeed significantly change the way we do, not only our depreciation assessment, but also capex assessments. This latter aspect is discussed in section A.4 and capex Attachment 5.

30 TRAC partners, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 11.

31 Origin Energy, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 2; CCP19, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 30.

32 Appendix A to Attachment 4 of the draft decision set out a number of examples.

33 AER, *Final Decision, AusNet Services transmission determination 2017–2022 Attachment 5 – Regulatory depreciation*, April 2017, pp. 10–13.

34 Reducing the asset life below its technical life clearly increases the annualised cost of the asset. There is currently a presumption that when capex is approved the benefits to consumers exceed the costs. Raising the costs through accelerated depreciation, while the benefits are unchanged, clearly changes the cost/benefit trade off and make approval of capex more uncertain.

35 As noted above, we may then also have to consider development of a mechanism under rule 85(4) of the NGR.

A.2.1 Decarbonisation

JGN's proposal stated the NSW Government's aspirational 2050 carbon neutral target will see demand for gas declines significantly in NSW.[36] We did not accept this view in the draft decision, nor do we do so for our final decision.

JGN submitted in its revised proposal that there has been a 'rapid acceleration' of the policy move towards decarbonisation since the initial proposal and that government policy is biased against natural gas. JGN stated that the uncertainty about the impact of decarbonisation policies on gas networks has now been removed because the NSW Government has committed to lowering greenhouse gases by 35 per cent by 2030.[37]

Despite this statement, we have not seen any evidence which suggests that the NSW Government is taking steps to discourage gas usage in NSW under its decarbonisation policies. On the contrary, recent developments suggest that gas could be used as the transition fuel to lower carbon emissions. In January 2020, the Commonwealth and NSW Governments announced a $2 billion bilateral agreement for investing in energy initiatives that would reduce emissions while ensuring consumer affordability and energy grid reliability is maintained. Under this agreement, the NSW Government made the commitment to inject an additional 70 PJ of gas into the east coast market.[38] A number of submissions also noted this development.[39]

In March 2020, the NSW Government released its *Net Zero Plan Stage 1: 2020–2030* which explains how it plans to achieve its targets for 35 per cent carbon emission reductions by 2030 and net zero emissions by 2050.[40] The plan focuses on investing in technologies that reduce emissions in a manner than grows the economy and supports jobs in regional area.[41] The NSW Government has not proposed or implemented any measure under its action plans for each of the above priorities that would appear to impact on the usage of gas, and therefore the services provided by JGN's gas network.

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36 JGN, *2020–25 Access Arrangement Proposal – Attachment 7.10 – Proposed changes to asset lives for new investments,* June 2019, pp. 4–11.

37 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 12.

38 Prime Minister, Premier of New South Wales*, Media Release: NSW energy deal to reduce power prices and emissions*, 31 January 2020, accessed at https://www.pm.gov.au/media/nsw-energy-deal-reduce-power-prices-and-emissions

39 ECA, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 3; TRAC Partners, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 10; CCP19, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 22.

40 The plan is financially supported by the bilateral agreement between the Commonwealth and NSW Government mentioned above. Energy NSW, *NSW to lead the nation on emissions reduction*, 14 March 2020, accessed at https://energy.nsw.gov.au/nsw-lead-nation-emissions-reduction

41 NSW Government Department of Planning, Industry and Environment, *Net Zero Plan Stage 1: 2020–2030*, March 2020.

On the contrary, some of the investments identified in the *Plan* could positively impact JGN, such as:

- capturing methane from underground mines and using it on-site or via the gas system to help offset emissions from gas usage by residents and businesses across NSW[42]
- making the existing natural gas supply 'greener' through the injection of hydrogen and biogas.[43]

Further, JGN's revised proposal included a report by the NSW business chamber which stated that 'natural gas is a bridge to a cleaner energy future for NSW'.[44] It further noted that gas-fired power generation lowers greenhouse gas emissions by 31 to 50 per cent and supports the transition to renewables by providing reliable dispatchable power when wind or solar are unavailable.[45]

In light of this information, we consider it would be unreasonable to assume that JGN faces a 'catastrophic' risk[46] due to the Government's decarbonisation policies. We consider that the existence of a carbon emissions reduction target does not automatically equate to a bias against gas without clear policy direction from the Government. In fact, recent developments show that there is an expectation that gas will play a role to achieve emission reductions. This shows that JGN's assumption that the NSW Government's emission reductions targets will result in a rapid decline in gas demand in NSW, which underpins JGN proposal for accelerated depreciation, is therefore unreasonable.

A.2.2 Competition with electricity

In its revised proposal, JGN submitted government policies are generally biased towards electricity. It submitted that gas is a 'fuel of choice' in NSW and therefore, incentives that enhance the cost competitiveness of electric appliances, and use of electricity via roof top-solar and batteries, put at risk existing investments in the NSW gas distribution network.[47]

We consider that JGN has overstated the cross-price elasticity of residential and small business gas users in NSW.[48] While some large industrial gas users may have bypass

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42 Ibid. p. 22. The plan notes that methane released during coal mining is a potential energy source equal to the entire residential gas use in NSW each year.

43 Ibid. pp. 29-30.

44 JGN, *2020–25 Revised Proposal – Attachment 8.8– EnergyQuest - Running on empty: How to keep NSW fuelled for the future,* January 2020, p. 2.

45 Ibid. p. 6.

46 JGN, *2020–25 Revised Proposal – Attachment 2.1– bd infrastructure report on asset lives workshop,* January 2020, p. 6.

47 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 12.

48 For example, for the 2018 remittal calculations for JGN an own price elasticity of -0.3 (or -0.11 once the proportion of network charges in the total gas bill was accounted for) was accepted by the AER, which is relatively inelastic.

opportunities (and prudent discounts offer a means to address this issue), the majority of consumers have limited opportunities to substitute electricity for gas. The declaration under the National Gas Law (NGL) of JGN's gas network as a regulated service reflects that the scope for competition in JGN's services is considered limited. We consider there is little incentive for JGN's consumers to disconnect from its network in large quantities, although electricity may provide an alternative fuel source for some gas consumers.

A report by Deloitte Access Economics on behalf of the ENA concluded that there are a variety of decarbonised gas options that are likely to be cost competitive with electrification over the long term.[49] Accordingly, a shift completely away from gas networks does not appear to be a very likely outcome given there are significant barriers to prevent switching between fuel sources.[50] Further, the report found that replacing gas with electricity is difficult as electricity networks would need to be augmented to allow a large number of gas customer to switching to electricity. This would also increase the cost of electricity.[51] It is difficult to conclude how government policies that support investments in the electricity market will materially affect gas networks. Further, if such competitive pressures on JGN's network exists, we consider that raising gas prices through applying accelerated depreciation for the next 30 years would be counter-intuitive in improving the competitiveness of gas.

A.2.3 Gas supply shortage in NSW

JGN's revised proposal submitted that NSW will face gas supply shortfalls as early as 2025.[52] In our draft decision, we considered any shortfall may be mitigated by a number of domestic supply solutions currently under consideration. We confirm this view in our final decision. While we recognise that insufficient gas supply may lead to rising gas prices in the future, it does not mean demand would reduce dramatically given the relatively low price elasticity of demand for monopoly network services.

Moreover, the extent of any shortage remains uncertain. A number of recent developments suggest improving domestic supply for natural gas in NSW, including:

- the NSW Government stated that if the Narrabri coal seam gas proposal is not approved, it would enable the importation of gas by facilitating the construction of gas import terminals in Port Kembla or Newcastle as an alternative[53]

See AER, *JGN Final decision Access arrangement 2015-20 - Remittal Actual volumes scenarios*, February 2019, Elasticity sheet.

49 Deloitte Access Economics, *Decarbonising Australia's gas distribution networks*, November 2017, pp. 6-7.

50 Ibid. pp. 13, 59.

51 Ibid. p. 61.

52 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. v.

53 AFR, *NSW will import gas if Narrabri blocked: Berejiklian*, January 2020, accessed at https://www.afr.com/politics/federal/nsw-will-import-gas-if-narrabri-blocked-berejiklian-20200131-p53wet

- in January 2020, the Australian Government's Department of Industry, Science, Energy and Resources published its review of the Australian Domestic Gas Security Mechanism (ADGSM), which found that the incentives created through the ADGSM have been working effectively to safeguard domestic gas supplies[54]
- the January 2020 interim report for the Australian Competition & Consumer Commission's (ACCC) Gas Market Inquiry 2017–2025 highlighted an improvement in the gas supply outlook across the East Coast market in 2020, with a supply shortfall unlikely in the short-term.[55]

We therefore do not accept JGN's view on the extent and timing of any gas supply shortfalls that could have a fundamental impact on the demand of its network.

A.2.4 Hydrogen

JGN identified that a number of emerging renewable technologies pose a risk to its gas network. However, we consider that emerging technologies come with both risks and rewards, and the development of hydrogen as a clean energy source could provide opportunities for gas networks.[56]

JGN submitted in its revised proposal that it faces a current price of hydrogen which is seven times higher than the National Hydrogen Strategy estimates it needs to be for competitiveness in gas pipeline blending.[57] JGN stated that it is unlikely that hydrogen will be at a competitive price by 2050, when it would have suffered a significant decline in the demand across its gas network.[58]

As discussed above, we are not persuaded that JGN is likely to face a decline in the demand for its network by 2050. Accordingly, even relatively modest development of hydrogen technology by 2050 could be seen as a positive. Recent developments that suggest a future for hydrogen in the energy mix include:

- the National Hydrogen Strategy, which aims to establish Australia's hydrogen industry as a major global player by 2030 has been unanimously adopted by the Commonwealth, State, and Territory Governments in late 2019[59]

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54 Department of Industry, Science, Energy and Resources, *Australian Domestic Gas Security Mechanism Review 2019*, January 2020, p. 12.

55 ACCC, *Gas inquiry January 2020 interim report*, January 2020, p. 1.

56 AER, *JGN 2020–25 Access Arrangement – Draft Decision – Attachment 4 – Regulatory Depreciation*, November 2019, p. 15.

57 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. v.

58 Ibid. p. 16.

59 COAG energy council, *22nd Energy Council Meeting Communique*, November 2019, accessed at http://www.coagenergycouncil.gov.au/publications/22nd-energy-council-meeting-communique

- recently published research by ENA and the Australian Pipelines and Gas Association showed that more than $180 million of funding had been committed nationwide for hydrogen infrastructure projects[60]
- Australia's Chief Scientist has backed the Government's strategy of using gas as a transitional fuel and made a strong case for the development of hydrogen fuel technology for heavy transport, heavy industry and chemical production[61]
- the Commonwealth Energy Minister has set up an advisory group, with the aim of determining how to produce hydrogen fuel for less than $2 per kilogram[62]
- the NSW Government's *Net Zero Plan Stage 1: 2020–2030* has recognised the commercialisation of hydrogen as a key priority, and the NSW Government is planning to set a target of up to 10 per cent hydrogen in the gas network by 2030[63]
- we note that our final decision includes the proposed expenditure related to JGN's Western Sydney Green Gas Trial (hydrogen) to its speculative investment account (see attachment 5).

JGN's revised proposal submitted that its trunks and high pressure mains are made of steel and may be affected by embrittlement if exposed to hydrogen.[64] We recognise that transporting higher blends of hydrogen through some gas pipelines may cause their embrittlement due to the material used to build these pipelines. However, as submitted by JGN, GPA Engineering's Hydrogen Future Study shows that low blends (up to 10 per cent) of hydrogen are largely compatible with gas pipelines.[65] If JGN intends to use its existing gas pipelines to transport higher blends of hydrogen to its end-users, we would require JGN to identify those particular pipelines so that their technical lives could be re-assessed at that time.

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60 ENA, *Media Release: Australian Gas Networks leading the hydrogen charge*, 27 February 2020, accessed at https://www.energynetworks.com.au/news/media-releases/2020-media-releases/australian-gas-networks-leading-the-hydrogen-charge/

61 Australia's Chief Scientist, *National Press Club Address: The orderly transition to the electric planet*, 12 February 2020, accessed at https://www.chiefscientist.gov.au/news-and-media/national-press-club-address-orderly-transition-electric-planet

62 Minister for Energy and Emissions Reduction, *Keynote address at CEDA 'Future Direction in Energy Technologies' event, Sydney*, 28 February 2020, accessed at: https://www.minister.industry.gov.au/ministers/taylor/speeches/keynote-address-ceda-future-direction-energy-technologies-event-sydney

63 NSW Government Department of Planning, Industry and Environment, *Net Zero Plan Stage 1: 2020–2030*, March 2020, p. 30.

64 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 15.

65 JGN, *2020–25 Revised Proposal – Attachment 8.5 – GPA Engineering – Hydrogen Future Study,* January 2020, p. 20.

A.2.5 Gas demand decline

In our draft decision, we noted that AEMO had forecast the annual gas consumption for residential and commercial consumers in NSW to continue to grow until 2038 under all scenarios in its 2019 Gas Statement of Opportunities (GSOO).[66] AEMO's latest 2020 GSOO also shows overall stable annual gas consumption in NSW over the entire range of its forecasts to 2039.[67]

JGN disregarded AEMO's forecasts and instead commissioned Core Energy (CORE) to prepare its own long-term NSW gas demand forecasts. JGN submitted that 'AEMO forecasts do not appear to explicitly model the effect of significant, increasing, and evolving electrification incentives, or any other step changes in the gas demand, such as the effect on consumer behaviour of accelerating NSW net-zero carbon targets'.[68]

We addressed JGN's concerns regarding AEMO's forecast data in our draft decision.[69] The factors considered by AEMO in its 2019 GSOO are substantive and include weather conditions, connection growth, energy efficiency savings, climate change impact, behavioural response to retail prices and gas-to-electricity switching. AEMO also forecast the annual consumption trend under different scenarios to reflect different rates of economic and population growth, decarbonisation of stationary energy and transport sectors, development of renewable generation and decentralisation.[70]

In contrast, we consider that CORE's forecasts are limited to a small range of scenarios. CORE noted that 'given the short timeframe and limited scope of this engagement, CORE has not developed detailed analysis of underlying factors which will drive each of the scenarios outlined.'[71] It noted that it exercised judgement in reaching its conclusions and 'observed a wide range of potential outcomes and projected demand which meets the scenario definition.'[72] The scenario definitions were broad in nature. In all scenarios, for example, it is assumed the NSW Government policy would achieve a net zero target by 2050. The Commonwealth Government was also assumed to take significant action on emissions by 2035, with one scenario assuming no fossil fuel use post 2035. We also note that not all of CORE's scenarios support the degree of decline in demand JGN expects.

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66 AER, *JGN 2020–25 Access Arrangement – Draft Decision – Attachment 4 – Regulatory Depreciation*, November 2019, p. 24.

67 AEMO, *2020 GSOO Publication– Gas Annual Consumption Total – Residential and Commercial – NSW*, March 2020, accessed at http://forecasting.aemo.com.au/Gas/AnnualConsumption/Total

68 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, pp. 42–43.

69 AER, *JGN 2020–25 Access Arrangement – Draft Decision – Attachment 4 – Regulatory Depreciation*, November 2019, p. 53.

70 AEMO, *Gas demand forecasting methodology information paper*, March 2019, p. 17; AEMO, *2019 GSOO publication*, March 2019, p. 14.

71 JGN, *2020–25 Revised Proposal – Attachment 8.6 –* Core *2019 2070 Scenario based outlook for JGN gas demand,* January 2020, p. 9.

72 Ibid. p. 4.

Other assumptions related to electricity price, gas price and hydrogen costs. We have already addressed assumptions regarding the NSW Government's carbon-neutral target and price elasticity of gas in the sections above and established that there is substantial uncertainty about the impact of these factors on demand for gas in NSW to arrive at sound conclusions. CORE's assessment also precedes recent policy developments in support of gas in NSW. On balance, we consider AEMO's forecasts provide a more reliable reference for gas consumption trends in NSW and what CORE sees as a high growth scenario is more likely to be a base case.

A.3 Benchmarking of standard asset lives

In the draft decision, we considered that JGN's proposed shorter asset lives for its pipeline asset classes did not align with the asset lives applied by other gas distributors for similar asset classes.[73]

In its revised proposal, JGN has submitted that while the technical lives of its asset classes may benchmark closely to gas networks operating in other states, we should expect the economic lives of its assets classes to vary significantly due to its different 'operating' environment compared to southern states, such as Victoria, because much of their loads are for heating.[74] It noted that the average gas consumption per connection in NSW is lower than Victoria. JGN further submitted that we should consider step changes in the environmental policies, financial subsidies, and evolving technologies that have an impact on the future of gas distribution networks when assessing its economic lives. JGN stated that it would be an 'improper application of the depreciation criteria' for the AER to assume that the economic lives of JGN's assets should be benchmarked against those of the southern states, such as Victoria.

While gas consumption per customer in NSW may be lower than Victoria, we do not consider that asset lives should be set to reflect consumption rates per customer. The technical lives of the assets are not affected by the number of consumers using a given asset. In this regard, pipelines are typically built to meet a particular level of peak demand. Accordingly, the number of consumers (and the volume of their consumption) actually using the asset should not affect the technical life of the asset. To the extent that economic lives of assets differ from their technical lives, we do not agree that demand considerations would cause a divergence in this case. Consumers in NSW may pay more in depreciation on a per customer basis than Victoria, but this does not mean that the assets in NSW will stop being used because of this difference. Accelerating depreciation would make the difference in per customer depreciation costs greater across the two regions.

JGN has also provided the example of Queensland's light regulated gas distribution networks to show that gas networks in warmer climates face a greater market threat

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[73] AER, *JGN 2020–25 Access Arrangement – Draft Decision – Attachment 4 – Regulatory Depreciation*, November 2019, p. 25.

[74] JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 48.

posed by substitution to electricity. It submitted that the National Competition Council (NCC) determined to apply light regulation to gas distributors in Queensland[75] that were formerly subject to full regulation as they were assessed to have a lack of market power, evidenced by the very low penetration rate and customer usage of natural gas in Queensland.

We note the coverage determination for a pipeline is administered by the NCC under Part 4 of the NGR and is not related to our decision making for an access arrangement review. Despite this, we note that JGN's conclusions about its market competitiveness being similar to the Queensland region appears contradictory to the information it has provided in its revised proposal regarding its penetration rates in NSW. JGN's augmentation plan included a baseline assumption that 94.3 per cent of houses in new estates in NSW would connect to gas.[76] JGN concluded that this figure underestimates its likely penetration rate for new estates of 98 per cent based on the data published by the NSW Government regarding its BASIX (Building Sustainability Index) certificates.[77]

We consider that there is no basis to shorten JGN's economic lives based on claims about underutilisation of its network, given its current and forecast penetration rates for the 2020–25 period have not demonstrated any changed competitive pressures compared to its current operating environment. We are therefore satisfied that it remains appropriate to benchmark JGN's standard asset lives for its pipeline asset classes to those of other gas networks with similar assets.

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75 APA's All Gas network and AGIG's (formerly Envestra) Queensland gas distribution network.

76 JGN, *2020–25 Revised Proposal – Attachment 4.2 – Response to the AER's draft decision - Capital expenditure,* January 2020, p. 52.

77 In NSW, each development application for a new residential dwelling must lodge a BASIX certificate. This specifies whether the installed hot water system, heating and cooktop appliances use gas. The NSW Government has published data from these certificates for the 2011-12 to 2017-18 period. JGN, *2020–25 Revised Proposal – Attachment 4.2 – Response to the AER's draft decision - Capital expenditure,* January 2020, pp. 52-54.

A.3.1 Alignment with UK and electricity asset lives

JGN has submitted that it has considered a new option in its revised proposal, which relates to capping its asset lives at 40 years for its new investments. It stated that this option adopts the approach applied in the UK and is consistent with the asset lives for electricity networks.[78]

We note that the longest standard asset lives for electricity distribution and transmission assets are mostly between 45 to 60 years based on our recent electricity determinations and not 40 years as claimed by JGN.[79] We consider that it is not appropriate to compare the asset lives for electricity networks with gas networks. We do not consider there is a sound basis for adopting the technical lives for electricity network assets given they are built for a different purpose and made from different materials.

We note that JGN's revised proposed forecast capex for the 2020–25 period is allocated to 17 different asset classes which have standard asset lives ranging from 5 to 80 years. These asset classes groups together assets which are similar in their type and lives. This is different to the UK Ofgem's method where the total capex is depreciated over a single life.

As shown in Table 4.4, if we apply the current standard asset lives to JGN's revised proposed capex, we get a weighted average standard life of 40.4 years for its total forecast capex for the 2020–25 period.[80] This shows that the total new investments proposed to be made by JGN in the 2020–25 period has an average standard asset life of 40 years even if we continue to use the longer asset lives of 50 and 80 years for its pipeline asset classes.

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78 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 84.

79 AER, *Final decision: TasNetworks distribution determination 2019 to 2024*, *attachment 4*, April 2019, pp. 9–10; AER, *Final decision: Evoenergy distribution determination 2019 to 2024*, *attachment 4*, April 2019, p. 9; AER, *Final decision: Essential Energy distribution determination 2019 to 2024*, *attachment 4*, April 2019, p. 8; AER, *Final decision: Ausgrid distribution determination 2019 to 2024*, *attachment 4*, April 2019, p. 9; AER, *Final decision: Endeavour Energy distribution determination 2019 to 2024*, *attachment 4*, April 2019, p. 10; AER, *Final decision: Power and Water Corporation distribution determination 2019 to 2024*, *attachment 4*, April 2019, pp. 8–9.

80 The proportion of capex in each asset class is used as weights to calculate the weighted average standard life.

Table 4.4 Weighted average standard life of JGN's revised proposal net capex for the 2020–25 period using current standard asset lives

Asset classes	Current (2015–20) standard life (years)	Net capex ($2019–20, million)	Weights (per cent)	Weighted average standard life (years)
HP Mains	80	116.6	13.1	10.5
Fixed Plant - Distribution	50	21.4	2.4	1.2
HP Services	50	5.6	0.6	0.3
MP Mains	50	140.3	15.8	7.9
MP Services	50	293.5	33.0	16.5
Country POTS	50	0.5	0.1	0.0
Buildings (SL)	48	2.3	0.3	0.1
Contract Meters	15	3.8	0.4	0.1
Meter Reading Devices	15	7.8	0.9	0.1
Tariff Meters	15	175.1	19.7	3.0
Fixed Plant	10	2.2	0.2	0.0
Furniture	10	1.7	0.2	0.0
Mobile Plant	10	2.9	0.3	0.0
Leasehold Improvements	10	2.9	0.3	0.0
Vehicles	6	12.4	1.4	0.1
Computers - IT Infrastructure	5	25.0	2.8	0.1
Software - Inhouse	5	76.2	8.6	0.4
Total		**889.9**	**100.0**	**40.4**

Source: AER analysis.

A.4 Consistency with capex proposal

We consider that there are a number of inconsistencies in JGN's proposal. Although its depreciation proposal is based on its submission that demand will decline persistently and effectively ceasing by 2050, its forecast capex is based on historical growth in demand.

In these current circumstances, JGN is proposing that all new pipeline assets constructed over the next five years (and beyond) will not be used to the end of their technical lives. If we had accepted JGN's evidence on future demand trends, we may have approved significantly less forecast capex in this final decision.

JGN's capex proposal for the 2020–25 period does not suggest it is preparing for a persistent and significant decline in demand, other than by seeking consumers to pay accelerated depreciation. We note that:

- over 50 per cent of JGN's revised proposed forecast capex relates to new demand (connections and augmentation), with many of these assets proposed to be subject to accelerated depreciation[81]
- JGN provided evidence in its revised proposal to show that it is improving its gas penetration rates for new developments as new suburbs are built in NSW which are reticulated with gas[82]
- JGN's revised proposed projected capital base for the 2020–25 period would increase by over 3 per cent in real terms despite JGN applying a higher rate of depreciation in its revised proposal.[83]

Where widespread stranding of assets is expected, we would reconsider whether JGN's historical averages, trends and practices are a reasonable proxy for the purpose of assessing its proposed capex forecasts. We would also revise aspects of our capex assessment approach to minimise the prospect of stranding. In particular:

- We would reconsider our approach to using a penetration rate based on a historical average. This is especially true when JGN has claimed that 'developers and local governments [are] phasing out natural gas as part of their stated emissions reductions strategies' to support its proposal for accelerated depreciation.[84] Despite this statement, we have not observed a step change in JGN's demand forecasts to account for this prospect.
- We would also reconsider our incremental revenue test for connections and augmentations from our current 30 year NPV to a 20 year or shorter NPV since the longevity of future consumers would be in doubt. More consumers wanting to connect to the gas network may then have to pay a capital contribution to connect.
- Instead of accepting JGN's traditional replacement approach, we would expect a paradigm shift in JGN's asset management approach.
- We would consider if certain supporting expenditures, such as information technology investments, should be restricted to business continuity purposes only at a minimum standard that doesn't breach any statutory and mandatory obligations. This might require the unwinding of existing non-critical IT systems and functionalities to minimise ongoing recurrent capex costs.

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81 JGN, *2020–25 Revised proposal – Attachment 8.3 – Incenta – Using asset lives to manage stranded asset risks,* January 2020, p. 9; JGN, *2020–25 Revised proposal – Attachment 4.1 – Capex Model*, January 2020.

82 JGN, *2020–25 Revised Proposal – Attachment 4.2 – Response to the AER's draft decision – Capital expenditure,* January 2020, pp. 52-54.

83 AER analysis.

84 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. v.

- We would need to consider whether the capital expenditure sharing scheme (CESS) should be applied in a declining demand scenario.
- Other options that may be reconsidered is wider use of prudent discounts (to avoid consumers leaving the network), the introduction of exit fees or different pricing structures.

Stakeholder submissions also noted an inconsistency in JGN's level of forecast capex and JGN's accelerated depreciation proposal. AGL observed that a growing capital base does not align with the concern about the preparation for a low carbon future and the need to recover costs over a reasonable time period.[85] Our Consumer Challenge Panel (CCP19) suggested a capex plan that eliminated network growth and new connections, and which would not impact safety or reliability, would go a long way to manage the risk which concerns JGN.[86]

As discussed above, we have not been persuaded by JGN's revised proposal regarding a significant and persistent decline in demand. Our approved capex forecasts in this final decision are based on an overall positive growth expectation for JGN's network.

A.5 Customer consultation and stakeholder submissions

JGN indicated that most participants who attended its customer forums supported its accelerated depreciation proposal. Its consultant, Professor Cosmo Graham of the Leicester Law School (UK) argued that the AER should put more weight on the expressed views of customer forums than those of consumer advocates and the CCP.[87] It also argued that companies would not have the incentive to engage with consumers if it does not result in regulatory outcomes.[88]

We recognise that JGN has undertaken a significant customer engagement program to inform its proposal. However, we must make our decision on JGN's proposal on the basis of all relevant evidence and submissions presented to us. We must assess the appropriateness of the proposal against the requirements of the NGR, taking into account the NGO and RPP. JGN's proposal to reduce the standard asset lives rests substantially on demand forecasts. We are required by the NGR to determine whether forecasts are arrived at on a reasonable basis, and represent the best forecast possible. Outcomes from JGN's customer engagement program do not remove our obligation to decide these matters.

We appreciate the benefits of customer engagement in eliciting their thinking on particular matters and for exploring options. Their opinions across a variety of matters

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85 AGL, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p.3.

86 CCP19, *Submission on JGN 2020–25 access arrangement*, 17 February 2020. pp. 20–21.

87 JGN, *2020–25 Revised Proposal – Attachment 8.4* – Regulatory decision making and consumer voices Cosmo Graham, p. 5.

88 Ibid. p. 4.

have weight in our considerations. However, we also need to conduct our own assessment of stakeholder comments. We consider it would be unreasonable to determine that all of JGN's consumers would have one homogenous view given it has a diverse customer base made up of:[89]

- 1,370,000 residential consumers which represent 30 per cent of its gas throughput
- 36,500 small business consumers which represent 15 per cent its gas throughput
- 400 industrial customer which represent the remaining 55 per cent of its gas throughput.

Customer groups frequently acknowledge our role in economic regulation and defer to our consideration of technical matters.[90] In the present circumstance, this is particularly relevant as JGN's proposal is stated to have been motivated by a return on capital it considers too low for the commercial risks it faces.[91] Energy Consumers Australia's (ECA) submission stated that JGN's management had subjectively changed their assessment of the risks JGN faced and this proposition needed to be 'very thoroughly' assessed by the AER.[92] The Public Interest Advocacy Centre (PIAC) was concerned that JGN's customer forum participants may not be aware that they were asked to take on the investment risk borne by JGN's shareholders.[93]

> 'While Jemena's engagement was excellent overall, PIAC challenges the accuracy of Jemena's claim in this case, as the issue was not represented to participants in a completely balanced and accurate manner. PIAC notes the question was posed to forum participants with the only options being a trade-off between current and future consumers, and the option of a trade-off between consumers and Jemena's shareholders was not canvassed. In PIAC's view this inappropriately assumes that consumers must take on Jemena's investment risk, and does not allow a valid conclusion about consumer preferences to be drawn.'

Further, JGN's reference to its consumer's considerations were based on the evidence presented to them by JGN. As demonstrated in section A.2, we do not consider the forecast decline in demand provided by JGN to be robust. Submissions also noted the information provided in engagement sessions was often high-level principles and hypothetical examples each of which relied on the adoption of many assumptions.[94]

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89 JGN, *2020–25 Access Arrangement Proposal – 2020 Plan*, June 2019, p. 6.

90 TRAC Partners, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 8; CCP19, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 6; PIAC, *Submission on JGN 2020–25 access arrangement*, 20 February 2020, p. 2.

91 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. iv.

92 ECA, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 2.

93 PIAC, *Submission on JGN 2020–25 access arrangement*, 20 February 2020, p. 1.

94 TRAC partners, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 8.

CCP19 stated it did not support the accelerated depreciation proposal and concluded:[95]

> 'CCP19 rejects the assertion that it or the AER have ignored an express consumer view. We reject the notion that consumer engagement delivers a monolith and binding 'express consumer view' on a matter in a sea of potentially competing or conflicting consumer views, other stakeholder and consumer representative view, the Rules and the obligation of the AER.'

ECA was particularly concerned with JGN's commissioning of Professor Cosmo's report. It stated:[96]

> 'Given the good work that secured JGN a joint win (with Jemena Electricity Networks) of the ENA ECA Network Community Engagement Award 2019, we are disappointed by the approach taken in this report.'

We appreciate that consumers wish to avoid price shocks where possible. It also appears that some consumers may be open to the use of accelerated depreciation in the right circumstances. However, this openness could change, with the ECA suggesting any customer support in principle depends on the appropriate accelerated depreciation decision being made in practice.[97]

A.6 Smoothing revenues over the long term

JGN and Incenta used an issue that we have considered in other decisions[98] of bringing forward depreciation today to provide a buffer to absorb higher costs in the future.[99] We addressed issues with anticipating future costs changes in the draft decision, but provide some further observation here.[100]

Firstly, it is important to realise that this 'cost smoothing' argument is quite different to one that sees accelerated depreciation as a way to deal with equity issues arising from potential stranding.

JGN submitted consumers would benefit from its proposal in terms of offsetting increases in gas prices in the future (beyond 2050).[101] However, the idea of smoothing prices (i.e. costs per kJ) beyond 2050 is at odds with JGN's expectation of demand ceasing by that time. That is, under JGN's scenario, which we have not accepted for

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95 CCP19, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 30.

96 ECA, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 3.

97 Otherwise consumers may view such costs as 'fees for no service'. ECA, *Submission on JGN 2020–25 access arrangement*, 17 February 2020, p. 3.

98 See Appendix A to Attachment 4 of the draft decision.

99 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 50.

100 AER, *JGN 2020–25 Access Arrangement – Draft Decision – Attachment 4 – Regulatory Depreciation*, November 2019, pp. 25-27, 29.

101 JGN, *2020–25 Revised Proposal – Attachment 8.2 – Changes to asset lives for new investments,* January 2020, p. 22.

this final decision, there would be no period beyond 2050 where lower depreciation charges and returns on assets were offsetting increases to other cost components.

While we support price smoothing in the short term, we also consider it efficient for consumers to face higher prices when market circumstances dictate. Depreciation should not be used to offset changes in other costs driven by market forces.

Long term cost cycles are also difficult to forecast and where we are situated currently in the cycle is equally difficult to determine. Even if they could be forecast (say, based on historically observed highs and lows of different costs) it is an open debate on whether, for example, the high, low, or average level of long term costs in the cost cycle should be aimed for. In this regard, an alternative to accelerated depreciation now is to wait until costs start rising in the future and then to defer depreciation at that time. This approach would be more certain to lock in the lowest level of long term costs for consumers. We consider it essentially arbitrary to lock in current levels of costs in the long term by adjusting the depreciation profile. It is also questionable whether locking in the lowest level of costs in the long term cost cycle is appropriate. We therefore do not support either accelerating or deferring depreciation to smooth long term prices.

A.7 Conclusion

Having considered JGN's revised proposal, we confirm our position in the draft decision to not accept the reductions to the standard asset lives for new expenditure associated with the 'Trunks', 'HP mains', 'MP mains', and 'MP services' asset classes.

We do not consider the evidence of demand and costs outcomes that JGN projected to 2050 and beyond as sufficiently robust. Nor do we consider the proposed solution is well targeted or consistent with the depreciation criteria.

Given this, we consider these standard asset lives should continue to be based on their technical lives.