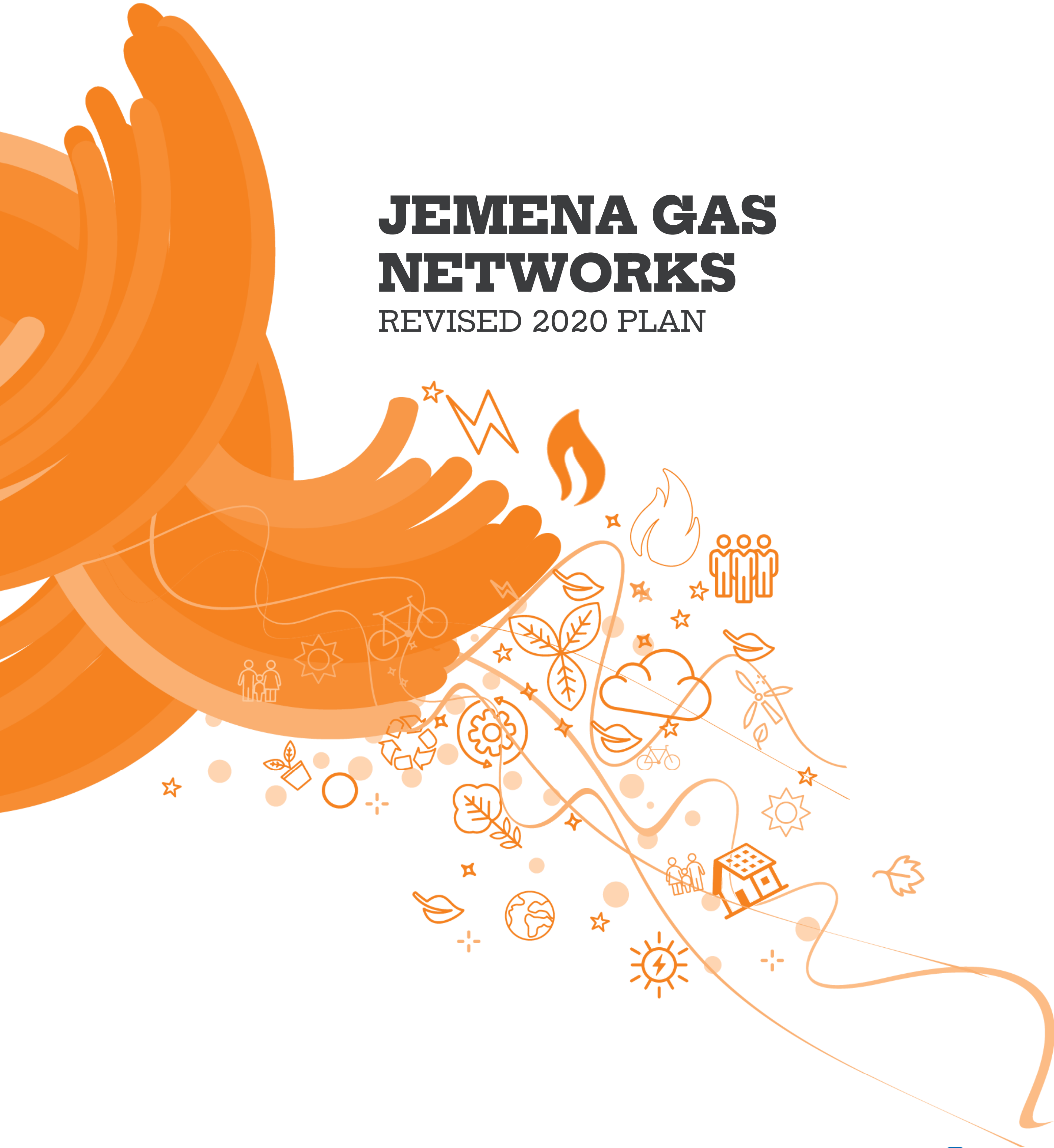
JEMENA GAS NETWORKS

REVISED 2020 PLAN



JANUARY 2020

Jemena
bringing energy to life

JEMENA GAS NETWORKS (NSW) LTD

2020-25 ACCESS ARRANGEMENT REVIEW

The Revised 2020 Plan and its associated attachments comprise JGN's Revised 2020-25 Access Arrangement Proposal

Contents

Abbreviations .... **v**
Overview .... **vi**
1. Background **1**
1.1 About JGN's Revised 2020-25 AA Proposal 2
1.2 Presentation of financial information 2
1.3 Attachments 2
2. What our customers have told us **4**
2.1 Our 2020 Plan reflects our customers' views 5
2.2 For a few critical issues the AER's draft decision does not reflect preferences expressed by our customers 6
2.3 Attachments 6
3. Our services **7**
3.1 AER draft decision 8
3.2 JGN response to the draft decision 8
3.3 Attachments 9
4. Our planned capital investments **10**
4.1 AER draft decision 11
4.2 JGN response to the draft decision 12
4.3 Revised proposal capex forecast 16
4.4 Attachments 17
5. Our opex requirements **18**
5.1 AER draft decision 19
5.2 JGN response to the draft decision 20
5.3 Revised proposal opex forecast 21
5.4 Attachments 22
6. Capital base **23**
6.1 Regulated asset base 24
6.2 Tax asset base 27
6.3 Attachments 28
7. Rate of return **29**
7.1 Rate of return overview 30
7.2 Return on debt and equity 30
7.3 Revised proposal rate of return 31
7.4 Inflation 32
7.5 Equity raising costs 32
7.6 Attachments 33
8. Depreciation and asset lives **34**
8.1 AER draft decision 35
8.2 JGN response to the draft decision 35
8.3 Revised proposal regulatory depreciation forecast 37
8.4 Attachments 38
9. Corporate income tax **39**
9.1 AER draft decision 40
9.2 JGN response to the draft decision 40
9.3 Revised proposal corporate tax forecast 40
9.4 Attachments 41
10. Revenue adjustments **42**
10.1 AER Draft Decision 43

10.2 JGN response to the draft decision 43
10.3 Revised proposal revenue adjustments 44
10.4 Attachments 44

11. Incentive schemes to apply in the 2020-25 AA period 46

11.1 AER Draft Decision 47
11.2 JGN response to the draft decision 47
11.3 Attachments 48

12. Revenue and price path 50

12.1 Revenue 51
12.2 Price path 52
12.3 Attachments 56

13. New connections and gas consumption 57

13.1 AER draft decision 58
13.2 JGN response to the draft decision 58
13.3 Revised proposal new connections and gas consumption forecast 59
13.4 Attachments 59

14. Tariff variation mechanism and our tariffs 61

14.1 Tariff variation mechanism 62
14.2 Tariffs 63
14.3 Attachments 66

15. Accessing our network 67

15.1 AER draft decision 68
15.2 JGN response to the draft decision 68
15.3 Attachments 68

Abbreviations

AA	Access Arrangement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AIC	Average Incremental Cost
BISOE	BIS Oxford Economics
CAM	Cost Allocation Methodology
Capex	Capital Expenditure
CCP	Consumer Challenge Panel
CESS	Capital Expenditure Sharing Scheme
Core Energy	Core Energy & Resources
CPI	Consumer Price Index
DAE	Deloitte Access Economics
EA	Energy Australia
ECA	Energy Consumers Australia
ECM	Efficiency Carryover Mechanism
EWON	Energy and Water Ombudsman NSW
GJ	Gigajoules
GSOO	Gas Statement of Opportunities
HIA	Housing Industry Association
JGN	Jemena Gas Networks (NSW) Ltd
KPIs	Key Performance Indicators
LRMC	Long Run Marginal Cost
NGR	National Gas Rules
NPV	Net Present Value
Opex	Operating Expenditure
PIAC	Public Interest Advisory Centre
RAB	Regulated Asset Base
RBA	Reserve Bank of Australia
RIN	Regulatory Information Notice
RSA	Reference Service Agreement
TAB	Tax Asset Base
UAG	Unaccounted for Gas
WACC	Weighted Average Cost of Capital
WPI	Wage Price Increase

Overview

Our Revised 2020 Plan seeks to enhance the long term value of gas for our customers. It intends to find the right balance between accepting substantial parts of the Australian Energy Regulator's (**AER**'s) draft decision and maintaining key elements of our proposals that are supported by our customers.

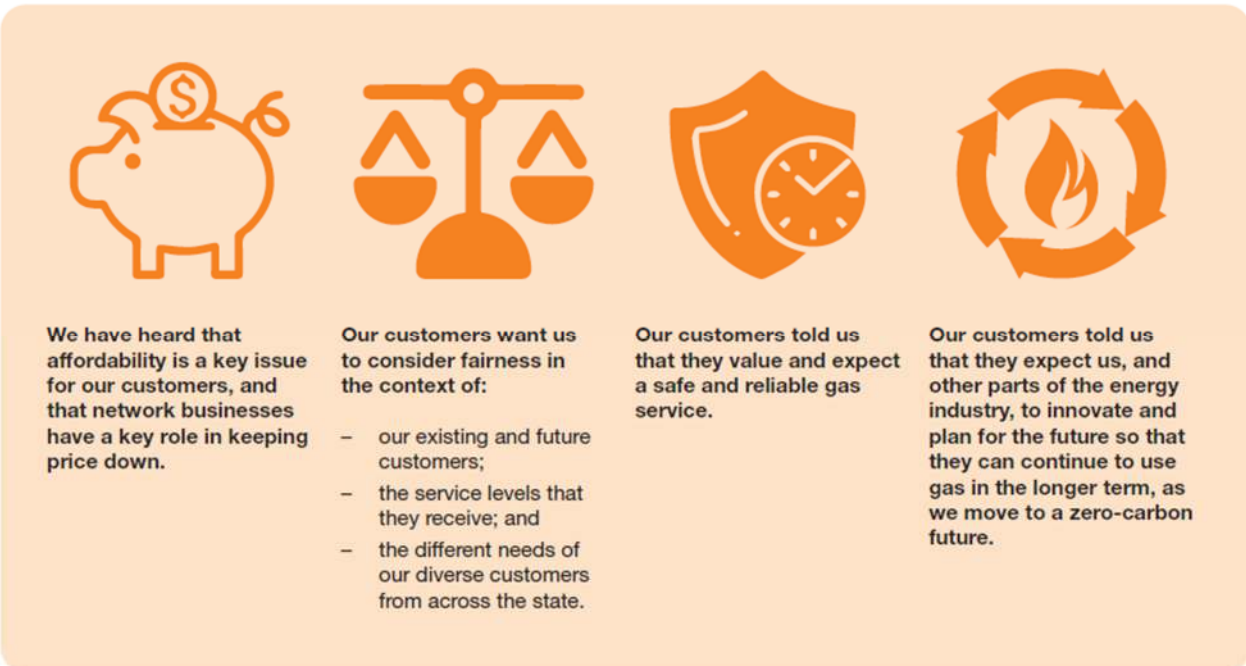
If accepted by the AER, our Revised 2020 Plan will put further downward pressure on gas bills across NSW and deliver savings of 21% over a five year period for a typical residential coastal customer, which is higher than the 18% reduction proposed in our 2020 Plan.

Our Revised 2020 Plan smoothed revenue is $97M ($nominal) lower than our 2020 Plan, reflecting changing financial market conditions since June 2019 that have reduced our allowed rate of return, as well as our acceptance of large parts of the AER's draft decision. Our Revised 2020 Plan smoothed revenues of $2,246M ($nominal) are $89M ($nominal) higher than the AER's draft decision.

Our 2020 Plan will provide our customers with safe, reliable and affordable services, and better position JGN for an uncertain future

One of our key objectives for this price review is for customers' views to shape our plans.[1] In developing our 2020-25 Access Arrangement (**AA**) proposal (our **2020 Plan**), we undertook extensive engagement with our customers from across our network to understand what they want and value from their gas service. Throughout the course of our engagement program, our customers provided their views and insights on what they want and value about their gas service, and what they would like us to prioritise as we plan for an uncertain future. The feedback that we heard from our customers is summarised into four key themes.

Figure OV–1.1: Key themes of customer feedback



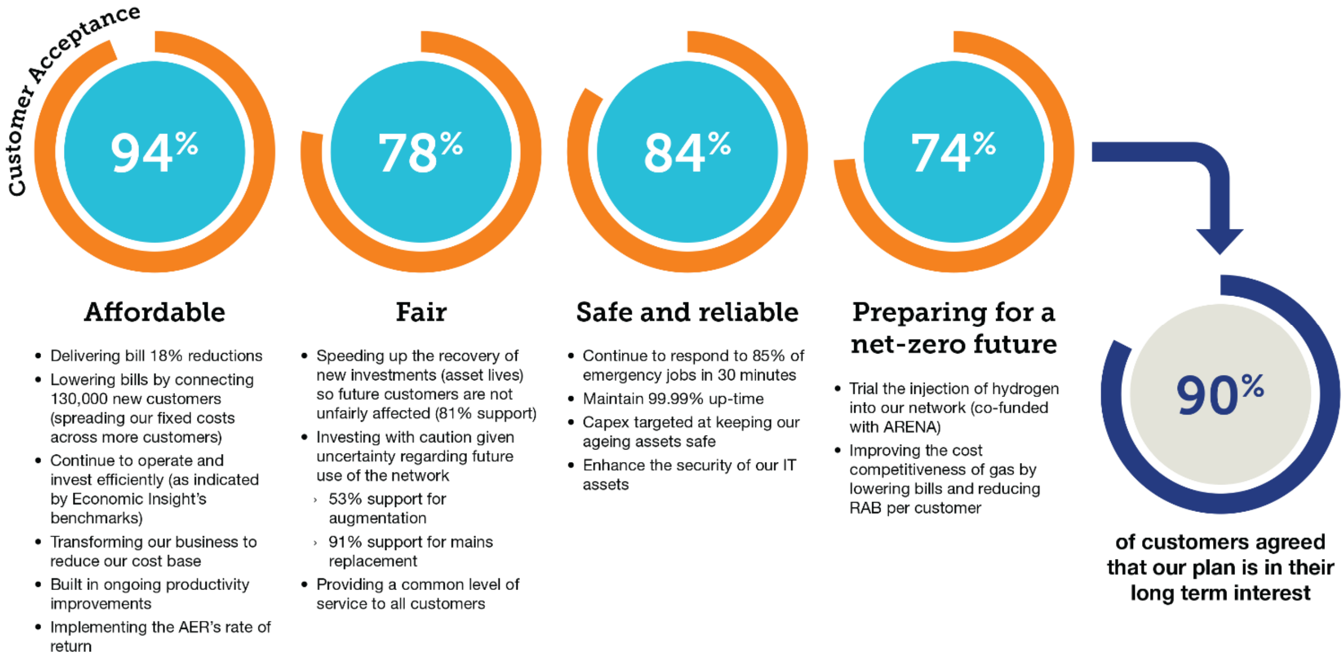
By listening, hearing and thinking about what our customers told us, we were able to develop a plan that was truly shaped and endorsed by our customers. Our 2020 Plan responded to the key theme of affordability whilst

1 The others being (i) secure regulatory allowances to efficiently deliver what our customers want (ii) take reasonable steps to position to JGN for an uncertain future; and (iii) lodge a proposal capable of acceptance by the regulator.

ensuring that we continue to deliver the safe and reliable services that our customers expect, and prepare Jemena Gas Networks (NSW) Ltd (**JGN**) for an uncertain future.

We are pleased to say that our customers confirmed their support for our 2020 Plan, with 90% of the customers we consulted with as part of our deliberative household engagement program voting that they believed our 2020 Plan was in the long-term interests of customers. Figure OV–1.2 summarises the initiatives we proposed in response to customer feedback on the four key themes and the customer voting results on how well our 2020 Plan responded to their feedback.

Figure OV–1.2: A balanced proposal that is in the long term interests of consumers



Note: Percentages represent the proportion of our customers who rated their acceptance to each theme as either "very well" or "quite well'

On 28 June 2019, we submitted our 2020 Plan to the Australian Energy Regulator (**AER**) for its consideration. Since that time we have continued to engage with the AER as it undertook its formal assessment of our 2020 Plan. This has primarily been through the provision of additional information on our 2020 Plan in response to information requests by the AER and its consultants.

The AER's draft decision approves key elements of our 2020 Plan

On 25 November 2019, the AER released its draft decision[2] (**draft decision**) on our 2020 Plan. We are pleased that the AER positively acknowledged our proposal and our customer engagement program, when it noted that:[3]

> *Overall, we are of the opinion that JGN has put forward a well-informed initial proposal, underpinned by extensive consumer engagement, and with few areas of contention remaining between now and our final decision…*

In addition, many of the submissions to the AER on our 2020 Plan have positively recognised our customer and stakeholder engagement program. This includes positive submissions by the Consumer Challenge Panel (**CCP**), Energy Consumers Australia (**ECA**), Public Interest Advisory Centre (**PIAC**), Origin, AGL and Energy Australia (**EA**).

2 AER, JGN 2020-25 access arrangement draft decision, November 2019

3 AER, *Overview | Draft decision – Jemena Gas Networks (NSW) Ltd Access Arrangement 2020-25*, November 2019, page 9.

It is a positive outcome of our customer engagement and our "no-surprises" approach with the AER that it has, in its draft decision, accepted many elements of our plan, including:

- Our services proposal, including retaining a single reference service for haulage and metering of gas, and our proposed changes to the ancillary activities provided under our reference service (although it has rejected our proposal to withdraw from hot water metering for new buildings from 1 July 2020).
- Approximately 98% of our forecast operating expenditure (**opex**), including our base year opex, our proposal to change the accounting treatment of corporate overheads, our specific forecasts and most of our trend escalation.
- Approximately 88% of our capital expenditure (**capex**) proposal, although it made significant cuts to our ICT capex—$34M or 32% of our proposed ICT capex—and other elements of our capital program.
- Our proposed methodology for calculating the capital base and our opening capital base as at 1 July 2020.
- Our approach to establishing the opening tax asset base (**TAB**) for the 2020-25 AA period but has corrected some errors in our TAB roll-forward model.
- Our method for calculating the rate of return, but updated our estimate using more recent market data and a different inflation assumption.
- Our proposed incentive schemes for the 2020-25 period, including our proposal to introduce a capital expenditure sharing scheme (**CESS**), although it has proposed some adjustments to the operation of the scheme.
- Our new connections and demand forecast, although it has requested that we provide an updated forecast incorporating the latest available data (2018-19 actuals).
- Most of our proposed changes to our 2015-20 AA, some with minor amendments.

The AER has also identified a number of topics where it requires more information before it can finalise its decision on our 2020 Plan. This includes:

- Our proposed changes to metering in new high-rise buildings with centralised hot water—the AER has stated that JGN should continue to offer hot water meters to new high rise buildings but is open to reconsidering its position subject to further information from JGN and other stakeholders on the likely demand for hot water metering, protections available to customers in embedded networks, and the potential capex savings from our boundary metering strategy.
- Some aspects of our historical and forecast capex, where the AER has requested further information from us in order to finalise its assessment of our expenditure as prudent and efficient.
- Our proposed changes to the Reference Service Agreement (**RSA**)—the AER has approved minor changes to our RSA but has deferred its decision on the more material changes that we proposed. The AER has acknowledged the good work that we have done to date to come to an agreement with retailers on the changes we are proposing to the RSA but intends to hold a roundtable with JGN and retailers before finalising its assessment.

On some key topics the AER's draft decision does not reflect preferences expressed by our customers

Although recognising the quality of our engagement, the AER's draft decision disallows a few critical elements of our proposal that our customers specifically voted in support of. In fact, it has disallowed three of the four key elements of our plan which we engaged on at length with our customers.

This includes:

- **Our proposed changes to asset lives for new investments**—while the AER has accepted our proposed change to metering asset lives, it has not accepted changes to the asset lives of our trunk mains, and medium pressure mains and services. The AER has stated that it does not consider that there is sufficient evidence that the economic lives of these assets has reduced. Its decision on asset lives:

  - Does not consider in any detail the preferences expressed by our customers on this topic—our customers strongly supported us taking these actions and they recognised the benefits to future customers. In the case of our asset lives proposal, they were aware of the marginal reduction in our short-term price savings needed to make this possible.
  - Does not recognise that this change is required to ensure that our efficient investment incentives are preserved during the 2020-25 period—the task here is to adopt standard asset lives that provide us with the correct investment incentive as we invest capex during the 2020-25 AA period. The AER's decision must ensure we have a reasonable expectation of recovering our costs and a normal return during that period.
  - Does not recognise that our proposal is exactly what the gas law and depreciation criteria rules intend the regulated depreciation allowance to do, and what good regulatory practice and precedent support.
  - States that the reduction in economic lives of our assets is speculative at this point in time on one hand, but also relies on the highly speculative assumption that hydrogen '*could have a substantial positive impact on the future of gas distribution networks*'[4] in rejecting our proposal. This reasoning is also contrary to its decision to exclude the Western Sydney Green Gas Trial from the speculative capex account on the basis that '*the integration of hydrogen as a fuel requires rule and law changes*' and its reading of the National Gas Law (**NGL**) definition of natural gas is that it precludes hydrogen.[5]
- **Our proposed price path**, which seeks to deliver a smooth retail bill for our residential and small business customers—the AER has instead substituted its own price path which has a large reduction in prices in 2020-21 followed by increases in years two to five of the AA period.
  - The AER's price path targets providing retailers with relatively smooth network bills, but does not consider the retail bills faced by our customers.
  - The AER's preferred price path ignores that our customers voted overwhelmingly in support of a price path that seeks to smooth *retail* bills.
  - The objectives identified by the AER in setting the price path include no mention of customer preferences, or how it addresses the views expressed by our customers on this issue or how it better supports the NGO.
  - The AER does not consider the current unprecedented low interest rate environment which has resulted in a significantly drop in the revenues of network businesses. Despite the lower revenues it is important businesses have sufficient, predictable and stable cash flows to ensure they meet their expenditure and financing requirements.
  - It is also in customers' long term interests to ensure that network businesses have sufficient cash to invest in the network to maintain the quality of supply, meet their debt obligations and credit rating requirements which results in lower financing costs passed on to customers through the Rate of Return Instrument review, improving long term affordability of our services.
- **Our plans to construct appropriate infrastructure to connect the new airport in Sydney, the Aerotropolis, a project of significant importance to the NSW economy**—the AER has not accepted our $13.2M of our augmentation capex and has disallowed a further $8.8M of our connections capex on the basis that the project is uncertain. It has only allowed $2.1M for us to continue planning and design until such time as the planning and project scope is more certain.
  - After customers provided us with conceptual guidance on how we should invest given the future uncertainty surrounding our gas network, we engaged them on our investment approach for the Aerotropolis.
  - 53% of our customers supported our plans for the Aerotropolis while 34% told us to invest more than we had proposed.
  - While there is general uncertainty regarding this project (as there is with any project) there is no uncertainty as to whether the project is required and costs will be incurred during the 2020-25 AA period.

4 AER, *Overview* | *Draft decision – Jemena Gas Networks (NSW) Ltd Access Arrangement 2020-25*, November 2019, page 40

5 AER, *Attachment 5: Capital expenditure* | *Draft decision – Jemena Gas Networks (NSW) Ltd Access Arrangement 2020-25*, November 2019, page 5-71.

- While the AER notes that we can seek a further allowance when uncertainty is reduced, there is no mechanism within the NGR for us to seek additional allowances during the 2020-25 period.[6]
- Our Revised 2020 Plan demonstrates that this project, which was supported by our customers, is prudent, efficient and rule compliant.

As noted by Professor Cosmo Graham,[7] making decisions which go against the outcomes of direct customer engagement will undermine trust and belief in the legitimacy of the process and weaken incentives for both networks and customers to engage in future engagements.

Recognising that two of our key objectives in developing our 2020 Plan customer engagement program were for customers' views to shape our regulatory proposal and to build customer trust in our regulatory proposal, we believe that it is important for us to maintain the positions we set out in our 2020 Plan where our customer have voted in support of our plans.

We have sought to provide more information to the AER to address its concerns with these elements of our plan. We believe that our proposal will better meet our customers' expectations and the long term interests of customers, because it specifically incorporates the feedback that they provided to us.

The AER's draft decision does not provide us with sufficient capex for the 2020-25 period

Our customers' supported our 2020 Plan as a whole including our proposed capital program which is aimed at reducing risks, maintaining our current service standards and improving affordability. Our forecast capex is lower than our actual capex during the 2015-20 period, and we have sought to constrain our program where possible.

We welcome the AER's decision to accept many aspects of our capex proposal for the 2020-25 AA period. However, we do not agree that the AER's draft decision, which reduces our capex by $108.8M, will provide us with sufficient capex for the 2020-25 period. In particular:

- The AER uses a connection forecasting methodology which is not aligned with an agreed forecasting method developed as part of the recent remittal processes that was only finalised in February 2019.
- There are a number of optimistic assumptions adopted by the AER in estimating meter replacement capex, which result in an under-estimate of the number of meters to be replaced.
- The AER has made significant cuts to our ICT capex—and a number of 'placeholder' decisions—which we require to ensure the ongoing operation of business critical IT systems.
- The AER has only allowed $2.1M of capex for the Aerotropolis project, despite acknowledging that the investment will be required in the 2020-25 period.
- By deferring replacement capex for Newcastle into the 2025-30 AA period, adds to the costs borne by our customers.
- The AER has chosen to apply the opex productivity factor to capitalised overheads, an unprecedented approach and a significant development that merits a formal and separate industry wide consultation.

Our Revised 2020 Plan

In response to the AER's draft decision, we have developed our Revised 2020 Plan.

We are pleased that our Revised 2020 Plan will enable our customers to continue to enjoy the benefits of using gas, whilst also ensuring the continued competitiveness and sustainability of our network in a low-carbon future.

6 We understand that the AER is referring to Rule 80, which allows it to made an advance determination on whether a project will meet new capex criteria. This Rule does not, however, allow the AER to change the 2020-25 allowance or provide additional funding during the period.

7 Professor Cosmo Graham's report, *Regulatory decision making and consumer voices*, is included as Attachment 8.4.

Importantly, our Revised 2020 Plan continues to reflect the preferences expressed by our customers during our engagement program.

Our Revised 2020 Plan incorporates the AER's draft decision where it provides us with sufficient funding to efficiently invest in, and safely and sustainably manage, our network in the long-term interests of our customers[8] or where it requires immaterial amendments to our AA Proposal. Where we have a different view to the AER on how to best meet the long-term interests of our customers, we have explained our response to the AER's draft decision in this document and its associated attachments.

There are some topics that the AER has requested more information on before making its decision on our 2020 Plan. Our Revised 2020 Plan seeks to provide the AER with this additional information. Additionally, our Revised 2020 Plan also takes into account new information since we submitted our 2020 Plan to the AER.

Our Revised 2020 Plan will:

- Deliver even greater price reductions than proposed in our 2020 Plan for all customer groups, made possible by a drop in our funding costs. We will deliver network bill decreases of 15% over the 2020-25 period, or $202 for a typical residential coastal customer. Together with the return of the revenue over-recovery, this will further lower bills—the network component of a typical residential bill will reduce by 21%, or $292.
- Provide our residential and small business customers with a network price path that seeks to counter forecast movements in other parts of the supply chain, primarily wholesale gas prices, which is more likely to provide customers with the smoothest possible retail bills than the AER's proposed price path.
- Ensure that we are able to continue to safely and efficiently operate and maintain our network.
- Provide common minimum levels of service to all customers across NSW.
- Connect approximately 145,000 new customers to our network, enabling us to spread our costs across a larger customer base.
- Offer large-industrial customers the opportunity to reset their charges if they have reduced their peak gas consumption over the past five years by offering a reset of Chargeable Demand.
- Position JGN for an uncertain future by taking appropriate actions now to respond to uncertainty around the long-term future of our network.

To deliver our Revised 2020 Plan, we are seeking to recover $2,268M in reference service building block revenue. Once we adjust for the revenue handback as a result of the AER's remade decision for the 2015-20 AA period and its adjustment determination,[9] our total revenue requirement reduces to $2,099M (see Table OV–1.1).

Table OV–1.1: Comparison of JGN's proposed revenue with AER's draft decision ($2020, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Total revenue requirement (unsmoothed)	2,191	2,009	2,099
Total revenue requirement (smoothed)	2,180	2,003	2,091

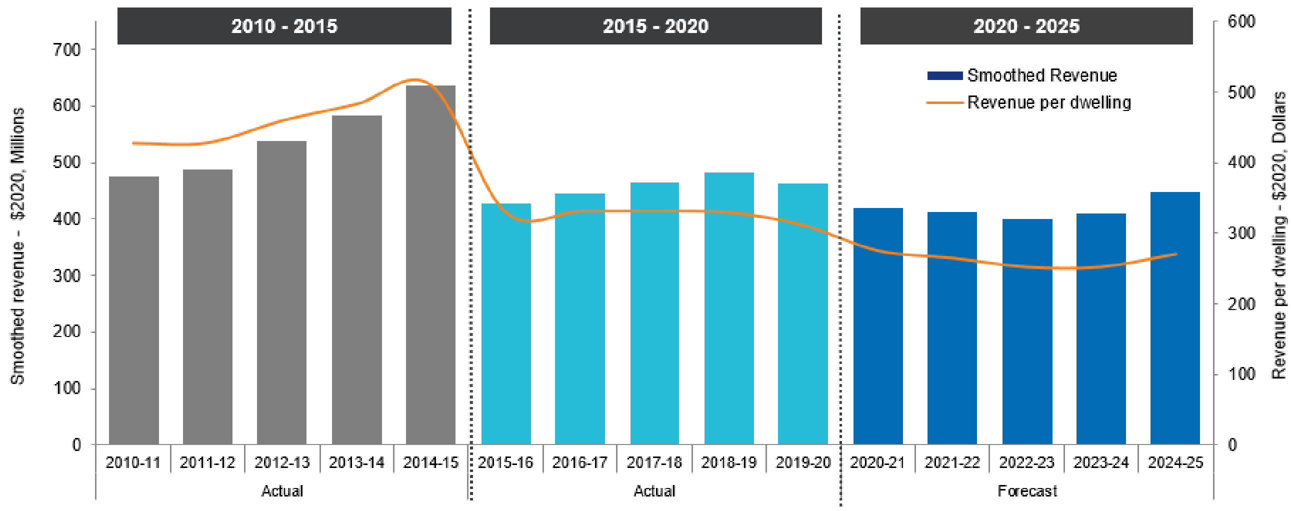
Our Revised 2020 Plan revenue is higher than the AER's draft decision because we have a different view to the AER on some key elements of our 2020 Plan—including on those topics where our customers voted in support of our plans.

Figure OV–1.3 provides a view of our smoothed revenues over the three AA periods from 2010 to 2025. It shows that the revenue required per dwelling has been falling since 2015-16.

8 Should the AER consider changing its position on any of these issues, we would expect the opportunity to make submissions on these matters before the final decision, in accordance with section 28 of the NGL

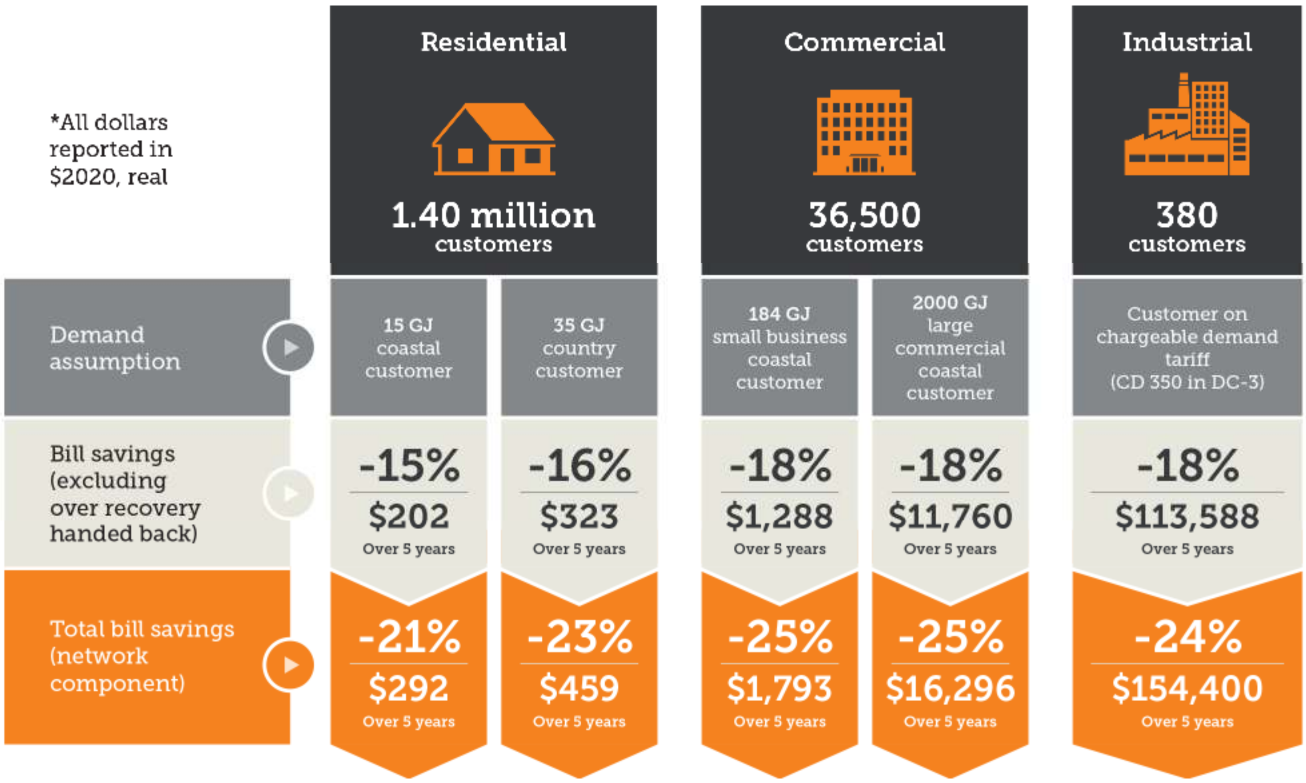
9 AER, *Jemena Gas Networks (JGN): Adjustment Determination – Final Decision*, 28 February 2019.

Figure OV–1.3: Our smoothed revenues



In isolation, our Revised 2020 Plan will result in bill decreases of 15% over the 2020-25 period, or $202 for a typical residential coastal customer. In addition, over 2020-25 we will return some revenue we received in the current period, which will further lower bills. In total over the five years, the network component of a typical residential bill will reduce by 21%, or $292. Our residential country, commercial and industrial customers will benefit from even greater savings. This is shown in Figure OV–1.4.

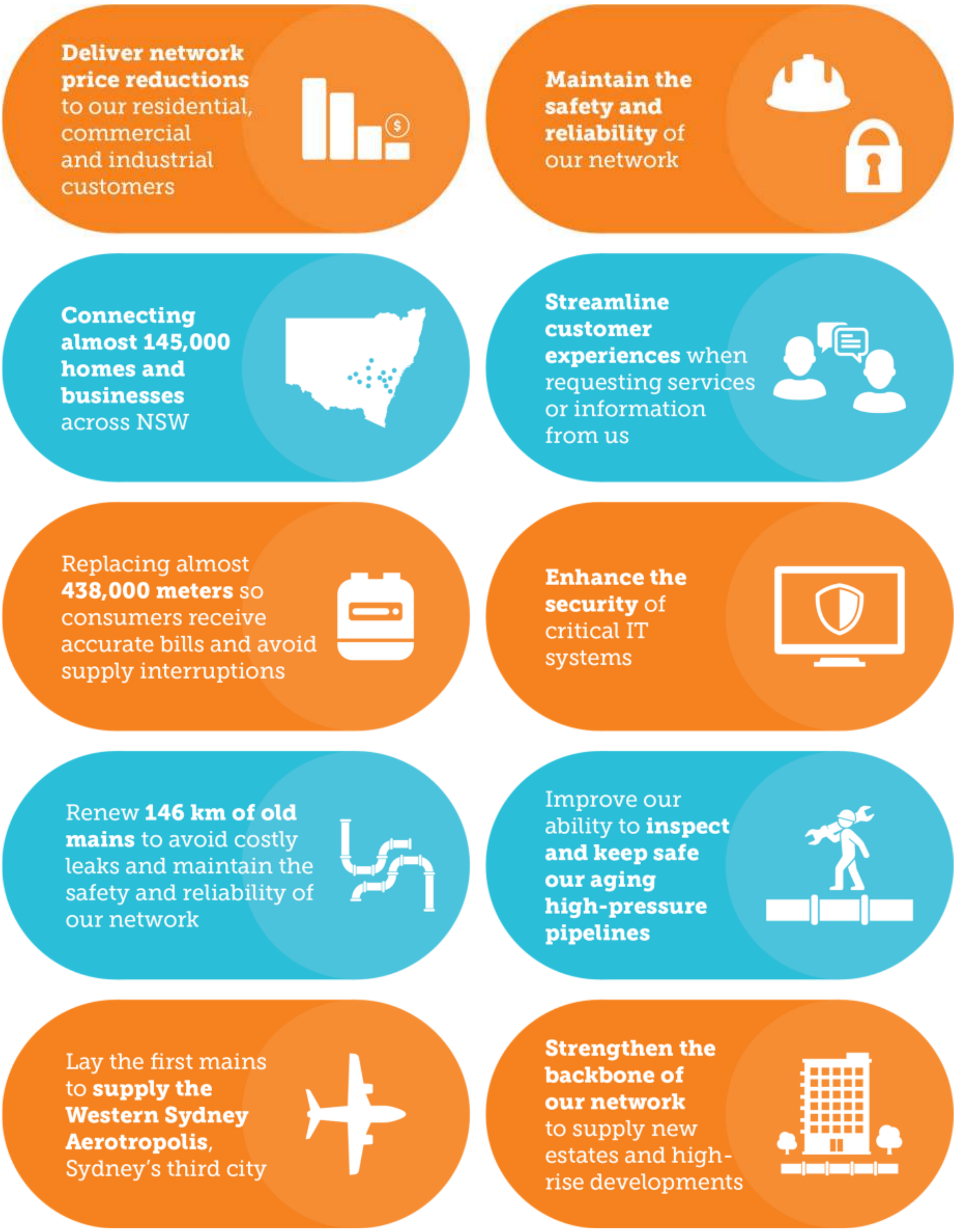
Figure OV–1.4: Network bill impacts of our Revised 2020 Plan



What our Revised 2020 Plan will deliver for our customers

Our Revised 2020 Plan will enable us to continue providing our customers with the safe, reliable and affordable services they expect, and deliver the outcomes set out in Figure OV–1.5.

Figure OV–1.5: What our Revised 2020 Plan will deliver



1. Background

1.1 About JGN's Revised 2020-25 AA Proposal

Jemena Gas Networks (NSW) Ltd has prepared a revised 2020-25 access arrangement (**AA**) proposal (**Revised 2020-25 AA Proposal**) that responds to Australian Energy Regulator's (**AER**) draft decision on JGN's 2020 Plan for the period 1 July 2020 to 30 June 2025.[10]

The Revised 2020-25 AA Proposal comprises the following documents:

— This document, the response to the draft decision (**response to the draft decision,** or the **Revised 2020 Plan**) and all of its associated attachments.

— Further revisions to the AA (which includes a revised RSA) that respond to issues raised in the draft decision.

— The 2020 Plan and all of its associated attachments, provided to the AER on 28 June 2019.[11] For the purposes of brevity, these documents are not attached to this Revised 2020-25 AA Proposal as they have already been provided. The response to the draft decision and its associated attachments supersedes the information previously provided in our 2020-25 AA Proposal dated June 2019 to the extent that there is any conflict.

Our approach to responding to the draft decision involves:

— Accepting components of the draft decision where it:
  - approves sufficient funding to enable us to invest efficiently in, and safely and sustainably manage, the network in the long-term interests of our customers[12]
  - requires immaterial amendments to our proposal.

— Providing additional support for other components of our 2020-25 AA Proposal to address the concerns raised by the AER in its draft decision for its reconsideration.

— Updating our 2020-15 AA Proposal to take into account new information and or circumstances since our 2020 Plan was prepared.

Attachment 1.1 provides a submission matrix that identifies the documents making up JGN's Revised 2020-25 AA Proposal.

1.2 Presentation of financial information

Throughout this Revised 2020 Plan and its associated attachments, all monetary values are reported in the value of a dollar in 2020 and exclude the impacts of inflations unless stated otherwise.

1.3 Attachments

Table 1.1 lists the attachments which provide further background information on our Revised 2020-25 AA Proposal.

10 Clause 60(1) of the National Gas Rules (**NGR**) provides that JGN may submit additions or other amendments to its access arrangement proposal to address matters raised in the access arrangement draft decision. Additional matters may be addressed with the AER's approval (clause 60(2)).

11 The documents submitted to the AER on 28 June 2019 have not been resubmitted to the AER.

12 Should the AER consider changing its position on any of these issues, we would expect the opportunity to make submissions on these matters before the final decision, in accordance with section 28 of the NGL

Table 1.1: Attachments containing background information on our Revised 2020-25 AA Proposal

Attachment	Name	Author
1.1	Document map	JGN
1.2	Confidentiality claims	JGN

2. What our customers have told us

2.1 Our 2020 Plan reflects our customers' views

In designing the engagement program for our 2020 Plan we identified three key objectives, shown in Figure 2.1.

Figure 2.1: Key engagement objectives

To ensure that our customers' views shaped our 2020 Plan, we engaged with a wide range of customers from across NSW over a 20 months—our residential engagement program involved a total of 220 household customers, in 39 deliberative engagement events at nine separate locations across the network. We also engaged with small business and large customers via one on one interviews, forums and webinars.

To ensure transparency when testing topics/options with our customers, we provided individual bill impacts and overall costs showing the collective impacts of choices customers had made throughout the engagement program, and the opportunity to reconsider their preferences.

Our forums were open to, and attended by many, external observers including members of our JGN customer council, the AER and its CCP.

Throughout the course of our engagement program, our customers provided their views and insights on what they want and value about their gas service, and what they would like us to prioritise as we plan for an uncertain future. The feedback that we heard from our customers can be summarised into four key themes show in Figure OV–1.1.

Our 2020 Plan is supported by our customers

Our extensive engagement program enabled us to submit our 2020 Plan to the AER in June 2019 that was clearly influenced, shaped and modified through deep discussions with our customers. In particular, our customers voted in support of:

- Maintaining the current levels of service that we provide to our customers
- Ensuring that gas continues to be available to those who wish to connect to our network
- Our plans to take appropriate actions now to respond to uncertainty around the long-term future of the gas network so that future customers are not unfairly impacted. This includes:
  - our proposal to shorten asset lives for our new investments
  - our investment approach, including our Aerotropolis project
- Our proposed price path, which seeks to achieve customer preferences for a smooth retail bill
- Our 2020 Plan as a whole—90% of our customers attending our deliberative forum voted in support of our 2020 plan.

See Figure OV–1.2 for a summary of customer voting on our 2020 Plan

We are very pleased that many of the submissions to the AER on our 2020 Plan have positively recognised our customer and stakeholder engagement program. This includes positive submissions by the CCP ECA, PIAC, Origin, AGL and EA.

In the period since we submitted our 2020 Plan, we have continued to engage with our customers and interested stakeholders. This has included:

— Engaging with interested stakeholders at the AER public forum on our 2020 Plan, on 7 August 2019. As part of our presentation at the public forum we also invited one of our residential customers who had attended our deliberative forums to provide a customer perspective on our engagement program and our 2020 Plan.
— Holding a deep dive workshop, on 14 October 2019, on our proposal to change asset lives for new investment with the ECA, PIAC, the CCP, and the AER (the outcomes of which are captured in Attachment 2.1).
— Briefing our JGN customer council on the key elements of the AER's draft decision, on 11 December 2019.

2.2 For a few critical issues the AER's draft decision does not reflect preferences expressed by our customers

Although recognising the quality of our engagement, the AER's draft decision has not accepted a number of important elements of our proposal which our customers voted in support of. This includes our:

— Proposal to shorten asset lives for our new investments.
— Plans to construct appropriate infrastructure to connect the new airport in Sydney, the Aerotropolis.
— Proposed price path, which seeks to deliver a smooth retail bill for our residential and small business customers.

Recognising that two of our key objectives in developing our 2020 Plan customer engagement program were for customers' views to shape our regulatory proposal and to build customer trust in our regulatory proposal, we believe that it is important for us to maintain the positions we set out in our 2020 Plan where our customer have voted in support of our plans.

We have sought to provide more information to the AER to address its concerns with these elements of our plan. We believe that our proposal will better meet our customers' expectations and the long term interests of customers, because it specifically incorporates the feedback that they provided to us on our plan.

2.3 Attachments

Table 2.1 lists the additional attachments to our Revised 2020-25 AA Proposal on our customer engagement.

Table 2.1: Revised 2020-25 AA Proposal attachments on our customer engagement

Attachment	Name	Author
2.1	Asset lives – October stakeholder forum	bd infrastructure

3. Our services

Response to the AER's draft decision

3.1 AER draft decision

In our 2020 Plan we set out our proposed changes to the services that we provide to our customers.[13] Our proposed changes are aimed at reducing the complexity and improving the understandability of our services, and include:

- Renaming the Haulage Reference Service to 'Reference Service' and retaining all the associated service offerings as our current single Haulage Reference Service.
- Making changes to our ancillary charges to improve clarity of the activity and cost-reflectivity of the charge, including the addition of am/pm appointments and a clear expedited reconnection service.
- Maintaining our non-reference services, but also for our 'Interconnection of embedded network' service:
  - changing the name to sufficiently differentiate it from services provided by the embedded network providers for commercial and residential high-rise buildings; and
  - including the interconnection of new upstream facilities.

In its draft decision, the AER has accepted our proposed changes to our services for the 2020-25 AA period, with the exception of our proposal to withdraw our hot water metering product from 1 July 2020.

3.2 JGN response to the draft decision

Our response to the AER's draft decision on our pipeline services is summarised in Table 3.1.

Table 3.1: JGN's response to AER draft decision on our services

	AER Draft Decision	JGN response
Reference service	The AER has accepted JGN's proposed single reference service, but has not accepted our proposal to withdraw our hot water metering product.	We accept the AER's draft decision.
Ancillary activities	The AER has accepted proposed changes to ancillary activities, but has instructed us to include the process and parameters for applying our wasted truck visit charge within our 2020-25 AA.	We accept the AER's draft decision.
Non-reference services	The AER has accepted the non-reference services, including the changes to the interconnection of embedded network.	We accept the AER's draft decision.

We accept the AER's draft decision to reject our proposal to withdraw our hot water metering product from 1 July 2020. We discuss this in section 14.2 of this Revised 2020 Plan.

In its decision to accept JGN's ancillary activities, the AER has invited any stakeholders concerned with the combined disconnection/reconnection fee for volume customers to provide evidence to inform its decision.[14] JGN is not aware of any evidence to support splitting the fee. Should the AER receive such evidence and be inclined to split the charge, JGN suggests this be implemented from year 2 prices (2021-22). This is because:

- The process to split the charge would require IT and billing changes, that have to be tested with retailers, which we would be unable to complete between the final decision and 1 July 2020.
- As only a cost pass through event may invoke an intra-year tariff variation, price changes can only occur annually under the annual tariff variation mechanism.

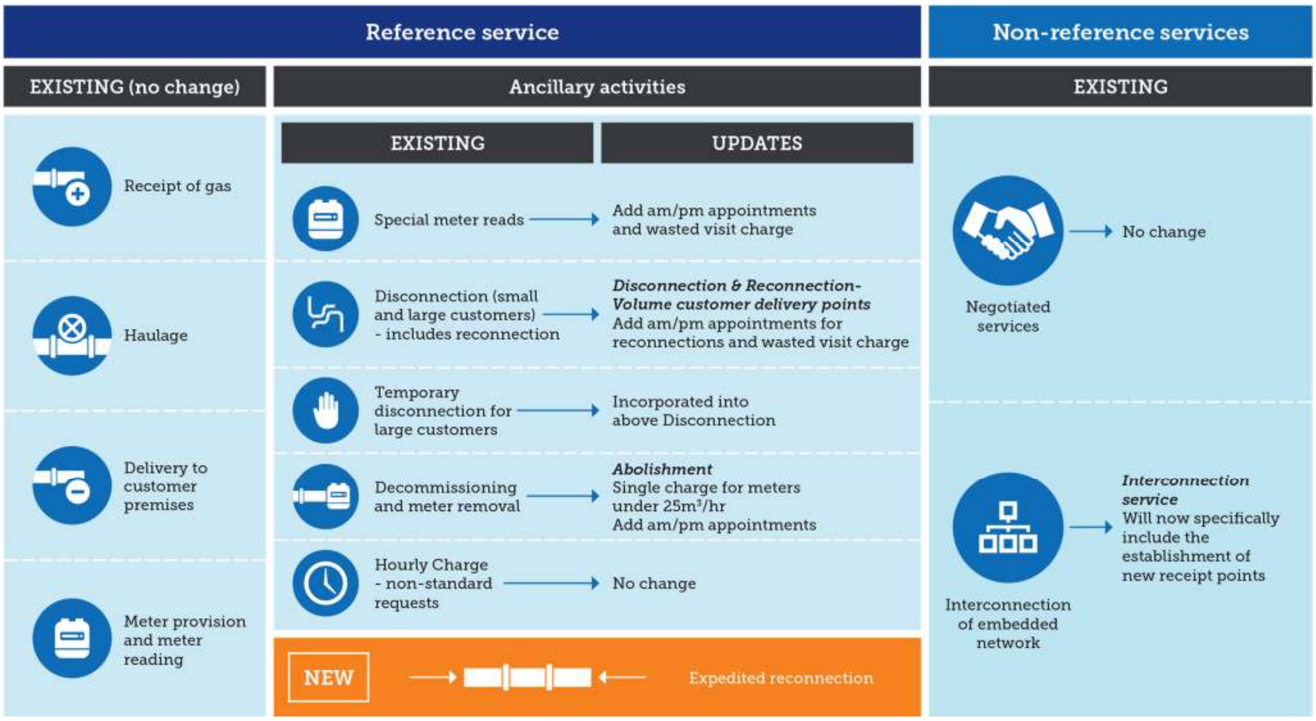
13 See Attachment 4.1 of our 2020-25 AA Proposal.

14 AER, *Attachment 1: Services covered by the access arrangement | Draft decision – JGN Access Arrangement 2020-25*, November 2019, page. 19.

Our proposed services for the 2020-25 AA period are shown in Figure 3.1. This includes a single minor change from our initial proposal to clarify that the am/pm appointments apply to reconnections, but not to disconnections.

We have also included within our 2020-25 AA[15] the process and parameters for applying our wasted truck visit charge. This includes clarification that a wasted visit that occurs where we respond to a customer or retailer request for disconnection or reconnection, expedited reconnection or special meter read and where we are unable to gain safe or unhindered access to complete the requested activity.

Figure 3.1: JGN's current services and proposed services



3.3 Attachments

Table 3.2 lists the attachments to our Revised 2020-25 AA Proposal which provide more detail on our proposed services for the 2020-25 AA period.

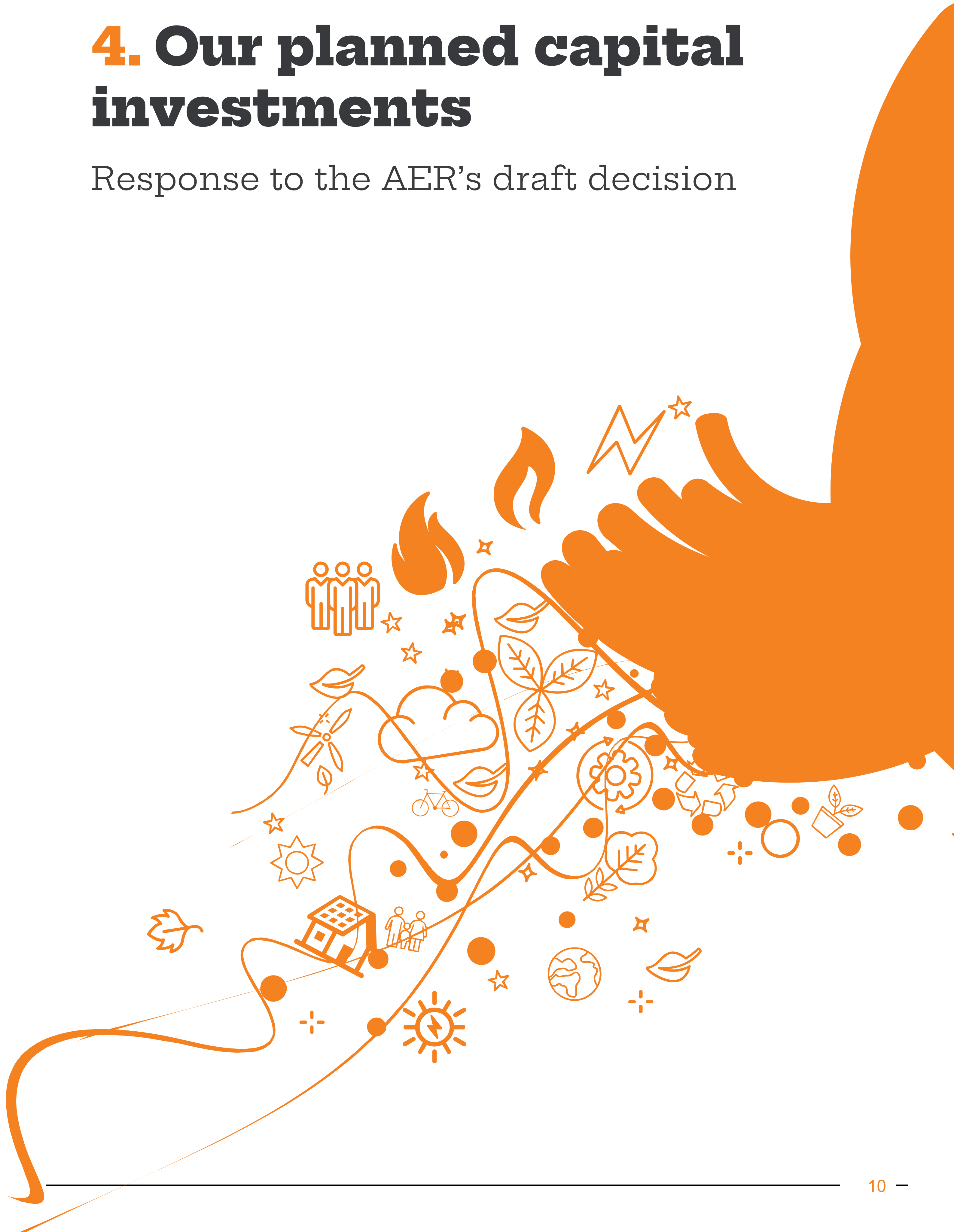
Table 3.2: Revised 2020-25 AA Proposal attachments on our proposed services

Attachment	Name	Author
N/A	2020-25 Access Arrangement	JGN

15 See schedule 4, clause 4.1(j).

4. Our planned capital investments

Response to the AER's draft decision



4.1 AER draft decision

Our 2020-25 capex program is focussed on our customers, reducing risks, maintaining our current service standards and reducing bills. Recognising that some of the investment choices required balancing trade-offs, particularly given the current uncertainty surrounding the future of the gas network, we sought customer guidance and developed our 2020 Plan with customers' preferences in mind.

Our 2020 Plan included a lean capex forecast, which was supported by our customers. We sought to constrain our program where possible, and proposed a reduction in capex despite the recent and forecast growth in our network. We are now supplying 354,000 dwellings more than we did in 2010-11 (a 32% increase) and we are forecasting to supply an additional 196,000 dwellings by 2024-25.

We welcome the AER's decision to accept many aspects of our capex proposal for the 2020-25 AA period, and its assessment of our historical capex for the period 2014-15 to 2018-19 as prudent and efficient. However, we do not agree that the AER's draft decision, which reduces our capex by a further $108.8M, will provide us with sufficient capex for the 2020-25 period.

The AER's draft decision gross capex forecast for the 2020-25 AA period is 12% below our proposed capex – $804.0M compared with $912.8M. The difference between our 2020 Plan and the AER's alternative capex forecast is due to AER disallowances in every category of capex:

- Connections – the AER lowered our proposed connections capex by deviating from its previously agreed forecasting method.
- Meter replacement – the AER assumed that we would be able to defer the replacement of several families of meters, beyond the timeframes we had forecast.
- Facilities and pipes – the AER has disallowed eight programs of work on the basis that insufficient justification was provided.
- IT – the AER requires further justification on our proposed IT capital program to form a view that it is conforming capex.
- Augmentation – the AER reduced the forecast expenditure by $22M[16] (a $22M cut for a $15.2M project) due to planning and asset scope uncertainty relating to the Western Sydney Aerotropolis.
- Mains replacement – the AER deferred the Newcastle mains rehabilitation project by one year, shifting $8.8M of expenditure into the subsequent 2025-30 AA period.
- Other – the AER has disallowed some of our proposed capex on fleet and relocations.
- Overheads – the AER has accepted our methodology for forecasting capitalised overheads, but has adjusted our forecast to account for the same productivity factors used in the opex forecast.

In this response to the draft decision, we have provided the AER with more information on our plans with the aim of demonstrating that our capex proposal is prudent, efficient and represents the best forecast in the circumstances. We have also sought to provide the AER with additional information on our historical corporate overheads and property capex.

Table 4.1 provides an overview of our 2020 Plan capex forecast, the AER's draft decision, and our Revised 2020 Plan forecast.

[16] The AER reduce cut our augmentation forecast by $13.2M and an additional $8.8M from our connections forecast.

Table 4.1: Comparison of JGN's proposed 2020-25 capex to AER's draft decision ($2020, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Connections	387.5	363.9	392.2
Meter replacement	118.0	105.7	117.6
Facilities and pipes	72.2	63.2	71.5
IT	107.2	73.3	101.2
Augmentation	60.8	47.6	62.0
Mains replacement	44.8	36.2	44.6
Other[17]	34.3	30.1	31.2
Overheads	88.1	84.0	85.9
Gross total	**912.8**	**804.0**	**906.2**
Contributions	13.4	12.9	13.1
Net total	**899.5**	**791.1**	**893.1**

In its draft decision, the AER has also rejected our proposal to include the Western Sydney Green Gas trial as speculative capex.

4.2 JGN response to the draft decision

Our Revised 2020 Plan seeks to address the key issues raised by the AER in its draft decision with the aim of demonstrating that our capex forecast represents the best forecast in the circumstances. Table 4.2 summarises the key elements of our response to the AER's draft decision on capex. More detailed responses are contained within Attachment 4.2 and Attachment 4.3.

17 Other includes property, fleet and SCADA (the system which controls our network).

Table 4.2: JGN's response to AER draft decision on capex

	AER draft decision	JGN response
Connections	The AER did not accept our connections capex for our new home, electricity to gas, and Industrial & Commercial tariff market segments. In contrast to our forecasting approach which relied on a consistent averaging period to calculate connection unit rates (using historical costs and volumes), the AER applied the lower of either a four or five year average. The only exception to this was where an even lower unit rate was calculated by excluding years with high costs or volumes. These adjustments reduced forecast capex by $19.6M. The AER also removed $8.8M as a result of its decision on the Aerotropolis (see below) and added $5.8M to reflect that it rejected our proposal to stop offering individual hot water metering. The AER's decision on the volume of new connections is discussed in section 13.	We have continued to use the AER's connection forecasting method developed following the recently concluded (February 2019) merits review and remittal processes. This approach applies a consistent averaging period (as the AER's previously raised concerns about inconsistent averaging periods) and does not exclude higher (or lower) cost years or take into account the increasing cost pressures we face. We show that when we normalise for connection volumes, the AER's forecasting approach materially under-forecast our connections capex forecast for 2018-19 (8.1% less than actuals) while our forecast was much more accurate (3.9% less than actuals). Over 5-years a -8.1% error leads to a forecast $32M below cost. We also updated our forecast to reflect the updated connections forecast, latest unit rate and volume data, and to reflect that we have accepted the AER's draft decision on our individual hot water metering product (see section 14.2).
Meter replacement	The AER's draft decision reduced our forecast meter replacement volumes by making more optimistic assumptions about our meter performance. These assumptions reduced our capex forecast by $8.4M. The AER also adjusted our forecast unit rates for defective hot water meters and meter data loggers to reduce our capex by $3M by removing years with high costs.	We have not accepted the AER's forecast as it applies optimistic assumptions and will result in an under-forecast of replacement volumes. This is shown when the AER's forecast is compared against actual 2019 meter performance data. Modifying the AER's approach to apply assumptions consistently results in a meter replacement volume forecast higher than our proposal. We also do not accept the AER's inconsistent approach to forecasting metering unit rates, for the reasons outlined above in our connections forecast. Lastly, we have updated forecast to reflect the data from 2019.
Facilities and pipes	The AER's draft decision accepted $63.2M of our proposed facilities and pipes capex but was not satisfied that sufficient justification had been provided for eight projects.	We have provided additional information on these eight programs of work which demonstrates that they are justified and the costs are efficient. We note five of these projects relate to forecasts for minor capital works and our ongoing costs to rectify exposed pipeline assets. Even though our network has grown significantly and will continue to grow, and our assets are continuing to age, our forecast is almost 50% less than what we have actually incurred over the last four years in these same programs.

	AER draft decision	JGN response
IT	The AER noted that it has no issues with our overall methodology for estimating IT capex (which was developed using the IT Project Estimation tool) but disallowed $33.9M of our proposed $107.2M of IT capex on the basis that it required more justification of our proposed expenditure. It also included 'placeholder' decisions for a number of projects, totalling $7.4M.	We have provided additional justification for our proposed IT capex program which demonstrates that this capex is prudent, efficient and complies with Rule requirements.
Augmentation	The AER: — Rejected our proposed capex on the Aerotropolis project on the basis of planning and asset scope uncertainty, only allowing $2.1M to continue planning and design work, noting that JGN can seek a further allowance under the rules as certainty is reduced. The AER also removed $8.8M in associated connections capex. — Requested that we provide an update on projects (which it has accepted) due for completion in 2020-21 and 2021-22 — Expressed concerns with our approach to demonstrating that our proposed augmentation capex complies with Rule 79(2)(b) – that the incremental revenue exceeds the capex.	In our Revised 2020 Plan we: — Highlight that while there is general uncertainty regarding the Aerotropolis project (as there is with any project), as recognised by the AER, there is no uncertainty as to whether the project is required and costs will be incurred. — Provide updated information on our plans and capex forecast, which demonstrates that our estimate is the best possible in the circumstances. — Explain that, without triggering an early and full AA process, there is no mechanism in the NGR for us to seek an additional allowance for the 2020-25 period. — Provide the updated information that the AER has requested on projects due for completion in 2020-21 and 2021-22. We have updated cost estimates (where we have newer estimates) and removed a project that is no longer required. We have also added a new project to allow renewable gas to be injected into our network. — Address each of the concerns that the AER has identified in its draft decision on our approach to demonstrating compliance with Rule 79(2)(b).
Mains replacement	The AER accepted our proposed mains replacement capex, with the exception of the Newcastle mains rehabilitation project. Although it considers that the project is prudent and the cost reasonable it has deferred the project by one year, shifting this expenditure into the 2025-30 AA period. It has deferred the project on the basis that the mains can continue to be effectively managed for another year to maximise the use of the existing asset.	We have not changed the timing of our Newcastle mains replacement project. We have provided analysis which shows that our proposed timing delivers better outcomes for customers (by reducing customer frustration with our deteriorating mains), and that delaying the project by one year will cost customers over $1M (as the financing cost savings from deferral are more than outweighed by the additional future opex costs).

	AER draft decision	JGN response
Other[18]	The AER has disallowed some of our proposed capex on fleet and asset relocations. The AER reduced our forecast relocation expenditure on the assumption that this is a legacy issue.	While we do not agree with the AER's revised fleet forecast we have not had sufficient time to respond on all matters raised by the AER in the six week window provided. As a result, we have accepted the AER's revised fleet forecast. For relocations we clarify that this expenditure is not a legacy issue but as a result of arrangements with third parties (typically government authorities) where we are not provided with a right guaranteeing the location of our assets. Given the planned level of infrastructure spending by the NSW government it is unlikely that these costs will be lower than the historical average.
Capital contributions	The AER accepted our forecast of capital contributions, but made adjustments to the reflect reductions to our forecast capex.	Our methodology for forecasting capital contributions is unchanged from that accepted by the AER. However, we have updated our capital contributions forecast for 2018-19 actual data and to be consistent with our revised capex forecast.
Capitalised overheads	Accepted our methodology for forecasting capitalised overheads, but has adjusted our forecast to account for the same productivity factors used in the opex forecast	We do not agree with the AER's unprecedented draft decision to apply a productivity factor to capitalised overheads. We consider that: — It is not appropriate to apply an *<u>opex</u>* productivity factor to *<u>capex</u>*—the model used to estimate an appropriate productivity factor for JGN excludes capitalised overheads, and there is no reasonable basis upon which this factor should be applied to capex. Any productivity factor that the AER applies should be based on appropriate benchmarking of relevant costs, derived from empirical data. — Such a significant departure in the AER's approach should be the subject of a formal consultation process—yet the AER has undertaken no such engagement. More information on our response is provided in Attachment 4.3.
Historical capex	The AER has accepted our historical capex as conforming subject to us providing more information on the overspend against allowance for capitalised overheads and property. It has requested more information on differences in inflation inputs in our capex and roll-forward models.	We have provided more detail on our historical capitalised overheads and property capex, which demonstrates that our expenditure has been prudent and efficient, and we have explained the reason for the difference in inflation inputs in our capex and roll-forward models. More information on our response is provided in Attachment 4.3.
Western Sydney Green Gas Trial	Rejected our proposal to include the Western Sydney Green Gas trial as speculative capex on the basis that the project "*is unlikely to meet the conforming capex criteria*", citing rule 79(2).	We consider that the AER's decision to not approve the creation of the speculative account is inconsistent with the NGR and the achievement of the NGO. Accordingly, we maintain in our revised proposal that a notional fund is created in accordance with rule 84 and clause 6.1 of JGN's AA (see Attachment 4.2 for more details).

18 Other includes property, fleet, SCADA (the system which controls our network), and asset relocations.

Section 4.4 lists the attachments which provide more details on our response to the AER's decision on our historical and forecast capex.

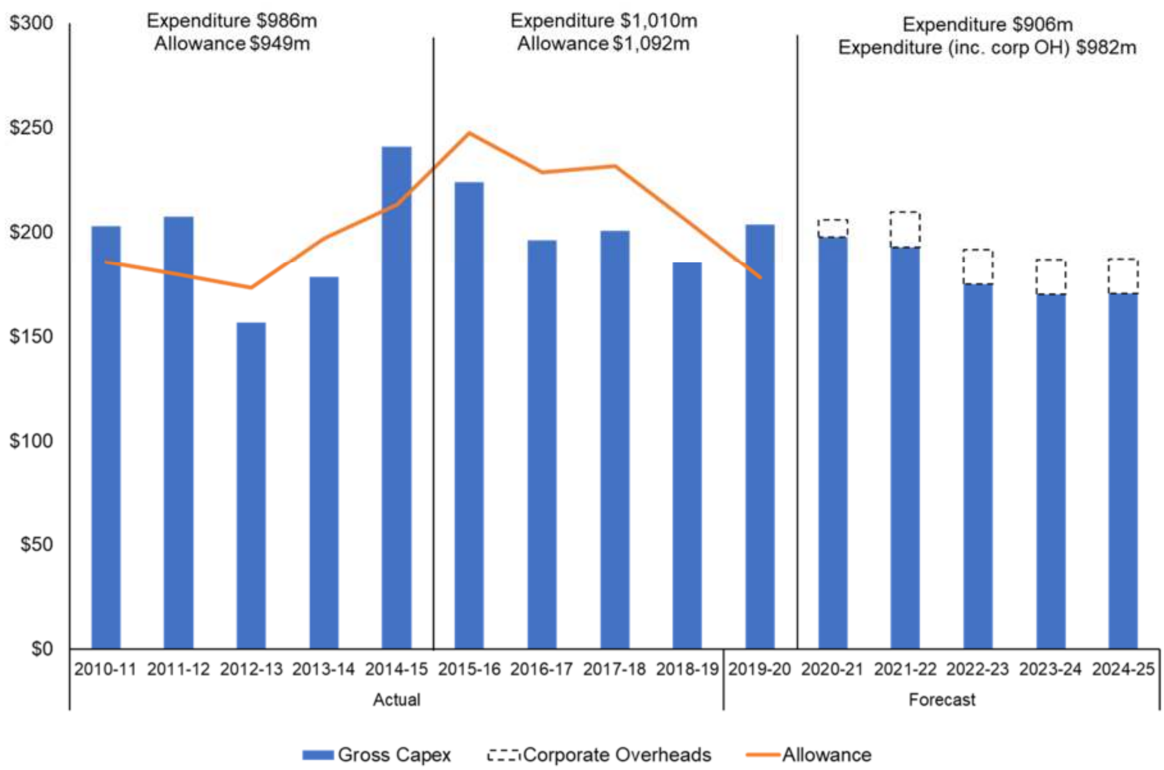
4.3 Revised proposal capex forecast

A breakdown of our revised proposal capex forecast for the five year period is set out in Table 4.3. Attachment 4.2 includes a detailed discussion on the basis for over revised forecast.

Table 4.3: Capex over the 2020-25 period ($2020, $M, including overheads)

	2020-21	2021-22	2022-23	2023-24	2024-25
Connections	93.1	85.6	86.5	86.5	89.0
Meter replacement	20.0	21.4	25.9	31.1	33.5
Facilities and pipes	28.5	23.3	7.8	7.7	13.4
IT	15.6	22.4	26.4	18.8	18.0
Augmentation	18.1	25.8	14.5	10.6	0.6
Mains replacement	13.6	6.8	7.6	10.8	11.6
Other[19]	8.9	7.6	6.2	4.6	4.3
Gross total	**197.8**	**192.9**	**174.9**	**170.1**	**170.5**
Contributions	4.5	1.9	2.0	2.9	1.9
Net total	**193.3**	**191.1**	**172.9**	**167.2**	**168.6**

Figure 4.1: Our capex over time ($2020, $M, including overheads)



19 Other includes property, fleet and SCADA (the system which controls our network).

4.4 Attachments

Table 4.4 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision and our revised capex forecast.

Table 4.4: Revised 2020-25 AA Proposal attachments on our forecast capex

Attachment	Name	Author
4.1	Capex forecast model	JGN
4.2	Response to the AER's draft decision – Capital expenditure	JGN
4.3	Response to the AER's draft decision – Property costs, overheads and inflation in the capex and roll-forward models	JGN
4.4	Matrix of capex supporting information	JGN
4.5	Connections and meter replacement capex source information	JGN
4.6	Mains replacement and facilities and pipes source information	JGN
4.7	IT capex source information	JGN
4.8	Augmentation capex source information	JGN
4.9	Report of factual findings – property costs [CONFIDENTIAL]	KPMG

5. Our opex requirements

Response to the AER's draft decision

5.1 AER draft decision

Opex is a major component of our building block costs. In developing our opex forecast for the 2020-25 AA period, we undertook a thorough assessment of our costs to ensure that our forecast represented the amount required to meet our obligations and customers' expectations efficiently, and to promote the long term interests of our customers.

We welcome the AER's decision to accept most aspects of our opex proposal for the 2020-25 AA period. The AER's draft decision alternative opex forecast for JGN is $1,096.6M, which is ~4.8% higher than the opex we proposed in our 2020 Plan but ~2.1% lower than the amended opex proposal we submitted on 8 October 2019.[20]

Table 5.1: Comparison of JGN's proposed opex with AER's draft decision, including debt raising costs ($2020, $M)

	JGN's 2020 Plan	Amended JGN opex proposal	AER's draft decision	Revised 2020 Plan
Forecast opex	1,046	1,120	1,097	1,092

The areas of difference between the AER's draft decision forecast and our 2020-25 AA Proposal opex forecast are:

- Selection of base year—the AER accepted our opex forecasting method but has relied on 2017-18 as an efficient base year for opex forecasting. This increases our opex forecast, but reduces our efficiency carryover amount.
- Inflation—the AER has used a more recent inflation forecast from the Reserve Bank of Australia (**RBA**), which impacts the escalation of base year (2017-18) into $2020.
- Rate of change—the AER has forecast a lower input cost trend than we forecast in our 2020 Plan and has also forecast lower output growth due to reductions in customer numbers and mains length flowing in from its assessment of our forecast capex and demand.
- Government levies specific forecast— we updated our government levies specific forecast with two additional licence fees that are subject to a 'true-up' in JGN's reference tariff variation mechanism—the pipeline licence fees and the Energy and Water Ombudsman NSW (**EWON**) fees.[21] The AER has accepted the inclusion of pipeline licence fees only.
- Debt raising costs—the AER has estimated lower debt raising costs based on a report by its consultant (Chairmont).

In response to AER concerns during its review of our 2020 Plan that 2018-19 was not an appropriate base year due to one-off factors impacting opex in that year, on 8 October 2019 we submitted an amended opex and ECM carryover forecast to the AER which used 2017-18 as the base year. Except for the change to the base year, we did not change any other assumptions or inputs to develop this amended opex forecast. The key areas of difference between the AER's draft decision forecast and our amended opex forecast therefore include inflation, rate of change, the government levies specific forecast and debt raising costs (as explained in the above bullet points).

In its draft decision, the AER noted that it considers its alternative estimate of total opex meets the opex criteria subject to JGN updating it to reflect:

- An updated demand forecast (discussed in section 13)
- The most up to date cost of replacement gas for forecasting the unaccounted for gas (**UAG**) allowance.

20 We submitted an amended opex and Efficiency Carryover Mechanism (**ECM**) carryover forecast to the AER on 8 October 2019. The opex forecast used 2017-18 (rather than 2018-19) as base year, in response to AER concerns that 2018-19 was not an appropriate base year due to one-off factors impacting opex in that year. See Attachment 5.3 for details.

21 We provided this in our response to Information Request IR018

5.2 JGN response to the draft decision

Our response to the key elements of the AER's draft decision on opex is summarised in Table 5.2.

Table 5.2: JGN's response to AER draft decision on opex

	AER draft decision	JGN response
Base year		
Selection of base year	Preference for 2017-18 as base year due to transformation costs impacting 2018-19 opex.	We accept the AER's draft decision.
Adjustments to base year	The AER accepted our proposed adjustments to base year, including expensing of corporate overheads. It relied on the movement in provisions reported in our AA Regulatory Information Notice (**RIN**) and has used a more recent inflation forecast from the RBA (August 2019 Monetary Policy).	We accept the AER's draft decision, but we have updated the base year adjustment for movements in provisions in 2017-18 to correct an error in our AA RIN. We have also used a more up to date inflation forecast from the RBA (November 2019 Monetary Policy). We have updated the corporate overheads adjustment based on our Revised AA Proposal capex model.
Trending of base year		
Input cost trend	The AER has rejected our proposal to take the average of BIS Oxford Economics (**BISOE**) and Deloitte Access Economics (**DAE**) estimate of real wages growth. It has instead relied only on the DAE forecast.	We have retained the approach in our 2020 Plan, and have updated our estimate with a more up to date forecast from BISOE as: – Statistically an average is likely to produce more accurate projections for labour costs over the period. – The AER has been inconsistent in way in it has evaluated CPI and wage price increase (**WPI**) forecast expectations. Whereas it uses a best estimate of expected CPI in the PTRM and has found that this estimate need not be the same as the best estimate of outturn CPI, for WPI, it has assessed the forecaster's accuracy against outturn WPI. We think that both forecasts should be considered on the same basis. – Using averages is consistent with the AER's approach to use averages over a single forecasting method for electricity networks' output escalation (where it relies on an average of benchmarking models), return on debt (which is based on an average of data curves), and in assessing electricity networks' relative opex efficiency.
Output growth trend	The AER has accepted our proposed method for forecasting output growth but has updated its forecast of customer numbers and mains length to reflect its draft decision on capex.	We accept the AER's draft decision, but we have updated our customer numbers and mains length forecast in line with our Revised 2020-25 AA Proposal capex forecast.
Productivity	The AER has accepted our proposed productivity.	We have retained the approach set out in our 2020 Plan, but note the interrelationship between input cost trend and productivity.

	AER draft decision	JGN response
Specific forecasts		
Unaccounted for gas (**UAG**)	Accepted our forecast UAG costs, but has instructed JGN to update the estimate based on the most up to date cost and volume data.	We accept the AER's draft decision. We have updated the forecast of UAG costs in line with the AER's instructions.
Government levies	Partially accepted our forecast of government levies but has renamed these costs 'licence fees' to ensure consistency with the 'licence fee factor' in JGN's tariff variation mechanism. It does not consider that EWON fees should form part of the 'licence fee factor'. On this basis it has not removed EWON fees from base year opex, meaning that a specific forecasts of these costs is not required.	We accept the AER's draft decision. We have updated the specific forecast of government levies (now termed licence fees and mains tax) to include only mains tax, authorisation fees, pipeline fees. We accept the AER's decision that EWON fees should not form part of the 'licence fee factor', and have kept these fees within base year opex.
Debt raising costs	The AER has substituted our estimate of debt raising costs with its own.	Our consultant (CEG) has identified significant errors in the analysis that the AER has relied on in coming to its draft decision. Additionally, the AER's analysis is based on a non-transparent approach which we cannot validate or commented upon. On this basis we do not accept the AER's draft decision. We have retained our current approach and developed an updated forecast of debt raising costs, based on the method that we proposed in our 2020 Plan.
Step changes		
Corporate overheads	Accepted JGN's half year adjustment to ensure JGN's proposed change to treatment of corporate overheads is not overstated in 2020-21.	We accept the AER's draft decision. We have updated the step change to align with the updated base year adjustment for corporate overheads.
Pigging and inspection costs	The AER has accepted our proposed change in treatment of pigging and inspection costs from capex to opex.	We accept the AER's draft decision.

Section 5.4 lists the attachments which provide more details on our revised opex proposal.

5.3 Revised proposal opex forecast

Our revised forecast opex (excluding debt raising costs) for the 2020-25 AA period is $1,092M, which is approximately $5M lower than the AER's draft decision, and $29M lower than our 2020-25 AA amended proposal. Our revised opex proposal reflects the minimum funding necessary to deliver the operating programs that support the services our customers' value.

Table 5.3 provides a build-up of each component of our opex forecast for the 2020-25 period.

Table 5.3: Opex forecast for 2020-25 AA period ($2020, $M, exc. DRC)[1]

	2015-20			2020-25 period					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Base year opex	183.3			187.6	187.6	187.6	187.6	187.6	937.8
Additional opex associated with expensing corporate overheads				16.7	16.7	16.7	16.7	16.7	83.3
Less specific forecasts (licence fees, UAG, debt raising costs)	(27.0)			(27.0)	(27.0)	(27.0)	(27.0)	(27.0)	(135.0)
Adjusted Base Opex	**156.3**			**177.2**	**177.2**	**177.2**	**177.2**	**177.2**	**886.1**
Trending the base opex	n/a			2.0	4.0	6.0	8.1	10.4	30.6
Specific forecasts	n/a			33.4	32.0	33.7	34.2	33.8	167.1
Step changes	n/a			(8.3)	0.0	3.3	1.3	3.1	(0.6)
Total				**204.3**	**213.2**	**220.3**	**220.9**	**224.5**	**1,083.1**

(1) Numbers may not add due to rounding.

5.4 Attachments

Table 5.4 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision and our revised opex forecast.

Table 5.4: Revised 2020-25 AA Proposal attachments on our forecast opex

Attachment	Name	Author
5.1	Opex model	JGN
5.2	RFM – Pigging costs	JGN
5.3	Response to the AER's draft decision – Operating expenditure	JGN
5.4	Review of the Australian Energy Regulator's approach to JGN's cost escalators	CEPA
5.5	Review of AER wage forecast comparison	BISOE
5.6	Labour cost escalation forecasts to 2024-25	BISOE
5.7	The cost of arranging debt issues	CEG

6. Capital base

Response to the AER's draft decision

6.1 Regulated asset base

6.1.1 AER draft decision

The value of the assets we use in providing our services is known as our capital base, or regulated asset base (**RAB**). This represents the unrecovered capex that we have incurred to provide services to our customers. In our 2020 Plan we estimated that the value of our asset base at the start of the 2020-25 period would be $3.35B ($ nominal), and that it will increase by approximately 15.8%, to $3.88B ($ nominal) by the end of the period.

In its draft decision, the AER has accepted the opening value of our capital base as $3.35BN ($ nominal).[22] The AER has accepted our proposed actual capex as conforming for the 2015-20 period, but has noted that capex for 2018-19 and 2019-20 are estimates and that it will update this with actual 2018-19 capex and an updated estimate of 2019-20 capex in its final decision.[23]

The opening capital base is rolled forward by indexing it for inflation, adding conforming net capex, and subtracting depreciation. The AER's draft decision has not approved JGN's proposed roll forward of the capital base. In its draft decision, the AER has estimated the closing value of our capital base (at 30 June 2025) as $3.79B ($ nominal). The key drivers for the AER's decision are that it has not approved our proposed inputs to the roll forward of the capital base, including our:

- Forecast capex—the AER reduced our forecast net capex by $108.4M ($2020) (discussed in more detail in section 4).
- Estimate of inflation—the AER has updated our proposed expected inflation rate of 2.42% per annum with its own forecast of 2.45% (discussed in section 7.4)
- Depreciation forecast—the AER reduced our depreciation forecast by $30.8M ($nominal) in line with its assessment of our forecast depreciation (discussed in section 8).

Table 6.1 provides an overview of our 2020 Plan capital base roll-forward, the AER's draft decision, and our Revised 2020 Plan forecast.

Table 6.1: Forecast value of JGN's RAB ($nominal, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Opening RAB at 1-July-15	2,980	2,980	2,980
Opening RAB at 1-July-20	3,353	3,353	3,331
Closing RAB at 30-June-25	3,883	3,794	3,850

6.1.2 JGN response to the draft decision

Our response to the AER's draft decision on our capital base is summarised in Table 6.2.

22 The AER amended the 2019–20 Weighted Average Cost of Capital (**WACC**) input in our Roll Forward Model (**RFM**) to be consistent with the remittal Post-Tax Revenue Model (**PTRM**) for the 2015–20 period. This update did not have a material impact on the proposed opening capital base as at 1 July 2020.

23 AER, *Attachment 2: Capital base | Draft decision – JGN Access Arrangement 2020-25*, November 2019

Table 6.2: JGN's response to AER draft decision on our capital base

	AER draft decision	JGN response
Opening capital base as at 1 July 2020	Accepts our proposed opening capital base, but has amended the 2019–20 WACC input in our RFM to be consistent with the remittal PTRM for the 2015–20 period, and requires updated actual capex for 2018-19 and latest estimate of 2019-20 capex.	We accept the AER's draft decision. As required by the AER, we have developed a revised estimate of our opening capital base to: — remove assets not used to provide pipeline services from the RAB[24] — incorporate 2018-19 actual capex — incorporate our revised estimate of 2019-20 capex
Projected capital base for 2020-25 period	Not approved. The AER has forecast the closing RAB at $3.794BN ($ nominal), which is $88.8M lower than our proposal. This is due to its — reduced net forecast capex ($108.4M lower) — use of a higher inflation rate (2.45% vs our proposal of 2.42%) — decision on depreciation, which is $30.8M lower than our proposal.	We have developed a revised forecast of our capital base over the 2020-25 AA period which incorporates our updated opening RAB, revised forecast of net capex (see section 4), inflation (see section 7.4) and depreciation forecasts (see section 8).
Capital base at commencement of 2025-30 period	Accepts our proposal to establish the opening capital base as at 1 July 2025 using the approved depreciation schedules based on forecast capex over the 2020–25 AA period. Considers that our 2020-25 AA should further provide clarity that the capital base as at 1 July 2025 is to be established using the approved depreciation schedules (straight-line) based on forecast capex at the asset class level	We accept the AER's draft decision. We have updated clause 3.10(b) the our 2020-25 AA accordingly.

6.1.3 Revised proposal capital base forecast

We have updated our capital base forecast in our Revised 2020-25 AA Proposal.

Closing capital base as at 30 June 2020

We have developed a revised estimate of our closing capital based as at 30 June 2020, which has been updated to:

- Remove assets from the RAB that are not used for providing pipeline services[25]
- Incorporate 2018-19 actual net capex
- Incorporate our revised estimate of 2019-20 net capex.

We have not included any conforming assets from a speculative investment account, classified any assets as redundant assets, or re-used any assets previously classified as redundant.

24 We have identified sites included in the land building asset class of our RAB that are no longer used to provide pipeline services. The allocation of the sites to asset classes is included in Attachment 6.2. We have had KPMG verify the value of the sites that we have removed from the opening RAB. KPMG's report is included as Attachment 6.3.

25 See footnote above.

Table 6.3 sets out the roll forward of the capital base over the 2015-20 AA period. Attachment 6.4 provides the roll forward of the Wilton to Wollongong trunk pipeline capital base, the Wilton to Newcastle trunk pipeline capital base and the NSW distribution capital base.

Table 6.3: Roll forward of combined total capital base over the 2015-20 AA period ($nominal, $M)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	2,980.2	3,091.7	3,162.0	3,240.0	3,279.4
Add net capex at start of year (1)	101.0	90.3	94.1	82.4	98.0
Add indexation (2)	52.0	47.0	62.2	59.3	76.0
Add net capex at end of year (1)	102.7	91.6	95.8	83.8	100.2
Less straight-line depreciation (3)	(144.2)	(158.6)	(174.0)	(186.1)	(173.3)
Adjustment	0.0	0.0	0.0	0.0	-49.4
Closing balance	**3,091.7**	**3,162.0**	**3,240.0**	**3,279.4**	**3,331.0**

(1) Net capex = gross capex (including equity raising costs) less capital contributions less asset disposals.
(2) Indexation = (opening balance + net capex at start of year) x Consumer Price Index (**CPI**) for the year.
(3) Depreciation for the current period is consistent with AER approved forecast straight-line depreciation.
(4) These notes also apply to the other tables in this section.

The closing balance for 2019-20 is then adjusted for the reallocation of existing pigging and inspection costs to constitute the opening capital base for the 2020-25 AA period.

Projected capital base for 2020-25 AA period

We have developed a revised forecast of our capital base over the 2020-25 AA period, set out in Table 6.4, which incorporates our revised capex, inflation and depreciation forecasts.

Attachment 6.4 provides separated capital bases for the Wilton to Wollongong trunk pipeline, the Wilton to Newcastle trunk pipeline and the NSW distribution system.

Table 6.4: Roll forward of combined total capital base over 2020-25 AA period ($nominal, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening balance	3,331.0	3,458.5	3,577.2	3,671.7	3,752.3
Add net capex	199.0	201.5	186.9	185.4	191.3
Add indexation of capital base	79.3	82.3	85.1	87.4	89.3
Less straight-line depreciation	(150.8)	(165.1)	(177.6)	(192.2)	(182.5)
Closing balance	**3,458.5**	**3,577.2**	**3,671.7**	**3,752.3**	**3,850.4**

6.2 Tax asset base

6.2.1 AER draft decision

In its draft decision the AER has accepted our approach to establishing the opening tax asset base (**TAB**) for the 2020-25 AA period but has corrected some errors in the CPI adjustment in the TAB roll-forward.

It has also accepted our proposal to apply the diminishing value method for tax depreciation to the opening TAB value and all new depreciable assets (except for forecast capex associated with buildings, leasehold improvement and in-house software). It has also accepted our proposed standard tax asset lives, and our implementation of the tax review.

Table 6.5 provides an overview of our 2020 Plan TAB roll-forward, the AER's draft decision, and our Revised 2020 Plan forecast.

Table 6.5: Forecast value of JGN's TAB ($nominal, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Opening RAB at 1-Jul-15	944.8	944.8	944.8
Opening RAB at 1-Jul-20	1,242.4	1,241.9	1,227.7
Closing RAB at 30-Jun-25	1,479.3	1,392.7	1,467.0

6.2.2 JGN response to the draft decision

Our response to the AER's draft decision on the TAB roll-forward is provided in Table 6.6.

Table 6.6: JGN's response to AER draft decision on TAB roll-forward

	AER draft decision	JGN response
Opening TAB	Partially accepted. The AER made some CPI adjustments to the actual capex added to the TAB. The AER noted that the opening tab will be updated to reflect 2018-19 actuals and the latest estimate of 2019-20 capex.	We have developed a revised estimate of our opening TAB to: – accept the AER's CPI adjustments – incorporate 2018-19 actual capex – incorporate our revised estimate of 2019-20 capex
Projected TAB for 2020-25 period	Accepted our proposal to continue using diminishing value method to depreciate assets for tax purposes. Accepted standard tax asset lives. Accepted JGN's accelerated depreciation for the residual pigging and inspection costs for tax purposes.	We accept the AER's draft decision. We have updated our TAB roll forward to reflect our revised capex forecast.

6.2.3 Revised proposal tax asset base forecast

Table 6.7 and Table 6.8 detail our Revised 2020-25 AA Proposal roll-forward of the tax asset base over the 2015-20 and 2020-25 AA periods.

Table 6.7: Roll forward of tax asset base over the 2015-20 AA period ($nominal, $M)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening balance	944.8	1,023.5	1,074.1	1,130.1	1,169.9
Add capex[(1)]	204.6	181.7	189.1	174.7	195.0
Less depreciation	(125.9)	(131.1)	(133.1)	(134.9)	(137.2)
Closing balance	1,023.5	1,074.1	1,130.1	1,169.9	1,227.7

(1) Gross capex less disposals

Table 6.8: Roll forward of tax asset base over the 2020-25 AA period ($nominal, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25
Opening balance	1,227.7	1,296.7	1,360.3	1,402.4	1,434.6
Add capex	201.5	201.3	187.0	186.6	191.3
Less depreciation	(132.4)	(137.7)	(144.9)	(154.4)	(159.0)
Closing balance	1,296.7	1,360.3	1,402.4	1,434.6	1,467.0

6.3 Attachments

Table 6.9 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision and our revised capital base forecasts.

Table 6.9: Revised 2020-25 AA Proposal attachments on our capital base

Attachment	Name	Author
6.1	RAB and TAB roll forward model	JGN
6.1	Contaminated sites asset classes	JGN
6.3	Factual findings report – contaminated sites [CONFIDENTIAL]	KPMG
6.4	Capital base	JGN

7. Rate of return

Response to the AER's draft decision

7.1 Rate of return overview

The AER published its new Rate of Return Instrument in December 2018. This Instrument is binding on JGN and the AER in a Distribution Determination. Our 2020-25 AA Proposal was based on applying the Rate of Return Instrument in full.

In our 2020-25 AA Proposal, we used a placeholder rate of return (specified as a nominal vanilla weighted average cost of capital (**WACC**)) of 4.96% for the 2020-25 AA period. This rate was calculated using the methods and assumptions set out in the AER's Rate of Return Binding Instrument.[26]

In its draft decision, the AER has accepted our method for calculating the WACC but has updated our estimate using updated market data and a different inflation assumption.

Table 7.1 sets out the placeholder rate of return in our 2020 Plan, the AER's draft decision, and our Revised 2020 Plan.

Table 7.1: Comparison of JGN's proposed placeholder rate of return to AER's draft decision

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Nominal vanilla WACC[27]	4.96%	4.46%	4.60%

A discussion of the components of the AER's draft decision on the rate of return and our response to the draft decision is included within the following sections. In addition, we also discuss the AER's draft decision and our response on inflation and equity raising costs.

7.2 Return on debt and equity

7.2.1 AER draft decision

The AER's draft decision return on debt is a placeholder of 4.36%, which is 0.16% lower than the placeholder in our 2020 Plan. Its draft decision return on equity is 4.60%, which is 1.02% lower than our 2020 Plan.

Table 7.2: Comparison of JGN's proposed return on debt and equity parameters and the AER's draft decision

Parameter	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Return on debt[28]	4.52%	4.36%	4.55%
Risk free rate	1.96% [Placeholder]	0.94% [Placeholder]	1.01% [Placeholder]
Equity beta	0.60	0.60	0.60
MRP	6.10%	6.10%	6.10%
Return on equity	5.62%	4.60%	4.67%

Note: The risk-free rate is estimated using a placeholder averaging period. The estimate will be updated for the averaging period proposed in confidential Attachment 7.8 of our 2020-25 AA Proposal, which the AER has accepted in its draft decision.

In its draft decision, the AER accepted our proposed debt averaging period. The difference in return on debt is driven by changes in market conditions since we submitted our 2020 Plan.

The difference in the return on equity is driven by significant reductions in the risk free rate since we submitted our 2020-25 AA Proposal in June 2019. In its draft decision the AER accepted JGN's proposed equity averaging period—the AER will replace the placeholder risk free rate with our actual risk-free rate using the

26 AER, *Rate of return instrument*, 17 December 2018.

27 This shows the value in the first year (2020-21) of the next AA period

28 This shows the return on debt of the first year (2020-21) of the next AA period.

method outlined in clause 4 of the Instrument and the averaging period which it has accepted when it makes its final decision.

7.2.2 JGN response to the draft decision

Our response to the AER's draft decision on the return on debt and equity is provided in Table 7.3.

Table 7.3: JGN's response to AER draft decision on return on debt and equity

	AER draft decision	JGN response
Return on debt	The AER accepted our approach but updated the placeholder annual debt observations in the forecast period to reflect latest market information.	We accept the AER's draft decision and have updated the placeholder annual debt observations in the forecast period using the latest available actual debt observation for JGN, noting that the AER will update it annually with our nominated averaging periods in 2020-25.
Return on equity	Accepted, updated placeholder to reflect movements in the risk free rate since we submitted our initial proposal.	We accept the AER's draft decision but have updated the risk free rate using a more recent placeholder averaging period, noting that the AER will update it in the final decision with our nominated averaging period.

7.2.3 Revised proposal return on debt and equity forecasts

We estimate a placeholder return on debt of 4.55%, and a placeholder return on equity of 4.67%. These have been determined by applying the Rate of Return Instrument. The values of these parameters are detailed in Table 7.2.

7.3 Revised proposal rate of return

Table 7.4 sets out the components of JGN's Revised 2020-25 AA Proposal placeholder rate of return. The return on debt, return on equity and nominal WACC estimates will be updated to reflect the actual averaging periods set out in Attachment 7.8 of JGN's 2020-25 AA Proposal (submitted to the AER in June 2019), consistent with the AER's Rate of Return Binding Instrument.

Table 7.4: Revised 2020-25 AA Proposal placeholder rate of return for 2020-25[1]

Parameters	Value (%)
Return on equity	4.67%
Return on debt	4.55%
Inflation	2.38%
Leverage	60.0%
Gamma	58.5%
Corporate tax rate	30.0%
Nominal vanilla WACC / Rate of return	**4.60%**

(1) Return on Equity is estimated using placeholder averaging period 30 September - 25 October 2019. This will be updated for JGN's actual averaging period. Return on debt is based on placeholder future observations which will be updated for JGN's actual debt averaging periods for each year in 2021-25.

7.4 Inflation

7.4.1 AER draft decision

The AER's draft decision includes an estimate of expected inflation of 2.45%, which is higher than the 2.42% included within our 2020-25 AA Proposal.

The AER has estimated its rate as the geometric average of 10 annual expected inflation rates. It uses the RBA's forecasts of inflation for the 2020-21 and 2021-22 years, and the mid-point of the RBA's inflation target band (i.e 2.5%) for the remaining eight years.[29] The AER will update its estimate of expected inflation in its final decision based on this method and RBA's latest available forecasts.

7.4.2 JGN response to the draft decision

Our response to the AER's draft decision on the return on debt is provided in Table 7.5.

Table 7.5: JGN's response to AER draft decision on inflation

	AER draft decision	JGN response
Inflation	The AER's draft decision includes an estimate of expected inflation of 2.45%, which is higher than the 2.42% included within our 2020 Plan.	As we noted in our 2020 Plan, although we have adopted the AER's preferred RBA method for the 2020-25 AA period as a placeholder forecast, we recommend that the AER re-consider its approach where its inflation forecasts are significantly above actual inflation to avoid the risk of undercompensating the businesses for their financing costs.

Attachment 7.2 includes a more detailed discussion on our response to the AER's draft decision on inflation.

7.4.3 Revised proposal inflation forecast

We have updated the placeholder forecast inflation of 2.38% applying AER's method and the most recent estimated inflation for 2020-21 and 2021-22 from the Nov 19 RBA Monetary Policy.

7.5 Equity raising costs

In our 2020-25 AA Proposal, we forecast equity raising costs using the AER's approach applied in the PTRM. Using this approach we forecast nil equity raising costs. The AER's draft decision is consistent with our proposal.

29 AER, *Attachment 3: Rate of return | Draft decision – Jemena Gas Networks (NSW) Ltd Access Arrangement 2020-25*, November 2019, page 7

7.6 Attachments

Table 7.6 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER’s draft decision and our placeholder rate of return.

Table 7.6: Revised 2020-25 AA Proposal attachments on our proposed rate of return

Attachment	Name	Author
7.1	Rate of return model	JGN
7.2	Response to the AER’s draft decision - Inflation	JGN

8. Depreciation and asset lives

Response to the AER's draft decision

8.1 AER draft decision

Depreciation represents the decline in the value of an asset over time. Including forecast regulatory depreciation in our revenue requirement enables us to recover our investment in our network over time in accordance with the economic lives of our assets. It enables us to fund the purchase of new replacement assets so that we can continue to provide our services in the future.

In its draft decision, the AER has not approved our forecast regulatory depreciation, and has instead determined an amount of $411M ($ nominal) over the 2020-25 AA period, which is ~7% less than our 2020-25 AA Proposal.

Table 8.1: Comparison of JGN's proposed forecast regulatory depreciations with AER's draft decision ($nominal, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Straight line depreciation	877	846	868
Less indexation	(434)	(434)	(423)
Forecast regulatory depreciation	**442**	**411**	**445**

In its draft decision, the AER has:

- Accepted our proposed method to calculate the regulatory depreciation allowance—straight line depreciation less annual inflation indexation of the projected capital base.
- Partially accepted our proposed changes to asset lives for new investments, but rejected most of the changes we proposed—it accepted our proposal to reduce the standard asset life of 'meters' and 'meter reading devices' from 20 years to 15 years but rejected our proposed changes to the asset lives of 'trunks', 'HP mains', 'MP mains' and MP services'.
- Accepted our proposed change to a year-on-year tracking approach for calculating real straight line depreciation for existing assets, but has corrected an error in our depreciation model.
- Accepted our proposal to accelerate depreciation of the remaining value of the existing pigging and inspection costs as at 1 July 2020—by creating a new asset class *(Existing pigging and inspection costs)*—but has corrected an input error in our proposed pigging costs roll forward model.
- Reduced our forecast regulatory depreciation to account for its:
  - expected inflation rate of 2.45% but has noted that this is a placeholder that it will update in the final decision (see section 7.4).
  - draft decision on our forecast capex for the 2020-25 AA period.

8.2 JGN response to the draft decision

Our response to the key elements of the AER's draft decision on regulatory depreciation and asset lives is summarised in Table 8.2.

Table 8.2: JGN's response to AER draft decision on regulatory depreciation and asset lives

	AER draft decision	JGN response
Calculation of the regulatory depreciation allowance	Accepted our proposal to use real straight-line depreciation less annual inflation indexation of the projected capital base to forecast our regulatory depreciation allowance over the 2020-25 AA period.	We accept the AER's draft decision.
Regulatory asset lives	Only accepted our proposed changes to asset lives for new metering assets. Rejected our proposal to change asset lives for new investments for trunks, high pressure mains, and medium pressure mains and services on the basis that it does not consider that there is sufficient evidence that the economic lives of these assets has reduced.	We do not agree with the reasoning provided by the AER in rejecting our proposal. We also note that our customers voted in support of our proposal to change asset lives for new investments. We have retained our proposal to shorten asset lives for new investments, and provide additional evidence for the AER to consider before finalising its decision on this important topic. See section 8.2.1.
Year-on-year tracking	Accepted our proposed change to a year-on-year tracking approach for calculating real straight line depreciation on our existing assets as at the start of the 2020-25 AA period but corrected an error in our depreciation model	We accept the AER's draft decision.
New asset class *(Existing pigging and inspection costs)*	Accepted our proposed new asset class which will accelerate the depreciation of the remaining value of the existing pigging and inspection costs as at 1 July 2020, but corrected an input error in our pigging costs roll forward model.	We accept the AER's draft decision.
Regulatory depreciation for 2020-25 AA period	Reduced our forecast regulatory depreciation to account for: — its forecast inflation of 2.45% (a placeholder) — its reduced capex forecast for the 2020-25 AA period	We have developed an updated forecast of regulatory depreciation which is greater than the AER's draft decision. It reflects: — an updated placeholder forecast inflation of 2.38% — our Revised 2020-25 AA Proposal capex forecast. — our proposed asset lives for new investments.

8.2.1 Proposed asset lives for new investments

While the AER has accepted our proposed change to metering asset lives, it has not accepted changes to the asset lives of our trunk mains, and medium pressure mains and services. The AER has stated that it does not consider that there is sufficient evidence that the economic lives of these assets has reduced.

Our Revised 2020-25 AA Proposal does not incorporate the AER's draft decision on our proposed changes to asset lives. We believe that it is imperative that we act now to ready ourselves for the low carbon future and recover any new investment in our network in a reasonable time frame.

The AER's draft decision on asset lives:

— Does not consider in any detail the preferences expressed by our customers on this topic—our customers strongly supported us taking these actions. They recognised the benefits to future customers. In the case of our asset lives proposal, they were aware of the marginal reduction in our short-term price savings needed to make this possible.

- Does not recognise that this change is required to ensure that our efficient investment incentives are preserved during the 2020-25 period—the task here is to adopt standard asset lives that provide us with the correct investment incentive as we invest capex during the 2020-25 period. The AER's decision must ensure we have a reasonable expectation of recovering our costs and a normal return during that period.
- Does not recognise that our proposal is exactly what the Nation Gas Law and the depreciation criteria in the NGR intend the regulated depreciation allowance to do, and what good regulatory practice and precedent support.
- States that the reduction in economic lives of our assets is speculative at this point in time on one hand, but relies on the highly speculative assumption that hydrogen '*could have a substantial positive impact on the future of gas distribution networks*' in rejecting our proposal. This reasoning is also contrary to its decision to exclude the Western Sydney Green Gas Trial from the speculative capex account on the basis that '*the integration of hydrogen as a fuel requires rule and law changes*' and it's reading of the NGL definition of natural gas is that it precludes hydrogen.[30]
- Does not recognise that we cannot wait to act, or that there is little downside to acting early—it is difficult to believe that an objective observer could conclude that there was no material risk of asset stranding from the material presented.
- Does not recognise that our proposal seeks a profile of cost recovery that supports lower gas prices in the future when everyone expects our customers to be facing higher costs across the gas supply chain—there is no argument about whether decarbonisation policies will have an impact on gas prices, the debate is about the timing of the impact or about the best ways of mitigating the impact.

A more detailed discussion on our response to the AER's draft decision on asset lives is included in the Attachment 8.2.

8.3 Revised proposal regulatory depreciation forecast

Table 8.3 summaries our revised forecast of regulatory deprecation over the 2020-25 AA period. Attachments 8.1 and 12.1 provide the underlying calculations.

Table 8.3: Forecast regulatory depreciation over 2020-25 AA period ($nominal, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Straight line depreciation	150.8	165.1	177.6	192.2	182.5	868.1
Less indexation	(79.3)	(82.3)	(85.1)	(87.4)	(89.3)	(423.4)
Regulatory depreciation	**71.5**	**82.8**	**92.4**	**104.8**	**93.3**	**444.8**

Table 8.4 sets out forecast regulatory depreciation for the 2020-25 AA period by capital base, which has been calculated in accordance with our response to the AER's draft decision.

Table 8.4: Forecast regulatory depreciation by capital base over 2020-25 AA period ($nominal, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Wilton-Wollongong trunk	0.1	0.1	0.1	0.1	0.1	0.4
Wilton-Newcastle trunk	0.4	0.5	0.6	0.7	0.8	3.1
NSW distribution network	71.1	82.2	91.8	104.0	92.3	441.3
Total	**71.5**	**82.8**	**92.4**	**104.8**	**93.3**	**444.8**

30 AER, *Attachment 5: Capital expenditure | Draft decision – Jemena Gas Networks (NSW) Ltd Access Arrangement 2020-25*, November 2019, page 5-71.

8.4 Attachments

Table 8.5 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER’s draft decision, our revised regulatory depreciation forecast and our proposed asset lives for new investments.

Table 8.5: Revised 2020-25 AA Proposal attachments on regulatory depreciation and asset lives

Attachment	Name	Author
8.1	Depreciation model	JGN
8.2	Response to the AER’s draft decision - Asset lives for new investments	JGN
8.3	Using asset lives to manage stranded asset risks	Incenta
8.4	Regulatory decision making and consumer voices	Prof. Cosmo Graham
8.5	Jemena NSW gas distribution network - hydrogen future study	GPA Engineering
8.6	2019-2070 scenario based outlook for JGN gas demand	Core Energy
8.7	Planet positive: Mirvac’s plan to reach net positive carbon by 2030	Mirvac
8.8	Running on empty: How to keep NSW fuelled for the future	EnergyQuest

9. Corporate income tax

Response to the AER's draft decision

9.1 AER draft decision

Company tax is a cost for all companies. The regulatory framework enables network companies to recover the efficient tax costs from customers as adequate compensation for the cost of tax is necessary to ensure that sufficient funds are available to meet the tax obligations.

In its draft decision, the AER has accepted our proposed method for calculating the corporate income tax allowance, including our proposed tax depreciation method and depreciation rates and the value of the 1 July 2020 opening tax asset base (**TAB**) (with minor adjustment). The AER has adjusted a number of inputs to the corporate income tax calculation to reflect its draft decision on other building block components. As a consequence, the AER's adjusted estimate of the tax building block is $5.7M which is approximately 64% below what we proposed in our 2020-25 AA Proposal.

Table 9.1: Comparison of JGN's 2020-25 forecast of the tax building block with the AER's draft decision ($2020, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Tax building block	16.0	5.7	8.3

9.2 JGN response to the draft decision

Our response to the key elements of the AER's draft decision on corporate income tax is summarised in Table 9.2. Our response on the TAB is included in section 6.2.

Table 9.2: JGN's response to AER draft decision on corporate income tax

	AER draft decision	JGN response
Value of imputation credits	The AER accepted our gamma proposal which was consistent with the 2018 Rate of Return Instrument.	We accept the AER's draft decision
Corporate income tax	The AER accepted our approach to calculating our forecast corporate income tax, but reduced opening TAB as at 1 July 2020 (see section 6.2) and the adjustments it made to other building blocks, which affect revenues and which in turn impact the tax calculation.	We have developed an updated forecast of corporate income tax, which reflects our Revised 2020-25 AA Proposal building block revenue and capex, and our updated estimate of the TAB as at 1 July 2020.

9.3 Revised proposal corporate tax forecast

We have updated our corporate income tax forecast to reflect our:

- Revised 2020-25 AA Proposal forecast building blocks revenue.
- Updated estimate of the opening TAB as at 1 July 2020 (see section 6.2).

Table 9.3 shows the tax building block for the 2020-25 AA period.

Table 9.3: Tax building block for the 2020-25 AA period ($2020, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Taxable income	6.6	12.6	17.5	23.1	6.6	66.3
Corporate income tax	2.0	3.8	5.3	6.9	2.0	19.9
Less value of imputation credits	(1.2)	(2.2)	(3.1)	(4.0)	(1.1)	(11.6)
Tax building block	0.8	1.6	2.2	2.9	0.8	8.3

(1) Taxable income = revenue requirement plus contributions less opex less interest expense less tax depreciation, as per PTRM (included as Attachment 12.1)

(2) Tax building block is equal to taxable income x benchmark tax rate x (1 – benchmark imputation credits).

The tax building block is calculated in the PTRM consistent with the 2018 Rate of Return Instrument and AER's recommendations in its recent tax review. The calculation for the 2020-25 AA period is consistent with the formula set out in rule 87A.

9.4 Attachments

The tax building block calculation is contained within the PTRM (Attachment 12.1).

10. Revenue adjustments

Response to the AER's draft decision

10.1 AER Draft Decision

Revenue adjustments are made to building block costs to deal with incentive schemes and other adjustments needed to give effect to rule requirements.

In our 2020 Plan we proposed two revenue adjustments—an ECM carryover amount and a handback to our customers of revenue earned over the 2015-20 AA period confirmed after the AER's final decision for that period.

Table 10.1 provides an overview of the revenue adjustments that we proposed in our 2020 Plan, the AER's draft decision, and our Revised 2020 Plan forecast. The AER's draft decision revenue adjustments total -$178.62M, which is ~66% lower than the revenue adjustments we proposed in our 2020 Plan but ~0.6% higher than the amended proposal we submitted on 8 October 2019.[31]

Table 10.1: Comparison of JGN's proposed revenue adjustments to AER's draft decision ($2020, $M)

	JGN's 2020 Plan	Amended JGN proposal	AER's draft decision	Revised 2020 Plan
ECM	61.8	(10.6)	(9.9)	(11.2)
Over-recovery	(169.1)	(169.1)	(168.7)	(168.9)
Total revenue adjustment	(107.3)	(179.7)	(178.6)	(180.1)

Our amended proposal made two changes to the ECM compared to our 2020 Plan in order to maintain consistency with our opex forecast. It:

- Changed our opex base year from 2018-19 to 2017-18.
- Removed one-off transformation costs in 2018-19 from the 'non-recurrent efficiency gain' component in ECM.
- Updated the movements in provisions for 2015-18 to align with the RIN and a minor correction to 2017-18 provisions.

In its draft decision, the AER:

- Accepted our amended opex and ECM proposal and made updates to our movements in provisions and licence fees.
- Accepted the -$169M adjustment to 2020-21 unsmoothed building block revenue to account for the handback to our customers of revenue earned over the 2015-20 AA period, but updated it for its latest placeholder WACC and forecast inflation.

10.2 JGN response to the draft decision

Our response to the key elements of the AER's draft decision on our proposed revenue adjustments is summarised in Table 10.2.

31 As explained in section 5, in response to AER concerns that 2018-19 was not an appropriate base year due to one-off factors impacting opex in that year, on 8 October 2019 we submitted an amended opex and ECM carryover forecast to the AER which used 2017-18 as the base year.

Table 10.2: JGN's response to AER draft decision on our proposed revenue adjustments

	AER draft decision	JGN response
ECM		
One off adjustments	Consistent with its opex decision to use 2017-18 as base year, we resubmitted the ECM with 2017-18 treated as the base year and removed 2018-19 transformation costs from the 'non-recurrent efficiency gain'. The AER accepted this approach.	We accept the AER's draft decision
Other updates	The AER made updates to: — inflation using a more recent RBA forecast (August 2019) and consistent with the opex model — licence fee costs in our ECM calculation to be consistent with the costs recovered through the automatic adjustment in JGN's tariff variation mechanism in the 2015-20 period — movements in provisions consistent with our submitted RIN	We have updated our ECM carryover amount to reflect: — more recent inflation forecast (November 2019) consistent with our revised opex model — actual 2018-19 audited opex including specific forecasts and movements in provisions — 2017-18 movement in provisions based on corrected RIN data
Handback of over-recovery		
Hand back of over-recovery	The AER accepted our proposal as it was in line with the AER's decision from February 2019 which established the quantum of the hand back.	We accept the AER's draft decision

10.3 Revised proposal revenue adjustments

We have developed a revised forecast of the ECM for the 2020-25 AA period. Our revised forecast:

— Uses more recent inflation forecast from the RBA Monetary Policy consistent with the opex forecast.
— Includes updates for 2018-19 actual opex, UAG costs, licence fees and movements in provisions.
— Incorporates corrected provisions data for 2017-18.
— Retains the -$169M adjustment as accepted by the AER to the 2020-21 unsmoothed building block revenue to account for the handback to our customers of revenue earned over the 2015-20 AA period.

We are forecasting a negative carryover amount of $11M when applying the ECM—that amount is deducted from our required revenue over the 2020-25 AA period, as summarised in Table 10.3. The calculation of this carryover amount is detailed in Attachment 10.1.

Table 10.3: ECM carryover amounts ($2020, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
ECM Carryover amount	(4.9)	(8.6)	5.0	-	(2.7)	(11.2)

10.4 Attachments

Table 10.4 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our revenue adjustments for the 2020-25 AA period.

Table 10.4: Revised 2020-25 AA Proposal attachments on revenue adjustments

Attachment	Name	Author
10.1	ECM model	JGN

11. Incentive schemes to apply in the 2020-25 AA period

Response to the AER's draft decision

11.1 AER Draft Decision

In our 2020 Plan we proposed to retain the ECM which currently applies to JGN. The ECM provides us with a continuous incentive to identify and deliver improvements to opex efficiency.

We also proposed a Capital Expenditure Sharing Scheme (**CESS**), similar in design to the scheme that applies for the Victorian gas networks, with some modification to reflect the feedback we received from stakeholders and the AER (e.g. by excluding new connection related capex). In our 2020 Plan we also proposed a suite of six measures and targets for the contingent payment index, which were chosen for their relevance to our NSW circumstances.

In its draft decision, the AER has:

- Approved our proposal to apply an ECM in the 2020-25 AA period, but has made some minor amendments:
  - to make the ECM consistent with version 2 of the Efficiency Benefit Sharing Scheme for electricity service providers and other gas distribution business equivalent incentive mechanisms.
  - it has changed the formula to reflect its preferred base year, 2017-18.
  - to clause 12.1(i) of our AA, to reflect its draft opex decision.
- Consistent with its decision to exclude EWON fees from the 'licence fee factor amount' in JGN's tariff variation mechanism, EWON fees will not be excluded from the operation of the ECM.
- Accepted our proposal to introduce a CESS, including the contingent payment mechanism, but requires the following modifications:
  - Remove the fixed principle (in clause 13.2 of the AA).
  - Update the capex forecast in clause 13.1(h)(iv) to reflect the draft decision capex forecast for the 2020-25 AA Period.
  - Add a new clause 13.1(i)(iv) that clarifies the application of a discount rate for deferred capex projects
  - Revise the proposed targets in clause 13.1(g) to remove outliers.
  - Revise the mathematical formulas in clause 13 to ensure that they operate as intended.
- It also asked us to:
  - Review the proposed CESS targets used internally.
  - Further justify using an 80–100 range for the contingent payment mechanism rather than 90–100.

11.2 JGN response to the draft decision

Our response to the AER's draft decision on our pipeline services is summarised in Table 11.1.

Table 11.1: JGN's response to AER draft decision on incentive schemes

	AER Draft Decision	JGN response
ECM		
Application of ECM in 2020-25 AA period	The AER has accepted the application of the ECM but has made minor amendments to ensure consistency with version 2 of the EBSS for electricity service providers and other gas distribution business equivalent incentive mechanisms.	We accept the AER's draft decision. We have updated our proposed 2020-25 AA to reflect the AER's draft decision, but we have updated the table in clause 12.1(i) to reflect our proposed opex forecast for the 2020-25 AA period.

	AER Draft Decision	JGN response
Exclusions from ECM in 2020-25 AA period	The AER accepted our proposed exclusions from the ECM. In line with its draft decision that EWON fees should not be included within the 'licence fee factor' in JGN's tariff variation mechanism, the AER has not allowed EWON fees to be excluded from the ECM.	We accept the AER's draft decision.
CESS		
Application of CESS in 2020-25 AA period	The AER accepted the CESS, including JGN's proposal to exclude connections capex from the operation of the scheme.	We accept the AER's draft decision
CESS formulae	The AER accepted the modifications to the CESS formulae to correct minor errors, and to exclude connections capex from the operation of the scheme. The AER also requested that we amend clause 13.1 to align with the CESS model and to insert a new clause on WACC.	We largely accepted the AER's draft decision. We have made changes to the formulae for greater consistency with the mechanics of the CESS model. These changes largely incorporate feedback provided by the AER on 10 December 2019
Contingent payment mechanism	The AER accepted the mechanism, but asked for further rationale, including why the range for the contingent payment factor should not be 90–100.	We have retained the 80–100 range for the contingent payment factor because it is consistent with the historical volatility of actual performance
Service performance Key Performance Indicators (**KPIs**)	The AER accepted the service performance KPIs proposed by JGN.	We accept the AER's draft decision
KPI targets	The AER asked JGN to revise the proposed KPI targets by removing outliers and reviewing them against internal targets.	We accept removal of outliers; however, we have not updated the KPI targets after reviewing internal targets. In addition, to ensure consistency of the logic is maintained when using historical KPIs that now exclude outliers, we also propose that outliers are removed from actual performance.
KPI weightings	The AER accepted our proposed KPI weightings.	We accept the AER's draft decision
Fixed principle	The AER rejected our proposed fixed principle on the basis that the CESS should not automatically apply for two AA periods	Varied our proposed fixed principle to make clear that it relates only to incorporating any CESS benefit or penalty from performance over the 2020–25 AA Period into subsequent allowed revenues as is consistent with the CESS methodology

Attachment 11.1 includes a detailed response to the AER's draft decision on the CESS, and our associated revised CESS proposal for the 2020-25 AA period.

11.3 Attachments

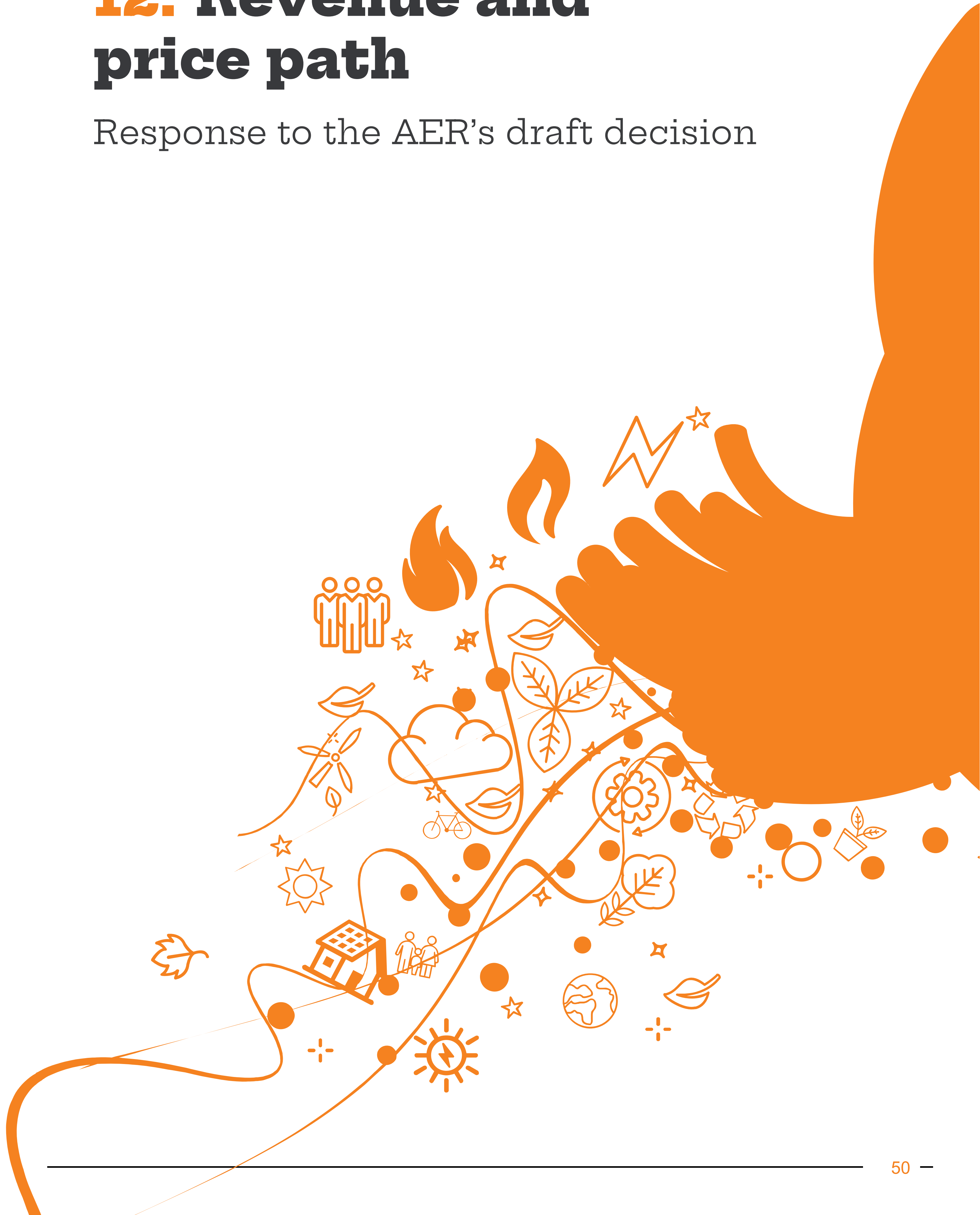
Table 11.2 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision on incentive schemes for the 2020-25 AA period.

Table 11.2: Revised 2020-25 AA Proposal attachments on revenue adjustments and incentive schemes

Attachment	Name	Author
11.1	Response to the AER’s draft decision – CESS	JGN
11.2	Illustrative CESS model	JGN

12. Revenue and price path

Response to the AER's draft decision



12.1 Revenue

12.1.1 AER draft decision

The AER's draft decision revenue allowance for JGN is $2,171M ($nominal), which is 8.3% lower than the revenue we proposed in our 2020 Plan.

Table 12.1: Comparison of JGN's proposed revenue with AER's draft decision ($ nominal, $M)

	JGN's 2020 Plan	AER's draft decision	Revised 2020 Plan
Total revenue requirement (unsmoothed)	2,367	2,171	2,266
Total revenue requirement (smoothed)	2,343	2,158	2,246

The lower revenue allowance reflects the AER's draft decision on the building block costs.

12.1.2 JGN response to the draft decision

Our response to the AER's draft decision is contained within sections 4 to 10.

12.1.3 Revised proposal revenue forecast

Table 12.2 details our Revised 2020 Plan unsmoothed and smoothed reference service revenue and X factors for the 2020-25 AA period. We have prepared this forecast using the AER's PTRM in accordance with rule 76,[32] and in developing these forecasts, the total revenue requirement represents only costs which are attributable to the Reference Service in accordance with the JGN Cost Allocation Methodology (**CAM**) (provided in Attachment 6.5 of our 2020 Plan) and rule 93.

Table 12.2: Revenue and price build up from building block elements ($2020, $M)[1]

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Reference service						
Return on capital	149.5	152.1	154.2	155.1	155.3	766.3
Regulatory depreciation	69.9	78.9	86.1	95.4	82.9	413.3
Opex	206.0	214.9	222.0	222.6	226.2	1,091.7
Net tax allowance	0.8	1.6	2.2	2.9	0.8	8.3
Incentive scheme adjustment	(4.9)	(8.6)	5.0	-	(2.7)	(11.2)
Building block revenue requirement (excluding revenue handback)	421.3	438.9	469.6	475.9	462.6	2,268.3
Revenue handback (repayment of over-recovered revenue in RY16-20)	(168.9)	-	-	-	-	(168.9)
Total reference service revenue requirement (including revenue handback) – unsmoothed	252.4	438.9	469.6	475.9	462.6	2,099.4
X factors[2]	21.25%	2.25%	3.25%	-1.75%	-9.02%	

32 JGN's PTRM is included as Attachment 12.1.

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Total reference service revenue requirement – smoothed	419.0	412.1	400.9	409.8	448.9	2090.6

(1) Non-reference service revenue is as reported in our 2020 Plan and AA RIN (Table F3.4 of the forecast AA RIN template).
(2) A negative number corresponds to a price decrease and vice versa.

12.2 Price path

12.2.1 AER draft decision

The AER's draft decision price path contains a real price decrease in 2020-21 of 26.26% followed by 1.25% real price increases in the remaining four years of the 2020-25 AA period. In its draft decision, the AER states that this will:

- Align unsmoothed building block costs with smoothed revenue.
- Minimise tariff variability.
- Provide price signals that reflect the underlying efficient costs.
- Minimise the likelihood of variability in tariffs at the start of the subsequent (2025-20) period by aligning final unsmoothed and smoothed revenue to within 3%.

12.2.2 JGN response to the draft decision

The AER has an opportunity to provide better outcomes for customers in its final decision by adjusting its approach to setting our price path. The AER decision does not appear to have even engaged with or responded to our customers' strong preference for a network price path that improves stability of the prices they face – that is, they want stable *retail* prices.

We outlined what we heard from customers in our 2020 Plan, including:[33]

- Independently of each other, customers at all five of our deliberative forum locations preferred a price path that was most likely to keep retail bills steady over one which provided sharp decreases followed by a period of price increases.
- At our final deliberative forum, where we presented our 2020 Plan, customers overwhelmingly supported the price path shape that sought to offset forecast wholesale gas price changes.

A network price path that seeks to counter forecast movements in other parts of the supply chain, primarily wholesale gas prices, would be most likely to provide customers with the smoothest possible retail bills. We consider this can be achieved while still meeting the AER draft decision requirements and preferences noted above.

As Professor Cosmo Graham notes:[34]

> *When dealing with expressed views of consumer preferences, there are few reasons for regulators rejecting them. This is especially the case when dealing with consumer views of their own preferences.*
>
> …

33 2020 Plan, pp. 44-46

34 Professor Cosmo Graham, *Regulatory decision making and consumer voices*, December 2019, pp 3-4.

> *Regulators may reject consumer views because they believe that they are wrong. There is a distinction to be drawn between consumer views about events or conditions which are external to them and consumer views of their own subjective preferences. In the former case, regulators are required to take what they believe, on the basis of evidence, is the correct decision, regardless of consumer views. In the latter case, they should be very cautious about rejecting direct evidence of consumer views especially in a context where they are trying to encourage consumer engagement.*
>
> *Rejecting express consumer views will have negative consequences: companies will have less incentive to take consumer engagement seriously and consumers will be less inclined to engage.*

In the following sections we show how we:

- Obtain a forecast of wholesale gas price movements.
- Apply this to the AER price path shape to observe retail bill impacts.
- Establish a price path approach that improves outcomes for customers by:
  - Moving revenue from years where wholesale gas prices are forecast to increase to those in which they are forecast to decrease.
  - Ensuring smoothed revenues return to within 3% of the building block cost in 2024-25.

Forecast wholesale gas price movements

We have sourced forecast wholesale gas price movements from the Australian Energy Market Operator (**AEMO**) gas statement of opportunities (**GSOO**).[35] The real wholesale gas price movements are shown in Table 12.3. This shows they are forecast to fall in 2020-21 and 2021-22 before a sharp rise in 2022-23. This is followed by a small increase and then decrease in the final two years.

Table 12.3: AEMO GSOO forecast wholesale gas price change (real)[36]

Bill change	2020-21	2021-22	2022-23	2023-24	2024-25
Forecast wholesale gas price change (real)	-5.6%	-5.5%	6.3%	1.6%	-1.5%

Applying the AER price path shape to retail bills

The shape of the AER's draft decision price path involves a 2020-21 price decrease followed by equal price increases for the remaining years. This targets providing retailers with relatively smooth network bills, but does not consider the retail bills faced by our customers.

Applying this draft decision price path shape to our revised proposal revenues would result in the price path shown in Table 12.4.

Table 12.4: AER price path shape applied to JGN's revised proposal revenues (real)

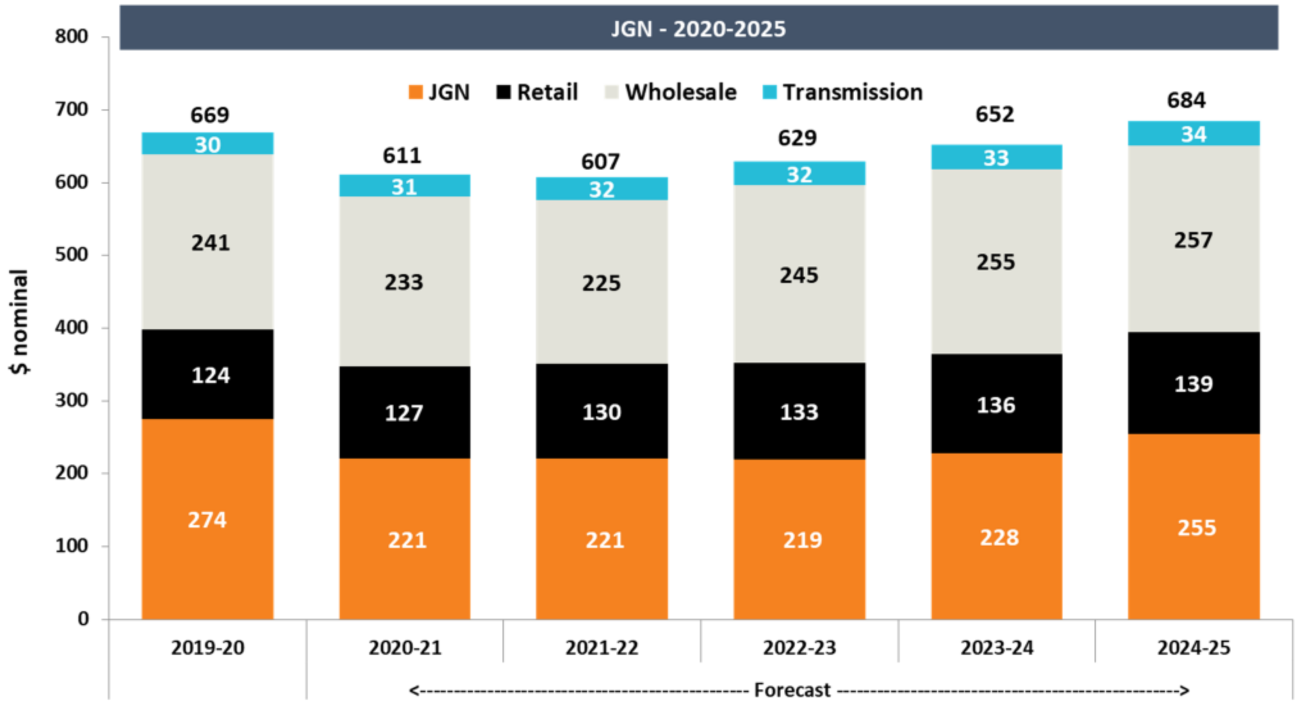
	2020-21	2021-22	2022-23	2023-24	2024-25
Indicative X-factors	26.90%	-3.09%	-3.09%	-3.09%	-3.09%

Our typical coastal customer consumes 15 GJ per annum. This customers' 2019-20 retail bill would be $669. Figure 12.1 shows how their retail bill would change when using the AER's draft decision price path shape applied to our revised revenues.

35 We have adjusted these to financial year rather than calendar year values.

36 Ibid.

Figure 12.1: Retail bill for typical JGN customers (15GJ – coastal) under AER price path shape applied to JGN revised proposal revenues



This results in year on year retail bill changes shown in Table 12.5

Table 12.5: AER draft decision price path shape applied to JGN revised proposal revenues - annual retail bill change (nominal)

	2020-21	2021-22	2022-23	2023-24	2024-25
Annual retail bill change	-12%	1%	6%	4%	3%

An improved outcome for customers

We can reduce the year-on-year retail bill changes for customers from that which would arise under the AER price path shape. This is done by shifting some revenue from those years where there is a forecast wholesale price increase to those years where there are forecast wholesale gas price decreases. This is shown in Table 12.6.

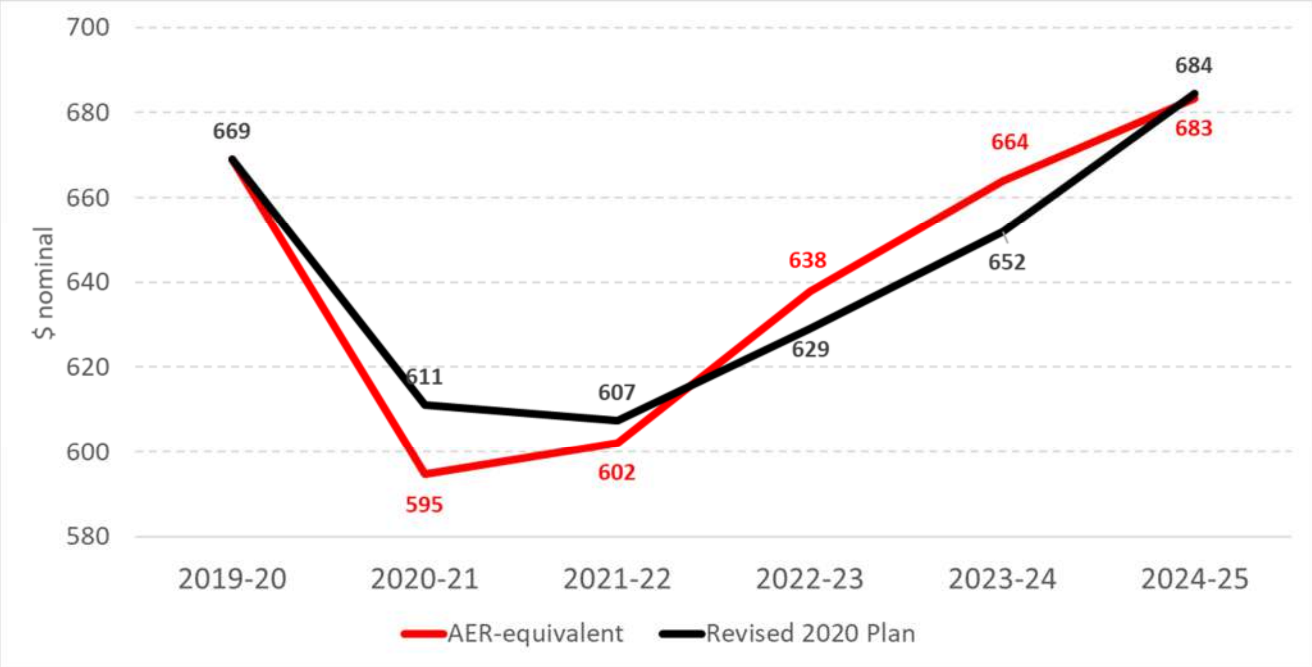
Table 12.6: Comparing annual retail bill changes

		2020-21	2021-22	2022-23	2023-24	2024-25
Forecast wholesale price change (real)		-5.6%	-5.5%	6.3%	1.6%	-1.5%
Applying AER draft decision price path shape to JGN revised revenue	X-factors (real)	26.90%	-3.09%	-3.09%	-3.09%	-3.09%
	Revenue ($nominal, $M)	398.18	422.94	448.81	475.95	504.73
	Forecast retail bill change (nominal)	**-12%**	**1%**	**6%**	**4%**	**3%**
JGN revised proposal	X-factors (real)	21.25%	2.25%	3.25%	-1.75%	-9.02%
	Revenue ($nominal, $M)	428.96	431.93	430.16	450.22	504.90
	Forecast retail bill change (nominal)	**-9%**	**-1%**	**3%**	**3%**	**5%**

Table 12.6 shows that the year-on-year annual percentage retail bill changes are equivalent to or lower under JGN's approach of seeking to offset wholesale gas price movements in all but the final year—hence a smoother outcome for customers. While JGN's approach has a 5% increase in the final year (to return to within 3% of building block revenues), this is lower than the 6% maximum that occurs under the AER draft decision price path shape in 2022-23.

Figure 12.2 also shows how JGN's approach results in smoother retail bills for customers as the bill doesn't dip as low, meaning there is less need for higher increases in the following years.

Figure 12.2: Annual retail bill for typical customer (15GJ coastal)



Long-term customer benefit

In the current unprecedented low interest rate environment the revenues of network businesses have significantly dropped. Despite the lower revenues it is important businesses have sufficient, predictable and stable cash flows to ensure they meet their expenditure and financing requirements. It is also in customers' long term interests to ensure that network businesses have sufficient cash to invest in the network to maintain the quality of supply, meet their debt obligations and credit rating requirements which results in lower financing costs passed on to customers through the Rate of Return Instrument review. This will improve long term affordability of our services.

Our recommended approach for the AER

Given the AER's final decision revenue may vary from those we have proposed in Section 12.1, we have provided the general steps the AER could take that would best give effect to customers' preferences:

- Target price changes that provide relatively steady JGN revenue for 2020-21 to 2022-23—compared to the AER's draft decision price path shape, this will likely result in a lower initial year network price decrease but ongoing network price decreases in 2021-22 and 2022-23.
- The network price decrease in year 2022-23 should be slightly higher that the network price decrease in year 2021-22 to reflect the forecast wholesale gas price increase in 2022-23.
- Weight the required price increases in the final two years toward year 5, which has the forecast 1.5% decrease in wholesale prices. This will also help to ensure that year 5 smoothed revenue returns to within 3% of building block revenues.

We would be happy to assist the AER to select a price path that best meets our customers' preferences.

Comparing options

Table 12.7 compares the JGN revised proposal price path approach with that used by the AER in its draft decision and demonstrates how the AER has an opportunity to provide even better outcomes for customers in its final decision.

Table 12.7: Comparing price path options

Criteria	AER draft decision approach	Revised 2020 Plan
Align unsmoothed building block costs with smoothed revenue	Yes	Yes
Customer retailer bill smoothing	No	Yes
Price signals reflect the underlying efficient costs	Returning revenue over-recovery means that prices must under-signal the efficient costs in some years.	Returning revenue over-recovery means that prices must under-signal the efficient costs in some years.
Returns smoothed revenue to within 3% of building block revenues	Yes	Yes
Supports long term affordability	Less likely	More likely

12.2.3 Revised proposal price path

Our proposed price path is set out in Table 12.8. The table also shows that forecast smoothed and unsmoothed reference service revenue over the 2020-25 AA Period has the same net present value (**NPV**), consistent with rule 92(2).

Table 12.8: Proposed reference service revenue and price path ($2020, $M)

	2020-21	2021-22	2022-23	2023-24	2024-25	NPV
Total building block revenue - unsmoothed	252.4	438.9	469.6	475.9	462.6	1,959.2
Total building block revenue - smoothed	419.0	412.1	400.9	409.8	448.9	1,959.2
Real price change (A)	-21.25%	-2.25%	-3.25%	1.75%	9.02%	N/A
Inflation (B)	2.38%	2.38%	2.38%	2.38%	2.38%	N/A
Nominal price change (C)	**-19.38%**	**0.08%**	**-0.95%**	**4.17%**	**11.61%**	**N/A**

(1) Nominal price change (C) for any year equals (1 + A) x (1+ B) – 1.

12.3 Attachments

Table 12.9 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER’s draft decision, and our proposed revenue and price path for the 2020-25 AA period.

Table 12.9: Revised 2020-25 AA Proposal attachments on revenue and price path

Attachment	Name	Author
12.1	PTRM	JGN

13. New connections and gas consumption

Response to the AER's draft decision

13.1 AER draft decision

In its draft decision the AER:

- Stated it is satisfied that our new connections and gas consumption forecast for our demand market (Tariff D)[37] was arrived at on a reasonable basis and represents the best forecast possible in the circumstances.
- Accepted our forecasts for our volume market (Tariff V)[38] as placeholders—it stated that it is satisfied that the overall demand forecasting methodology applied by our consultant, Core Energy & Resources (**Core Energy**), is consistent with rule 74(2) of the NGR. However, the AER noted that our forecasts would not be accepted in the AER's final decision unless we provide certain further information and update inputs.

13.2 JGN response to the draft decision

Table 13.1 summarises the AER's draft decision on new connections and demand and our response.

Table 13.1: JGN's response to AER draft decision on the new connections and demand forecast

Topic/item	AER draft decision comments	JGN response
Tariff V		
Methodology to forecast of new connection numbers	Accepted subject to provision of further information and clarification on some key inputs and assumptions, relating to: — Billing data and penetration rate calculation — Zero consuming meters — Volume boundary metering strategy	Further information and clarification provided.
Methodology to forecast consumption per connection	The AER accepted our methodology to forecast consumption per connection.	No response required.
Input data	Accepted subject to use of: — Latest actual demand and customer data — Latest Housing Industry Association (**HIA**) data	Updated input data used.
Tariff D		
Forecast of new connection numbers	The AER accepted our forecast of new connection numbers.	We accept the AER's draft decision. No further information required.
Forecast consumption per connection	The AER accepted our forecast consumption per connection.	We accept the AER's draft decision. No further information required.

37 'Tariff D' applies to demand customers, which is those customers with a consumption greater than 10 terajoules (**TJ**) per annum

38 'Tariff V' applies to volume market customers, which is those customers that consume less than 10TJ per annum.

13.3 Revised proposal new connections and gas consumption forecast

In line with the AER's requirement that we update our new connections and gas consumption forecast for our volume market customers, we have updated our forecast to reflect:

- Actual gas consumption demand and customer numbers for 2018-19.
- The latest dwelling construction forecast developed by HIA.
- The AER's draft decision to reject our proposal to withdraw our hot water metering product for new buildings from 1 July 2020.

Since the AER's draft decision accepted our demand market (Tariff D) forecasts are consistent with rule 74(2) of the NGR, we have not updated those forecasts.

Table 13.2 sets out our forecast of connections at 30 June each year, demand per connection and total demand for residential customers for the 2020-25 period.

Table 13.2: Tariff V – Residential forecasts

	2020–21	2021–22	2022–23	2023–24	2024–25
Residential connections (number)	1,426,103	1,445,411	1,464,509	1,483,589	1,503,402
Residential demand per connection (GJ/a)	19.1	19.0	18.8	18.7	18.5
Residential demand (GJ/a)	**27,249,292**	**27,459,486**	**27,604,083**	**27,744,939**	**27,877,128**

Table 13.3 sets out our forecasts of connections at 30 June each year, demand per connection and total demand for small business customers for the 2020-25 period.

Table 13.3: Tariff V – Small business forecasts

	2020–21	2021–22	2022–23	2023–24	2024–25
Small business connections (number)	37,629	38,151	38,668	39,180	39,689
Small business demand per connection (GJ/a)	357.0	354.0	350.5	346.2	342.4
Small business demand (GJ/a)	**13,432,111**	**13,505,587**	**13,554,159**	**13,565,938**	**13,590,312**

Table 13.4 sets out our forecasts of MDQ and ACQ for industrial customers for the 2020-25 period.

Table 13.4: Tariff D – Industrial forecasts

	2020–21	2021–22	2022–23	2023–24	2024–25
Maximum Daily Quantity (MDQ) (GJ/d)	232,101	227,472	222,298	217,452	212,498
Annual Contract Quantity (ACQ) (GJ/a)	45,845,197	44,898,001	43,955,208	43,018,111	42,086,222

13.4 Attachments

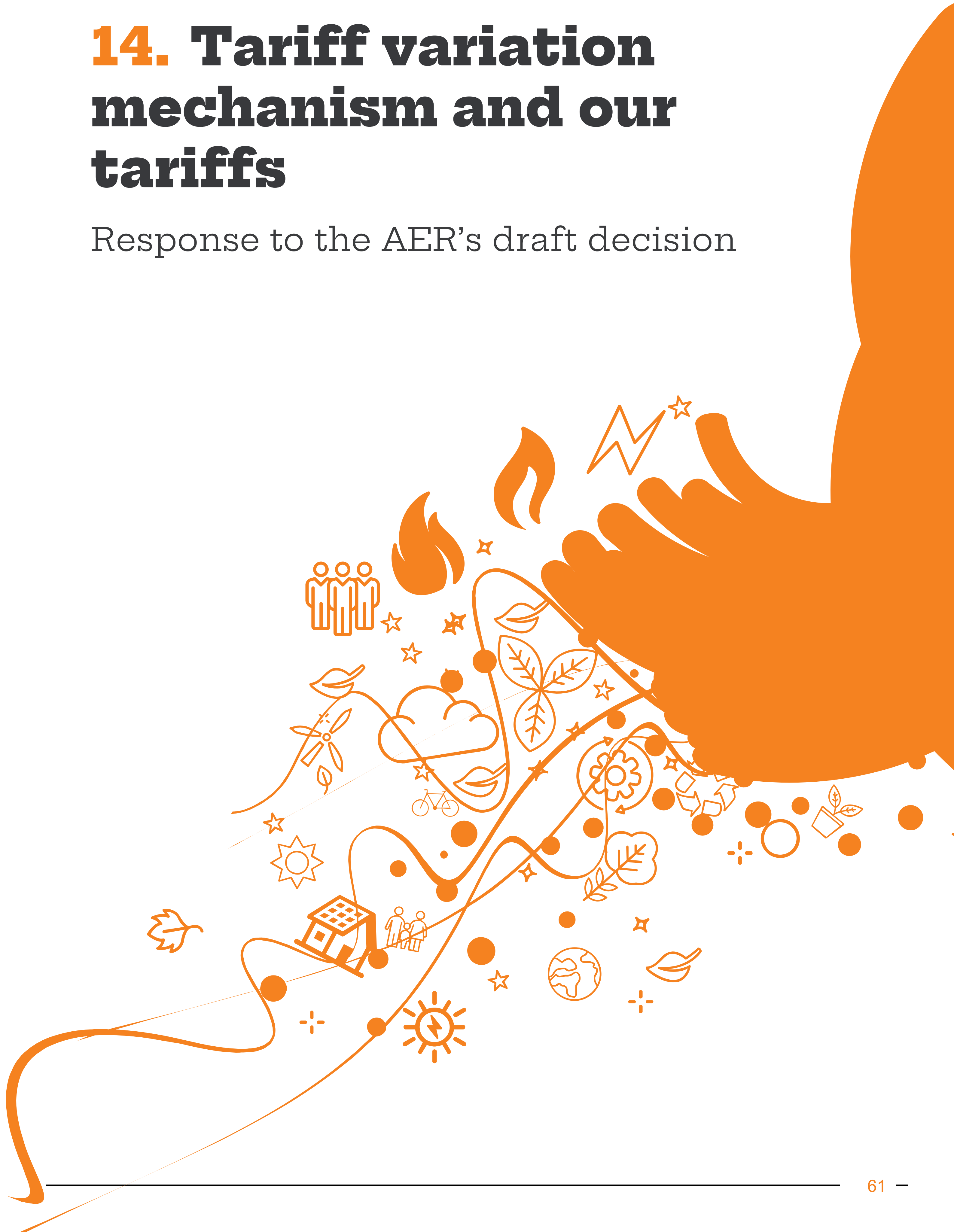
Table 13.5 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision and our revised new connections and gas consumption forecast for the 2020-25 AA period.

Table 13.5: Revised 2020-25 AA Proposal attachments on revenue adjustments and incentive schemes

Attachment	Name	Author
13.1	Response to the AER’s draft decision - Demand	JGN
13.2	Demand forecast update	Core Energy
13.3	Demand forecast models (revised proposal)	Core Energy
13.4	Core volumes to PTRM (Tariff V)	JGN
13.5	Core volumes to PTRM (Tariff D) [CONFIDENTIAL]	JGN

14. Tariff variation mechanism and our tariffs

Response to the AER's draft decision



14.1 Tariff variation mechanism

14.1.1 AER draft decision

In its draft decision the AER accepted JGN's proposal for all elements of the tariff variation mechanism other than:

- Initial reference tariffs and X factors.
- The inclusions for licence fees recovered via our automatic adjustment factor.

14.1.2 JGN response to the draft decision

Our response to the key elements of the AER's draft decision on our tariff variation mechanism is summarised in Table 14.1.

Table 14.1: JGN's response to AER draft decision on our proposed tariff variation mechanism

	AER draft decision	JGN response
Weighted average price cap	The AER accepted JGN retaining a weighted average price cap.	We accept the AER's draft decision.
Amendment to UAG factor calculation	The AER accepted the amendment to the UAG factor calculation.	We accept the AER's draft decision.
Method to accommodate 2015-20 AA remittal outcome	The AER accepted our method to accommodate the 2015-20 AA remittal outcome.	We accept the AER's draft decision.
Initial reference tariffs and X factors	Requires changes to reflect draft decision.	We have updated our initial tariffs and X-factors to reflect this revised proposal (see section 12.1)
Licence fee factor	Amended to remove references to Energy & Water Ombudsman (**EWON**), AER and AEMO fees.	We partially accept the AER's draft decision and have proposed amendments to retain true-up of AEMO fees should these arise.

Licence fee

Currently JGN incurs EWON fees, but does not incur AER or AEMO fees. We accept that, going forward, excluding EWON fees is consistent with the implied risk sharing arrangement between us and customers as the level of fees is impacted by level of complaints EWON receives in relation to JGN.

However, this does not apply to historical AEMO fees that JGN has paid, which were based on allocations to market participants. We consider that AEMO's evolving role in gas markets means these cannot be ruled out in future. Further, it would be appropriate to include any AEMO fees, should these arise again in future, in the automatic adjustment true-up as they would be uncontrollable to JGN. We have propose amendments to the licence fee factor to reflect this.

We also accept that mains tax should be included in the automatic adjustment mechanism.

14.1.3 Revised proposal

The licence fee factor amount for a Financial Year is to be calculated as follows:

a) the actual cost incurred in that Financial Year by the Service Provider as a result of IPART's natural gas authorisation fee for the Service Provider's gas reticulation licence, the charges levied by local government areas in New South Wales as permitted by Section 611 of the Local Government Act 1993 and the annual licence fees for individual pipelines charged by the Department of Planning and Environment and any AEMO fees which are related to the ownership or operation of the Network

minus

b) the forecast incurred in that Financial Year by the Service Provider as a result of IPART's natural gas authorisation fee for the Service Provider's gas reticulation licence, the charges levied by local government areas in New South Wales as permitted by Section 611 of the Local Government Act 1993 and the annual licence fees for individual pipelines charged by the Department of Planning and Environment and any AEMO fees which are related to the ownership or operation of the Network.

14.2 Tariffs

14.2.1 AER draft decision

In its draft decision the AER accepted JGN's proposal for all elements of the tariff variation mechanism other than:

- Initial reference tariffs and X factors.
- Our proposal to cease providing hot water metering for new sites from 1 July 2021 (our volume boundary proposal).

In addition the AER encouraged JGN to update our long run marginal cost model to include replacement capex.

14.2.2 JGN response to the draft decision

Our response to the key elements of the AER's draft decision on our proposed tariffs is summarised in Table 14.2.

Table 14.2: JGN's response to AER draft decision on our proposed tariffs

	AER draft decision	JGN response
Allocation of revenue and costs to reference services	Accept	We accept the AER's draft decision.
Proposed structure of reference tariffs	Accept	We accept the AER's draft decision.
Proposed tariff classes	Accept	We accept the AER's draft decision.
Our evidence of efficient prices, including long run marginal cost (**LRMC**) and stand-alone and avoidable costs	Accept, and encouraged JGN to update our LRMC model to include replacement capex.	We accept the AER's draft decision and have provided updated LRMC estimates.

	AER draft decision	JGN response
Proposed changes to availability of VI tariff to new buildings with centralised to water (our "volume boundary strategy")	The AER considers that JGN should continue to offer the individual hot water metering services to new high rise buildings in our reference service from 1 July 2021.	We accept the AER's draft decision and have amended the drafting in our 2020-25 AA to reflect this.
Proposed pass through events	Accepted with drafting amendment required to Natural Disaster pass through event.	We accept the AER's draft decision and amended drafting.
Initial reference tariffs and X factors	Requires changes to reflect draft decision.	We have updated our initial tariffs and X factors to reflect this revised proposal (see section 12.1 for X-factors and Schedule 2 "Initial Reference Tariff Schedule" of our 2020-25AA for updated tariffs).
Prudent discounts	Accept as necessary to respond to competition from other providers of pipeline services or alternative energy sources and to ensure the ongoing efficient use of our pipeline.	We accept the AER's draft decision and have amended our proposal to reflect additional information on prudent discounts that reflect negotiations that have occurred since we submitted our 2020 Plan.

14.2.3 Revised proposal

Volume boundary strategy

We accept the AER's decision on our volume boundary strategy.

Our volume boundary strategy sought to withdraw JGN from hot water metering for new high rise customers from 1 July 2021 as this is not a core business for us. It is not a service offered by other gas distribution network service providers in Australia. Through lower capex, this would also support putting downward pressure on all of our customers' bills. By withdrawing from hot water metering, we aimed to facilitate the competitively provided gas embedded network market that provide services to customers within shared buildings.

How to treat hot water metering is not clearly covered within the National Gas Rules. The reference service factors that the AER has relied upon were incorporated into the rules by the Australian Energy Market Commission (**AEMC**) primarily to limit market power, avoid monopoly prices and assist customer and pipeline users in negotiation and arbitration. The AEMC stated:[39]

> *"…a reference tariff directly constrains the use of market power of a service provider in the provision of the reference service itself. Moreover, the determination of a reference tariff, through a transparent access arrangement process by a regulator assists parties that are seeking access to services similar to the reference service in their negotiations or in arbitration."*

It does not then sit comfortably that the AER has relied upon these reference services in a draft decision to make JGN participate in the hot water metering market, effectively shrinking the market for embedded network companies to compete.

Nonetheless, we appreciate that protections for customers in embedded networks is a valid concern of the AER, customers and other stakeholders. Further, we appreciate how the AER has engaged with JGN on our volume boundary strategy and for the opportunity to provide further persuasive evidence. However, within the six week timeframe to respond to the AER draft decision, it is simply not feasible to meaningfully engage with a range of

39 AEMC, *Rule determination: National gas amendment (regulation of covered pipelines) rule 2019*, 14 March 2019 p. 30.

stakeholders and reach a common view on customer protection. The level of concern expressed and expected engagement warrants a longer, authentic and more considered set of stakeholder interactions.

We therefore accept the AER's draft decision and will delay the implementation of this strategy to be reconsidered again outside the 2020-25 period. High rise developers will be able to continue to choose individual metering provided by JGN. We have revised our proposed 2020-25 AA to remove assignment of a high-rise building with centralised hot water connected after 1 July 2021 to a boundary metered tariff. The assignment will instead be dictated by the nature of the metering assets installed at the site.

Importantly, we will continue to work with the NSW government, EWON and other stakeholders to support customer protection solutions.

Prudent discounts

JGN has two existing prudent discounts that were included in our 2020 Plan, one of which we noted was subject to negotiation. Attachment 14.1 provides an update on these prudent discounts as well as the inclusion of a third prudent discount we consider is in customers interests to include.

Long run marginal cost

JGN uses the Average Incremental Cost (**AIC**) approach in order to estimate the LRMC for each tariff and each tariff parameter. In its draft decision, the AER stated that it was satisfied with JGN's approach at that stage, but encouraged us to refine and improve our method by considering including replacement capex and associated opex in our revised proposal.

We have therefore recalculated LRMC to include these costs for each of our volume tariff classes. These are shown in Table 14.3 and compared to our previous estimates in our 2020 Plan that did not include replacement capex. This provides a range for which to consider LRMC.

Table 14.3: LRMC for JGN proposed tariff classes ($nominal)

Proposed Tariff Class	LRMC excluding replacement capex ($/GJ)	LRMC including replacement capex ($/GJ)
VI-Coastal	$16.79	$18.21
VI-Country	$11.73	$12.72
VB-Coastal	$2.84	$3.48

Table 14.4 details our estimated LRMC values for our tariff components in the volume market.

Table 14.4: LRMC for each tariff class by tariff component ($ nominal)

	Tariff Component			
Tariff Class	Fixed $/annum(1)		Variable $/GJ	
	Excluding replacement capex	Including replacement capex	Excluding replacement capex	Including replacement capex
VI-Coastal	$206.30	$206.46	$8.54	$9.95
VI-Country	$205.54	$205.68	$6.54	$7.52
VB-Coastal	$229.78	$229.98	$2.61	$3.24

(1) Note that the values are calculated per connection. That is, for the boundary metered tariff, $229.78 is the LRMC for supplying each boundary metered connection rather than the end-customer.

Including replacement capex increases all our LRMC estimates.[40]

Given the increase in LRMC estimates, we have reconsidered how we take into account LRMC in setting our tariffs as required in the rules (NGR, clause 94(4)(a)). We primarily do this by ensuring our block 1 usage prices for the volume market signal at least the $/GJ tariff class LRMC calculations. For our Revised 2020 Plan, this occurs whether we use the LRMC estimates that include replacement capex or those without. We outlined in our 2020 Plan why our tariff levels will not equal our tariff component LRMC levels.[41] These reasons still apply. In particular, how we price the fixed charge strongly takes into account gas competitiveness and price stability.

14.3 Attachments

Table 14.5 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision on our tariff variation mechanism and our tariffs for the 2020-25 AA Period.

Table 14.5: Revised 2020-25 AA Proposal attachments on TVM and our tariffs

Attachment	Name	Author
14.1	Prudent discounts [CONFIDENTIAL]	JGN

40 This is an expected outcome under the AIC method which divides the present value of expected costs by the present value of additional demand supplied. Adding replacement capex into this calculation increases the numerator while the denominator is constant.

41 2020 Plan, Attachment 4.1 *Our reference services and tariffs*, p. 36.

15. Accessing our network

Response to the AER's draft decision

15.1 AER draft decision

In its draft decision, the AER accepted some, but not all, of the amendments that we proposed to the AA and the RSA.

The proposed amendments to the AA and the RSA approved by the AER include those for queuing, extension and expansions, capacity trading, change of receipt or delivery points, and review submission and revision commencement dates. The AER requires a number of changes to other parts of the AA, in line with its draft decision on the building blocks, tariff variation mechanism and tariffs.

The AER has not approved our other proposed amendments to the RSA. As noted by the AER, we have continued engaging with the retailers who made submissions on our proposed changes since we submitted our proposal in June 2019, including following the release of the draft decision. Through that engagement, we and the retailers have agreed a number of changes to our proposed RSA and there are very few unresolved matters. We understand that the AER is intending to hold a roundtable meeting with us, retailers, and the AER to further discuss the RSA before it makes a decision on our proposed changes.

In its draft decision, the AER also sought further justification for the proposed amendment to clause 30 of the RSA which will increase security requirements for non-retailer users.

15.2 JGN response to the draft decision

In Attachment 15.1 we set out the AER's draft decision on our proposed changes and our response to the draft decision. Attachment 15.2 includes a marked-up version of the 2015-20 AA, which takes into account our response to the AER's draft decision.

Attachment 15.3 sets out the AER's draft decision on our proposed changes proposed to the 2015-20 RSA and our response. It also includes commentary on the stakeholder submissions on our proposed changes to the RSA, with an explanation of how we have responded to the feedback. Attachment 15.4 includes a marked-up version of the 2015-20 RSA, which takes into account our response to the AER's draft decision as well as feedback from stakeholder submissions.

15.3 Attachments

Table 15.1 lists the attachments to our Revised 2020-25 AA Proposal which provide further information on our response to the AER's draft decision and our proposed revisions to the 2015-20 AA and 2015-20 RSA. .

Table 15.1: Revised 2020-25 AA Proposal attachments on the AA and RSA

Attachment	Name	Author
15.1	Response to the AER's draft decision – Explanation of proposed revisions to 2020 AA	JGN
15.2	Mark up of 2020 AA in response to draft decision	JGN
15.3	Response to the AER's draft decision – Revisions to the RSA	JGN
15.4	Compare of 2015 and 2020 RSA	JGN
15.5	Compare of 2015 and 2020 RSA (changes since June 2019)	JGN