

Jemena Gas Networks (NSW) Ltd

2015-20 Access Arrangement

Response to the AER's draft decision and revised proposal

Appendix 1.3 - The draft decision and long-term customer consequences

Public

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1. INTRODUCTION

1. This document identifies potential consequences for Jemena Gas Networks' (**JGN**) 2015-20 expenditure plans, and resulting long-term consequences for our customers, in the event that the AER was to make a final decision that is in line with its draft decision. All dollar figures reported are in nominal dollars, unless specified otherwise.

1.1 JGN'S INITIAL PROPOSAL

2. JGN's initial access arrangement revision proposal (**initial proposal**) was formulated, in consultation with our customers, to operate the network in a sustainable manner and to deliver on expected service levels for a safe and reliable natural gas service, consistent with our 20 year asset strategy. Our initial proposal and this revised proposal set out the capital and operating expenditures (**capex** and **opex**), revenues and tariffs necessary for JGN to recover at least its efficient costs and provide a commercial market return on equity to investors, in accordance with the National Gas Law (**NGL**) and National Gas Rules (**NGR**).
3. Our proposal reflects:
 - efficient levels of opex and capex required to deliver on expected service levels for a safe and reliable natural gas service
 - a commercial market return
 - forecasts of demand that are the best in the circumstances
 - an overall revenue allowance and tariffs, based on those inputs, which would allow JGN to be able to recover at least efficient service costs and a commercial market return for investors.
4. For reasons summarised below, we consider that our proposal is in the long-term interests of consumers.

1.1.1 JGN'S ASSESSMENT OF ITS EXPENDITURE REQUIREMENTS

5. Our proposal is the product of extensive consultation with customers and long-term network planning by management.
6. Customer engagement was a key part of JGN's assessment of future expenditure requirements. We undertook extensive consultation with customers, stakeholders and community groups, as described in our initial proposal.¹
7. Some key outcomes of our engagement include:²
 - customers support safety being our non-negotiable top priority
 - customers value network service reliability and responsiveness, and are generally satisfied with current levels of service
 - a universal level of service (i.e. the same level of service for all customers) should be a priority for JGN going forward.
8. JGN also undertook analysis of long-term impacts on the cost of service under different service level scenarios.³ This analysis informed JGN's decisions in relation to capital expenditure (**capex**) planning.

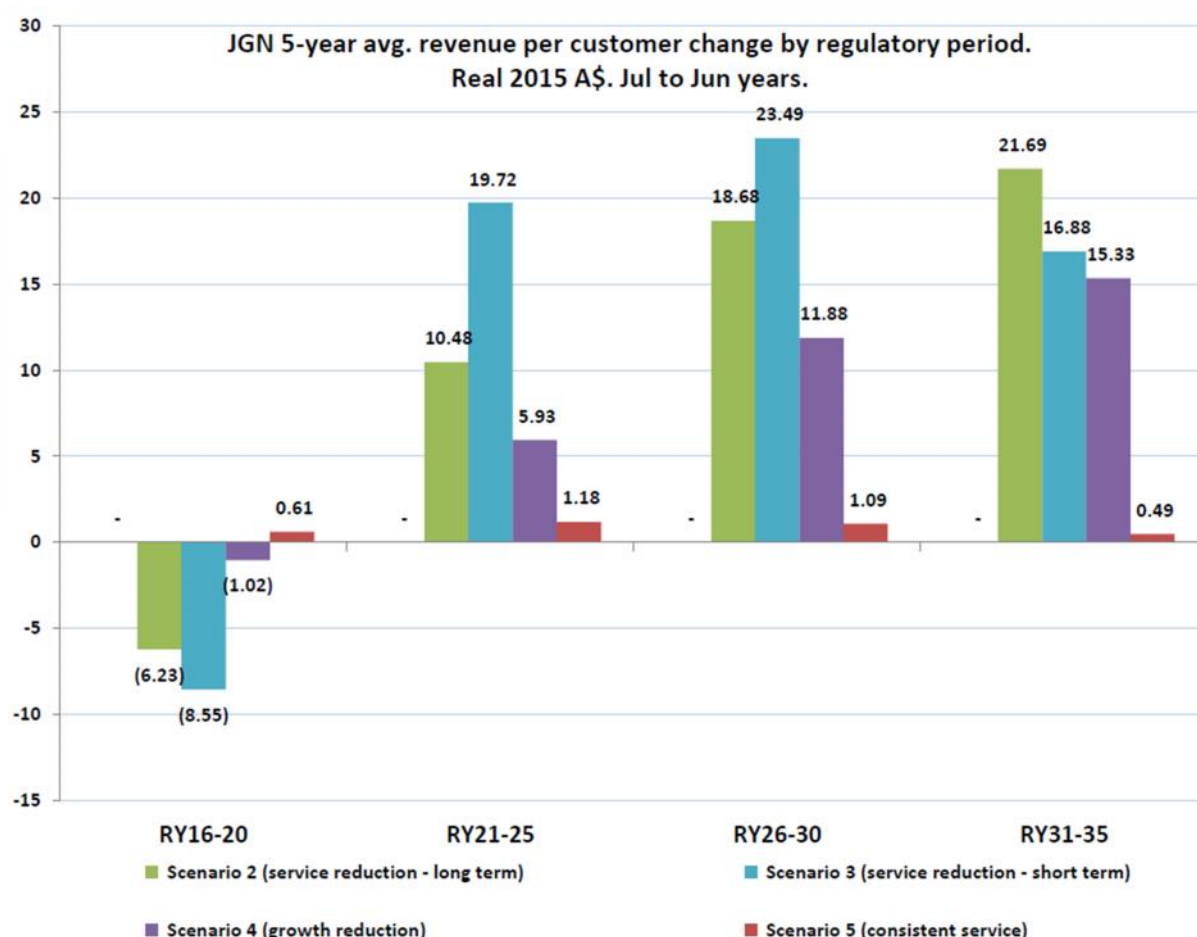
¹ JGN, *2015-20 access arrangement information*, 30 June 2014, appendix 1.4.

² Ibid, p 28.

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9. JGN tested five alternative scenarios:⁴
 1. maintaining current service levels
 2. reducing service levels permanently by reducing capex (offset in future periods by higher operating expenditure (**opex**))
 3. reducing service levels in the short-term only (creating a need for ‘catch-up’ in future periods)
 4. scaling back of marketing and network growth opportunities
 5. equalising service levels for all customers⁵ (a desire expressed in customer engagement).
10. The results of this analysis are presented in Figure 1–1.

Figure 1–1: Results of JGN scenario analysis⁶



³ JGN, *2015-20 access arrangement information*, 30 June 2014, appendix 6.1.

⁴ Ibid, pp 55-60.

⁵ JGN, *2015-20 access arrangement information*, 30 June 2014, para 235.

⁶ Ibid, p 59.

11. As can be seen, this analysis indicated that under any of scenarios 2, 3 or 4 there could be lower per customer costs in the RY16-20 period but significant costs to consumers over the longer term, relative to scenario 1. This indicated that scenarios 2, 3 or 4 would not be in the long-term interests of consumers, either in terms of the quality of services or the price of those services.
12. Based on our analysis, either scenario 1 or scenario 5 will be in the long-term interests of consumers, depending on customer preferences. The choice between these two scenarios came down to a trade-off between the desirability of equalising service levels and the cost of this to consumers over the long-term.
13. Based on this analysis, and taking into account feedback from customers, JGN proposed to adopt scenario 5. As can be seen above, this is expected to result in a moderate increase in customer bills relative to scenario 1, but will provide for equalisation of service levels between customers (an outcome that customers desire).
14. It was this planning and consultation which guided JGN's asset management plan (**AMP**), IT asset management plan (**IT AMP**) and its planned expenditure for the 2015-20 AA period. It was considered that expenditure planning consistent with this service level framework would best promote the long-term interests of consumers, in terms of the price, safety, reliability and quality of supply. JGN maintains its view in this regard.

1.1.2 EFFICIENT COSTS OF MEETING EXPENDITURE REQUIREMENTS

15. JGN's proposed expenditure forecasts reflect the efficient costs of meeting the proposed service level plan, as described above.
16. There are strong incentives for a private network owner such as JGN to operate efficiently on a sustainable basis. In particular, JGN management face ongoing incentives to incur an efficient level of opex and capex and to promote efficient investment in and use of the network. These incentives arise from the following:
 - *efficiency incentives under the framework for regulation of network services*—in particular, where management outperform against regulatory expenditure allowances the benefits are effectively shared between investors in the first place and over time with consumers as lower opex and capex are passed through in lower prices. This is a well-recognised feature of the regulatory regime⁷
 - *JGN's market circumstances, and in particular, competition from alternative fuels*—as explained in JGN's initial proposal, JGN's market circumstances are characterised by rising wholesale gas prices⁸, falling electricity prices⁹, competition from non-traditional energy sources¹⁰, gas appliance substitution¹¹, challenging government policy settings¹² and improving energy efficiency¹³.
 - these conditions place JGN squarely in a competitive market environment with other fuels that can power NSW homes and businesses. This operating environment drives JGN to seek out lowest sustainable cost solutions to delivering the safe and reliable level of service our customers expect for their money.

⁷ This was recently observed by the AEMC in its submission to the Senate Inquiry into the performance and management of electricity network companies. The AEMC noted that a key feature of network regulation in Australia is that it is based on an incentive framework. Under this framework, businesses face incentives to become more efficient and over time, to reveal the level of efficient costs. Refer to: AEMC submission to the Senate inquiry into electricity network companies, 18 December 2014, pp 4-5.

⁸ JGN, 2015-20 access arrangement information, 30 June 2014, para 83.

⁹ Ibid, para 152.

¹⁰ Ibid, para 120.

¹¹ Ibid, para 126.

¹² Ibid.

¹³ Ibid.

17. JGN's initial proposal reflected the amount of revenue required for it to operate the network sustainably and efficiently over the long term and to maintain the current level of overall network reliability, security of supply and quality of services, including bringing forward expenditure to meet customers' stated preferences for a universal level of service. As outlined further in this response to the AER's draft decision, JGN maintains this view.

1.1.3 DETERMINATION OF THE REQUIRED REVENUE ALLOWANCE AND TARIFFS

18. Based on its forecast expenditure requirements and its assessment of the level of returns required to provide a benchmark commercial market return to investors, JGN determined the overall revenue allowance that it would require for the next AA period.
19. As required by the NGR, the revenue allowance was determined using a conventional building block framework.
20. Consistent with the expert advice of Geoff Swier, we consider that determining the overall revenue allowance in this manner will deliver outcomes that are in the long-term interests of consumers.¹⁴ Relevantly, an overall revenue allowance that is determined in this way will ensure that JGN has a reasonable opportunity to recover at least its efficient service costs and provide a commercial market return on equity to investors.

1.2 AER DRAFT DECISION ON JGN'S PROPOSAL

21. In its draft decision, while the AER has substantially approved JGN's proposed opex and capex (with some exceptions), JGN considers it has erred in its determination of the required rate of return (including the adjustment for imputation credits). A detailed discussion of the errors in the AER's approach to the rate of return is set out in appendices to chapter 7 of the revised proposal, and appendices to chapter 8 in relation to adjustment for imputation credits.
22. As a result of these errors in relation to the rate of return, the overall revenue allowance determined by the AER in its draft decision is materially below that which would be required by a benchmark efficient entity to recover at least efficient service costs and provide a commercial market return to investors. The combined effect of the AER's errors in relation to the rate of return is to reduce the overall revenue allowance for the 2015-20 AA period by \$350 million below what is required to recover at least efficient costs and provide a commercial return. This comprises:
- approximately \$240 million reduction attributable to the AER's errors in relation to the return on equity;
 - approximately \$90 million reduction attributable to the AER's errors in relation to the return on debt;
 - approximately \$20 million reduction attributable to the AER's errors in relation to the adjustment for the value of imputation credits and benchmark debt raising cost estimate.
23. Other areas where the AER draft decision creates revenue shortfall are opex and capex reductions, in addition to adjustment for capex difference in 2009-10. These contribute to approximately \$70 million revenue reduction.
24. The AER has also erred in determining the forecast of demand to be used in calculating tariffs. As a result, tariffs will not be sufficient to provide JGN with at least an opportunity to recover the overall approved revenue allowance or more critically the level of revenue required to recover at least efficient service costs and a commercial market return on investment. Based on its forecasts of demand, JGN estimates that the effect of this error will be to reduce revenue over the 2015-20 AA period by approximately \$90 million below the AER's approved revenue allowance.
25. In total the shortfall in revenue against our revised proposal is likely to be approximately \$500 million.

¹⁴ Geoff Swier, *Economic considerations for the interpretation of the National Gas Objective*, 23 May 2014 (Appendix 1.7 to JGN's initial proposal).

26. If the AER, in any final decision or decision to propose and approve its own revisions, adopts the positions in the draft decision on the rate of return and demand, the resulting overall revenue allowance and approved prices will be insufficient to recover the building block costs (including a return on capital) of a benchmark efficient firm in JGN's position, and consequently, consistent with the expert advice of Geoff Swier,¹⁵ not promote the long-term interests of consumers.

1.3 JGN MANAGEMENT RESPONSE IF THE AER'S FINAL DECISION IS IN LINE WITH THE DRAFT DECISION

27. If the AER proceeds to make a final decision on JGN's AA revisions proposal that is in line with its draft decision, JGN will be deprived of a reasonable opportunity to recover at least its efficient costs and provide a commercial market return to investors.
28. In this event, JGN will review:
- the service level scenarios in its 20 year asset strategy
 - its capex and opex in accordance with its AMP and IT AMP
- to identify service level reductions and expenditure reductions to address the shortfall in revenues.
29. JGN will implement identified expenditure reductions to enable JGN to address the shortfall in revenues so as to be able to recover its efficient service costs and provide a commercial market return on equity to investors.
30. JGN has undertaken a review to identify potential capex and opex reductions in the next AA period that it can implement to address an anticipated revenue shortfall of approximately \$500M. This review has been in accordance with our AMP, IT AMP and asset management policy, each of which was submitted in appendices 6.2 and 6.3 of the initial proposal.
31. The identified capital and operating programs and projects include categories of expenditure which are not absolutely critical in the short-term, but which form part of JGN's proposal because they will benefit consumers over the long-term (and reflect what customer engagement has informed us is what customers want us to do), such as:
- customer engagement and marketing (opex)
 - IT systems and proactive asset replacement (capex).
32. The review has prioritised identification of expenditure reductions which have the least-worst impact on JGN's ability to continue to serve its customers. Notwithstanding the prioritising of expenditure reductions, in most cases expenditure reductions of the requisite magnitude require JGN to accept significant additional risk in its asset management approaches, materially increasing the likely incidence of adverse customer service outcomes.
33. The types of expenditure programs which would need to be cut-back or abandoned to address the revenue shortfall are discussed further below. In each case, the expenditure would be beneficial to consumers over the long-term—either by promoting network growth or by reducing the overall cost of operating the network over the long term—but may need to be materially reduced or abandoned if the AER's final decision is in line with the draft decision. Indeed the AER has acknowledged that it would be in the long-term interests of consumers for JGN to undertake this expenditure, by substantially approving JGN's proposed opex and capex allowances in the draft decision.

¹⁵ Ibid.

34. JGN management would seek to reduce expenditure as soon as possible, in order to restore the business to a position where it is delivering acceptable returns. However in practice there may be some delay in achieving certain expenditure reductions, reflecting the time required to wind down current service level activity. Therefore it is likely that the effect of reduced spending would start to be felt towards the middle of the 2015-20 AA period and extend into the subsequent AA period.
35. The expenditure reductions that would need to be considered by JGN are not reductions that would otherwise be considered in the ordinary course of business, with an AER approved revenue allowance (and prices) that is sufficient to allow for recovery of efficient costs and a commercial return. These expenditure reductions would be short-term measures only, and would not be beneficial to consumers over the long-term. As discussed below, it is likely that if such expenditure reductions were to be implemented this would:
- compromise the reliability and quality of network services over the long-term
 - inhibit network growth
 - increase the overall cost to consumers over the long-term.
36. Clearly it would not be in the long-term interests of consumers if JGN management were placed in a position where there would be a need to implement these types of expenditure reductions in order to maintain a revenue that is sufficient to allow for recovery of efficient costs and provide a commercial market return to investors.

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3. LONG-TERM CUSTOMER CONSEQUENCES

38. The negative consequences for consumers from reducing expenditure along the lines outlined above would be significant, both in the short-term (2015-20) and longer-term (2020 and beyond). Significant inter-temporal consumption and investment inefficiencies would be created.
39. We have assessed the possible short-term and long-term outcomes in terms of the service attributes that matter to customers. These service outcomes are:
- **price**—the price customers must pay for using our network
 - **public amenity**—the number of gas leaks and other similar incidents, and the level of planned maintenance work affecting traffic disruptions
 - **service quality**—ensuring consistent service levels and quality – not varying the level of service quality across different segments of the network, which might hinder these segments in installing new, more efficient (and more demanding) gas appliances, such as instantaneous hot water systems
 - **responsiveness**—the time it takes to respond to supply disruptions, to reconnect customers, to respond to customer queries and concerns, and the time required to connect new customers
 - **reliability**—minimal service disruptions, to avoid the resultant customer frustration and flow on business impacts
 - **availability**—ensuring new customers' ability to connect to the network is efficient and simple.
40. The safety of our employees, customers and the community is of paramount importance to us and our review has not covered initiatives that could result in worse safety outcomes.
41. If JGN was to reduce expenditure along the lines outlined above, there will be poorer service levels across each of these service outcomes, as well as flow-on impacts reflected in higher prices and customer bills in the longer-term due to:
- **significant catch-up expenditure**—JGN would require at the 2020 AA review catch-up expenditure to bring service levels back to around 2010-15 levels (the levels our customers have told us they want) and to operate the network in accordance with good industry practice. This catch-up expenditure would include incremental expenditure to re-instate previous asset management procedures, mobilise the required workforce, and rehabilitate assets to appropriate condition
 - such an outcome is also likely to result in increased price volatility, with unsustainably lower prices in the 2015-20 AA period, followed by a price-hike reflecting the catch-up expenditure in the 2020-25 AA period.
 - **reversing negative perceptions**—we also need to take into account how poor service outcomes in the 2015-20 AA period will create negative perceptions of natural gas as a product extending beyond 2020. We have thought about what we would have to do to both rebuild our reputation as a reliable service provider, but also to help return gas to being a preferred fuel of choice for prospective new customers and re-establish ourselves as a preferred utility partner for developers and industrial customers
 - **lower average consumption and connections**—poor service outcomes impact demand for gas through lower electricity-to-gas conversions, lower new connections, reduced average consumption, and higher disconnections. Lower connections and lower throughput consequently results in higher average prices for existing customers in the longer-term, which in turn lowers connections and throughput further (and so on)

- such an outcome may also give rise to inefficiency insofar as consumers may have invested in gas appliances that in effect become “stranded” as consumers disconnect from the gas network in the face of increasing prices.
42. The quality of the staff, processes, decision-making, customer-focus and dynamic improvement incorporated into the management of the business would also be materially impacted from a lack of funding. This would result in significant inefficiencies and productivity decline over time. Specifically, the following areas which help us deliver a low-cost and customer-validated level of service would be negatively impacted:
- customer engagement and vulnerable customer support
 - marketing gas as a fuel of choice to NSW customers and potential new customers
 - industry development and improvement initiatives
 - non-network capex, including IT
 - reduced capex – move to “replace on failure” asset management approach
 - human resource management and corporate support.
43. Some of the key impacts on consumer outcomes are discussed below.

3.1 PRICE

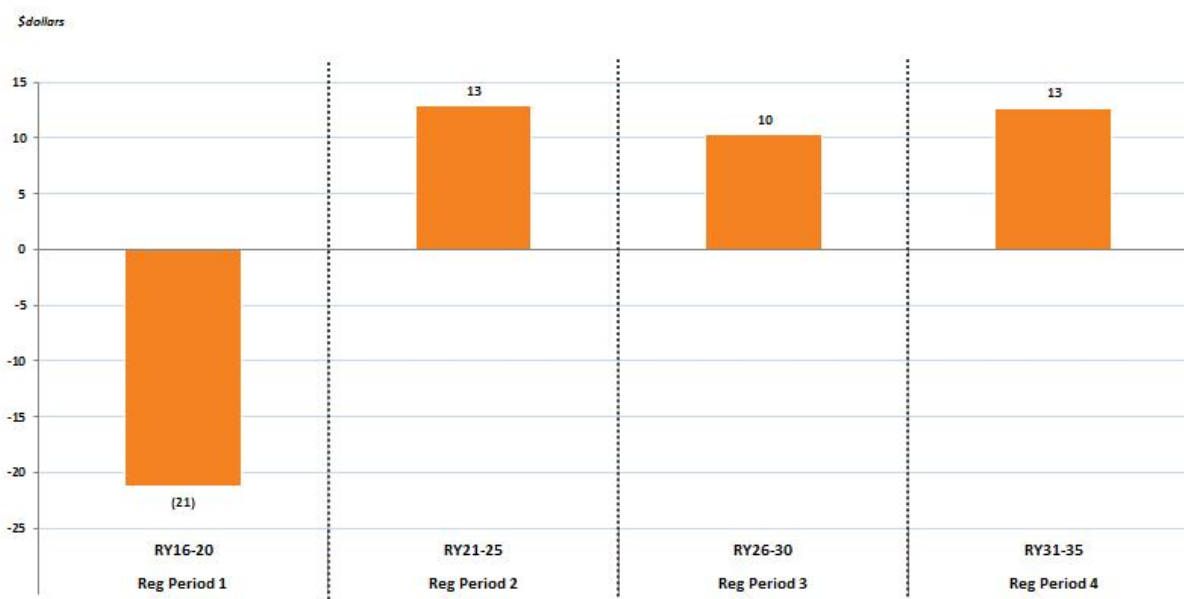
44. The price that customers pay for network services over the long term is a function of:
- the cost of operating the network over the long term
 - demand for network services (i.e. the number of customers connected and load).
45. If expenditure on proactive asset replacement and capacity development is reduced, this is likely to increase the total cost of supplying network services over the long term, thus increasing prices for consumers in future periods. Reduced asset replacement expenditure would be more than offset by higher maintenance costs over the long term.
46. Similarly, reduced investment IT and industry development initiatives will hinder productivity and increase operating costs over the long term.
47. The nature of JGN's network costs are largely fixed and therefore expenditure reductions will take time to take effect (for example staff reductions incur redundancy cost reducing any benefit in the short term). Marketing expenditure is the only significant expenditure category that can be immediately reduced and have a direct effect on costs immediately. Demand for network services is likely to be materially affected by reductions in expenditure on marketing and customer engagement and will lead to higher prices for consumers in the long term.
48. Should the outcomes of the AER's draft decision be reflected in the final decision, JGN is likely to cease all marketing other than above-the-line television and outdoor advertising. This above-the-line advertising is useful to retain the visibility of the product brand 'Natural Gas the Natural Choice' and will retain the ability to influence some potential customers to choose gas appliances. JGN would also cease to provide the incentive component of its marketing strategy.
49. These cuts would result in a number of significant customer impacts, many of which would be permanent. The number of electricity to gas (**E to G**) new connections is estimated to reduce by at least 50%. In addition, JGN's penetration of new estates and high-rise developments is estimated to reduce by a quarter as well as there being a high likelihood that businesses will elect to use other fuels for their needs. Compounding this issue,

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given JGN would not be able to reduce its costs to customers and having regard for the fact that wholesale price of gas is increasing, the number of disconnections would increase materially. The net result would be that the throughput through the network would reduce and all customers would pay a higher price per unit of consumption.

50. A significant consideration is that, once lost, it is reasonable to expect that the customer will not return to using gas in the future. Given appliances have a useful life of up to 15 years, practically and effectively, a significant number of customers will be lost permanently. Therefore a reduction in marketing expenditure in the next period could have permanent consequences.
51. Assuming JGN was able to recommence marketing after 2020, JGN would need significant catch up expenditure over the following 10 years to rebuild its capability and brand, as well as its relationships with developers, plumbers and appliance retailers and manufacturers. The demand recovery would have a long lag due to the long life of consumer durable appliances and household energy configurations.
52. Based on our initial review, Figure 3–1 sets out the incremental revenue per customer impacts in subsequent AA periods, resulting from 2015-2020 reductions in expenditure. While customers are expected to face an initial price reduction in the next AA period (RY16-20), this will be followed by material price increases over the following three AA periods (RY21-35) as we move to recover to a level of service that our customers have told us they expect, and operate our network and manage our business in accordance with good industry practice.

Figure 3–1: Incremental revenue per customer impacts – initial review findings. \$2015. \$dollars. Jul to Jun years.



Source: JGN analysis

- (1) The customer price metric is allowed revenue / customer numbers and is reported in \$2015.
- (2) The allowed revenue per customer is reported as a five-year average over each AA period.

3.2 PUBLIC AMENITY

53. The required move to a “replace on failure” asset management approach will increase public reported gas escapes and disruptions/street closures resulting from emergency response to reported gas escapes. These

outcomes have serious impacts on the amenity of the community through nuisance smells, traffic disruptions and the *perception* of an increased level of safety risk.

- 54. The level of public reported escapes in the long-term would be impacted by the level of asset replacement investment and in the short-term by a reduction in the level of non-urgent leakage repairs and planned inspection and maintenance activities.
- 55. JGN would reduce asset replacement expenditure, reduce or delay non urgent gas mains repairs, lowering short term maintenance expenditure. In the medium to longer term reactive maintenance costs would increase and would result in the public experiencing an increase in leaks in the order of 30% over the long term.
- 56. This could also result in lower E to G connections and higher levels of disconnections as a result of consumer concerns over the perceived quality of JGN's service, and perceived riskiness of gas. This would in turn lead to a higher cost per customer over the long term.

3.3 SERVICE QUALITY

- 57. JGN, as requested by our customers, proposed to equalise service levels across the network by 2020.
- 58. However the AER draft decision would not provide sufficient funding to meet this customer expectation. As a result we would not undertake the proposed upgrade works in relevant areas in the 2015-20 AA period, instead retaining existing 2kPa networks - which do not allow affected customers to access certain modern gas appliances, such as instantaneous gas hot water.
- 59. Indeed, if the AER's final decision is in line with its draft decision, JGN expects that even current levels of service quality could not be maintained. JGN expects that the need to reduce expenditure on capacity development may lead to supply degradation in some areas over the next five years.

3.4 RESPONSIVENESS

3.4.1 INCIDENT RESPONSE

- 60. One measure of responsiveness is JGN's ability to respond to incidents within an acceptable timeframe to minimise safety risks, community disruption and the duration of supply interruptions. Longer response times increase the disruption to the community through outage periods, extended traffic disruptions etc. and have the potential to increase the risk of damage to property or people.
- 61. JGN's ability to respond effectively is driven by resourcing, geographic density of crews and the number of incidents requiring a response at any given time. It is also influenced by considerations including network standardisation and arrangement.
- 62. JGN currently establishes its resourcing levels to ensure consistent geographic coverage for emergency response. This comes at a cost in terms of employee productivity. JGN's proposed operating plan for 2015-20 maintains this approach. However, the AER's allowances would require us to downsize resourcing based purely on lowering cost, thereby increasing response times in excess of the current 60 minute target that our customers have told us they prefer.
- 63. There is also a potential impact on customer numbers (and thereby destroyed demand) due to lower E to G conversions and disconnections.

3.4.2 OUTAGES

- 64. The majority of major outages are a result of third party incidents impacting JGN's assets, and as such responsiveness to the incident in restoring supply is a key controllable aspect to the responsiveness service outcome. As for incident response times, the time required to satisfactorily resolve outages can be impacted by

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the level of emergency resources and geographic density of crews. Long-term performance of this KPI is also impacted by the level of supply planning and investment in capacity development to enhance security of supply.

- 65. JGN's proposed capital and operating plans for 2015-20 have been formulated with a view to ensuring that outage frequency remains within current acceptable service levels. However, adopting a lowest cost resourcing strategy as described in the previous section would result in a potential doubling in customer hours off supply due to increased response times on average.
- 66. As for incident response times, impacts on outage resolution also has the potential to impact on customer numbers (and thereby destroyed demand) due to lower E to G conversions and disconnections on account of gas services being perceived as unreliable.

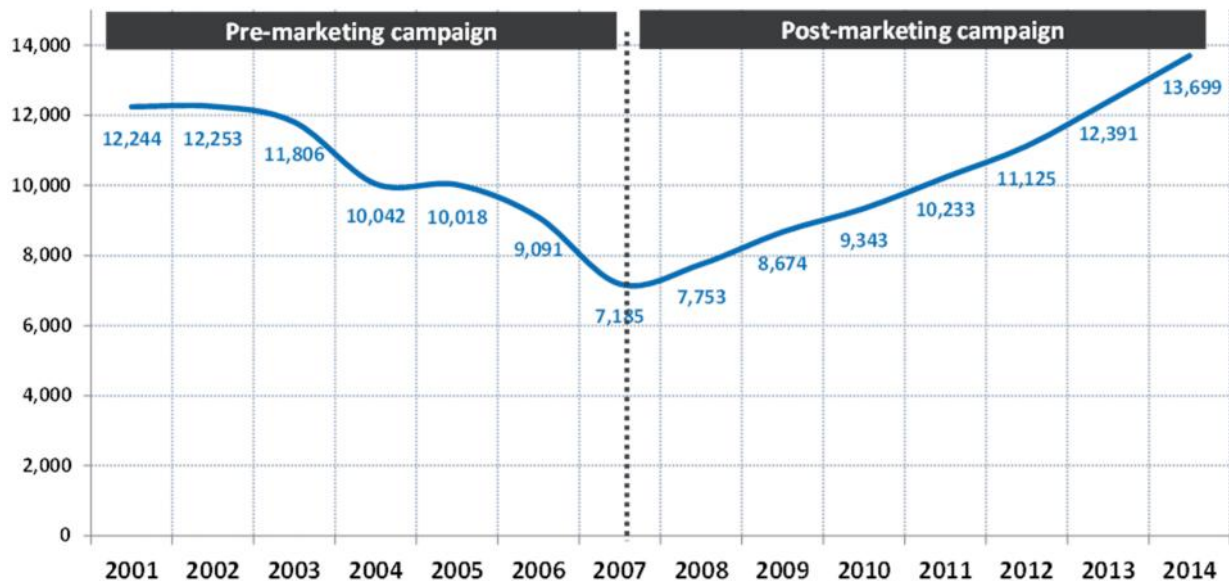
3.5 RELIABILITY (POOR SUPPLY)

- 67. Reliability is measured by the level of reported poor supply per 1000 customers, which is the measure of customers experiencing low or fluctuating gas pressure which adversely affects the performance of their gas appliances and can require pilots to be relit.
- 68. Poor supply is mainly driven by the level of network investment in capacity development and asset replacement. Prudent investment is required to ensure supply pressures are maintained at minimum levels for an expected weather range. JGN currently bases its investment decisions in this area on supplying a peak 1 in 10 winter weather condition.
- 69. Reduced capex on capacity development and asset replacement, arising from the AER's decision, would result in a steady increase in poor supply reports and complaints. Based on management's assessment, this in turn would require JGN to move from basing investment decisions on a peak 1 in 10 winter weather condition (planning to meet demand in 9 out of 10 years) to a peak 1 in 2 weather condition (planning to meet demand in 1 out of 2 years).
- 70. The level of reported poor supply is likely to increase by up to 60%, as larger proportions of the network are impacted by capacity constraints in a colder than average winter.
- 71. There could be impacts on customer numbers in the short term as a result, however (if left unaddressed) in the medium and longer term the service reduction scenario would result in lower E to G connections and higher levels of disconnections as a result of consumer concerns over the perceived quality of our service. If this outcome received media attention, this would escalate the decline in connections materially.

3.6 GAS AVAILABILITY

- 72. The proportion of new dwellings in NSW connecting to natural gas is driven by the viability of making gas available in new housing estates and urban consolidation zones.
- 73. The viability in turn is driven by the consumer demand for gas. If the average load and connection rates drop, fewer new housing estate expansions will be economically viable, reducing by up to 25% the new housing lots serviced by gas and therefore reducing access to gas for new dwelling builders.
- 74. Our marketing program is key to maintaining high rates of new dwelling connections. The program promotes the desirability of gas and underpins ongoing connection rates and average load per customer.
- 75. There has been an increase in the proportion of new homes connecting to gas in recent years as a result of JGN's marketing program which began in 2007, as set out in the Figure 3-2.

Figure 3–2: Marketing campaign has driven new estate connections



76. The AER's draft decision would require a significant downsizing in market expansion capex and connections staff. This is the result of fewer new dwellings connecting to gas, longer connection times, reduced levels of E to G connections, and JGN employing fewer connections staff to support the program.
77. Also, due to internal cash constraints, JGN would need to re-consider its capital contributions policy. Increasing the upfront cost of connections will result in fewer economic connections and higher average prices. If no mains are laid in development areas whilst the lowest cost initial development opportunity exists, it is highly likely mains will never actually be laid because retrofitting is prohibitively expensive, and thus future potential customers will not be connected.
78. Clearly there would be a material negative impact on the short and long-term forecast of number of customers connected to the network as result of the AER's decision. We would propose to unwind these negative outcomes as quickly as practical from 2020, to promote customers' long-term interests, but this would require significant catch up expenditure on marketing as well as higher capital costs for expending the network on a brownfield basis rather than greenfield.

3.7 SAFETY

79. JGN believes maintaining a high level of safety performance (both public safety and JGN employee/contractor safety) should not be negotiable, and our customers have told us they do too. We do not seek to compromise the safety of our staff or the public.
80. However, there could be impacts on E to G connections and higher levels of disconnections as a result of *perceptions* of increased network safety concerns as expenditures are cut.

3.8 CUSTOMER ENGAGEMENT AND VULNERABLE CUSTOMER SUPPORT

81. The funding available under the draft decision would cause JGN to cease all discretionary customer engagement. All the initiatives we have proposed in our AA revision proposal that were identified through customers telling us what they wanted would have been foregone. This is the equivalent effect for future AA revisions should the AER's draft decision be upheld in its final determination.

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82. Customer engagement is fundamental to understanding what activities our customers value, including potential new initiatives to support the gas brand and the gas experience. Broadly it allows JGN to validate its investment levels through desired service outcomes, to mitigate overinvestment or underinvestment in the network.
83. By way of example, our customers have recently told us to bring forward mains and services renewals in areas affected by poor service levels so that JGN is able to offer a universal level of service by 2020. Similarly, without feedback from our customers we could not have credibly put forward a vulnerable customer initiative as work that customers considered was good value for money.
84. Should the outcomes of the AER's draft decision be reflected in the final decision, we would have to redirect funding away from the vulnerable customer initiative, instead focusing on delivering our BAU priorities of delivering a safe and reliable gas service. This goes explicitly against what customers have told us they want.
85. Significant cuts to our call centre staffing will materially reduce responsiveness to network incidents, damaging the gas brand, higher reported losses and thereby worse public amenity and public perceptions of gas as a fuel of choice.

3.9 INDUSTRY DEVELOPMENT

3.9.1 ASSET MANAGEMENT

86. Industry participation ensures that standards and regulations are, and remain, fit for purpose and do not impose unnecessary costs or restriction on the introduction of technical or service innovations. These have made a significant contribution to JGN's historical productive efficiency improvement. JGN's failure to contribute in these fields will not have a short term impact on costs, however - following funding cuts - in the longer term it is likely that Jemena's ability to maintain its productive efficiency and make dynamic improvements would be reduced, leading to higher operating and construction costs and resulting higher charges than would otherwise be the case.
87. Key effects on customers include:
 - lower customer-focus in development of standards—without JGN to support other distributors, the development of technical standards is likely to be technically driven by technical regulators and suppliers, leading to requirements being pushed to customers, such as requirements for new infrastructure in customer premises that may have been more efficiently placed on distributors, or that is aesthetically or practically not meeting customers' expectations. This will degrade attractiveness of natural gas and potentially lead to reduction in reliability or public amenity;
 - poorly specified technical requirements that add cost for no real benefit as standards are drafted in attempt to eliminate risk for various industry participants;
 - material reduction of JGN involvement in industry research and innovation forums. These forums are generally focussed on generating advancements in safety (mainly public safety) and cost benefit initiatives across the industry. While not compromising public safety, not being involved would lead to delays in implementing new developments in industry practice and equipment and, at a minimum, delays in the implementation of innovations that generate cost savings or improved levels of service to customers.

3.9.2 ENERGY AND REGULATORY POLICY, AND CONNECTION POLICIES

88. Industry development and improvement covers:
 - working with customers and developers to facilitate connection to the network
 - energy market advocacy, government relations and industry standards and rules development to support efficient and favourable policy settings and compliance obligations.

89. We would need to remove staff from these areas which would have the following consequences:
- material reductions in customer connections, resulting in higher gas prices, lower sales, and less timely processes for any customers seeking connection –a worse outcome for both us and our customers.
 - unfavourable/favourable government policy positions unchallenged/unsupported—banning of electric hot water systems in NSW, BASIX, the NSW Energy Efficiency Scheme, embedded networks, pricing and retail market initiatives.
 - pace of innovation slows as well as JGN barriers to others innovating increase , e.g. no tariff structures statement, less consultation on tariff changes– dynamic efficiency loss;
 - JGN no longer having capacity to advocate for enhancements to retail market performance and customer experience (e.g. not leading the development of exempt seller arrangements for gas customers, not seeking rule changes like the matched allocation rule change which have no commercial gain to JGN but do provide material customer benefit).
90. To turn this around, in 2020-25 we would have to re-baseline to existing levels plus one FTE for each of the four groups with the relevant corporate division. This allows us to recommence these activities and rebuild our public credibility and brand in the advocacy space.

[c-i-c]