Advice to AER from Consumer Challenge Panel sub-panel 8 regarding Australian Gas Networks' (SA) Access Arrangement 2016-2021 Proposal

1. Introduction

Australian Gas Networks (AGN) has submitted a gas access arrangement proposal for its South Australian distribution network to the Australian Energy Regulator (AER) for the period 1 July 2016 to 30 June 2021, pursuant to its obligations under rule 52 of the National Gas Rules (NGR).[1]

The AER's Consumer Challenge Panel (CCP) was established in 2013 to assist the AER to make better regulatory determinations by providing input on issues of importance to consumers. Members of the CCP bring consumer perspectives to the AER, to improve the balance of the range of views that the AER considers in its decision-making processes.

The roles of CCP members include:

- Advising the AER on
    - whether a network business' proposal is justified in regard to the services to be delivered to customers;
    - whether those services are acceptable to, and valued by, customers; and
    - whether the proposal is in the long term interests of consumers.
- Advising the AER on the effectiveness of the network business' engagement with its customers, and how this engagement has informed, and been reflected in, the development of the business' proposal.[2]

The CCP is divided into sub-panels. The AGN gas distribution access arrangements in South Australia fall under CCP sub-panel 8. Its members are David Prins and Robyn Robinson, who are the authors of this document.

The purpose of this document is to provide our advice to the AER regarding the AGN proposal. In formulating this advice, sub-panel members have:

- Reviewed and provided feedback on AGN's draft Stakeholder Engagement Scoping Paper;
- Observed a deliberative workshop with AGN residential consumers in Adelaide;
- Held briefings with AER staff;
- Attended a briefing with AGN management;
- Met with a group of AGN's consumer representatives in Adelaide; and
- Reviewed the regulatory proposal documentation provided by AGN.

[1] The proposed access arrangements, including all the AGN documents referenced in this paper, can be found on the AER website at http://www.aer.gov.au/node/33310

[2] For further information on the CCP, see https://www.aer.gov.au/node/19305

2. Overview of Findings

AGN has prepared its access arrangement proposal for 2016-2021 in an environment that is distinguished by several significant changes to the conditions that were in place when the previous five-year proposal (for 2011-2016) was prepared. In particular:

- The previous proposal was developed immediately following the period of the Global Financial Crisis (GFC). Both interest rates and perceptions of risk have fallen markedly since that time. This means that the current costs of finance are now significantly lower than the record high cost of capital allowances that the AER set for the 2011-2016 period.
- The availability of new and more efficient technologies in the electricity industry has led to significant improvements in the relative cost efficiency and performance of electric household appliances as opposed to gas household appliances. Cost-reflective electricity network prices are also likely to be introduced in South Australia, which may give further cost advantage to efficient electricity usage. These factors will be likely to combine to cause electricity to replace gas as a fuel of choice in the residential sector, for both potential and existing gas customers. This will impose further downward pressure on the demand for gas over the next regulatory period, and result in an increased level of uncertainty around the forecasts for demand levels over the next five years.
- With the emergence of the east coast Australian gas export market during 2014 and 2015, domestic wholesale gas prices were initially forecast to increase rapidly towards international parity. Subsequent decreases in world oil prices, and advances in the US shale oil and gas industry, more recently appear to have moderated the forecast rate of price increases. Nevertheless, any resulting increases in retail gas prices are likely to reduce the competitiveness of gas as an energy source, and this is likely to lead to lower demand levels for gas.
- New Guidelines have been introduced by the AER as part of its Better Regulation program to provide direction to network businesses in the preparation of their proposals. Two of these Guidelines which are of particular relevance are the Rate of Return Guideline[3] (the RoR Guideline), and the Consumer Engagement Guideline for Network Service Providers[4] (the CE Guideline).

Each of these factors has played a part in influencing the development of AGN's proposal.

AGN is proposing an upfront price cut of 11% in real terms (i.e. excluding the effects of inflation) on 1 July 2016, followed by price increases in real terms of 5% per year for each of the following 4 years,[5] with no reduction of current high safety and service levels. AGN also proposes to increase investment in the network for the next period to $699 million,[6] which is approximately 28% higher than the capital expenditure allowance for the current period. This level of capital expenditure will have a significant impact on prices during the next and subsequent regulatory periods.

Through its Stakeholder Engagement Program, AGN has identified that for its customers, 'price and the ability to control demand is the primary concern'.[7] Energy affordability is clearly a key concern.

In line with customer expectations, we consider that price reductions beyond the modest level proposed by AGN are both necessary and achievable over the next regulatory period. Therefore, overall we do not consider

[3] See http://www.aer.gov.au/node/18859
[4] See http://www.aer.gov.au/node/18894
[5] AGN Access Arrangement Information, P11
[6] AGN Access Arrangement Information, P9
[7] AGN Access Arrangement Information, Attachment 3.9 *Australian Gas Networks Stakeholder Insights Report,* P12

that AGN's current proposal best reflects the long-term interests of gas consumers in South Australia. We present our views in more detail in the following sections of this advice to the AER.

The CCP is also required to advise the AER on the effectiveness of AGN's customer and stakeholder engagement. We have found that AGN has implemented a comprehensive Stakeholder Engagement Program in accordance with the CE Guidelines, and has demonstrated a genuine commitment to customer and stakeholder engagement as part of the process of developing the 2016-2021 proposal. Our views on the effectiveness of the customer and stakeholder engagement, and the extent to which the engagement activities have informed, and been reflected in, the development of the proposal, are presented in the applicable sections throughout this advice.

3. Stakeholder Engagement

Stakeholder Engagement Program

AGN has developed and implemented a stakeholder engagement program to inform the initiatives set out in its proposal.[8] This is a relatively new approach for AGN. We consider that overall, the Stakeholder Engagement Program is well-designed and comprehensive, and aligns closely with the AER's CE Guideline. Our observations and feedback from customers who participated in the program indicate that throughout the implementation of the program to date, AGN has demonstrated openness and a genuine commitment to meaningful engagement with its stakeholders.

AGN's Stakeholder Engagement Program has received high level support within the business as demonstrated by CEO attendance at a customer workshop, senior management involvement in AGN Reference Group meetings, and a meeting between the Reference Group and AGN's Board and Management team. We also endorse the appointment of an independent advisor as a means of ensuring that feedback from stakeholder engagement activities, both positive and negative, can be accurately captured and reported transparently to AGN.

AGN reports that it "received a range of additional feedback during its stakeholder engagement program".[9] Stakeholders have a range of interests and views. While views have to be collated and considered in aggregate, sometimes, variety and lack of consistency in responses tells a more accurate story than an attempt to create uniformity in views that actually does not exist.

AGN Reference Group

The AGN Reference Group was established in October 2014. It comprises representatives from a broad cross section of key community stakeholder groups, including representatives from the local government, business, property, and welfare sectors.[10] The key role of the AGN Reference Group was to challenge, guide and review the process of developing and implementing the stakeholder engagement program.[11]

The meeting records provided by AGN[12] confirm that the AGN Reference Group discussions were indeed focused almost entirely on the design and conduct of the stakeholder engagement program. While the AGN Reference Group clearly provided valuable input on this matter, it is disappointing that the scope of their role was limited to this extent. Based on their role with ESCOSA, it is reasonable to assume that Reference Group members would have knowledge of utility regulation in South Australia, and be able to provide informed customer views on many aspects of the Access Arrangement proposal, including matters such as the proposed capex program, approach to Rate of Return, tariff price paths, incentive schemes etc. For this reason, we consider that engagement with the AGN Reference Group was not as effective as it could have been in shaping AGN's Access Arrangement proposal. Reference Group members told us that they were alarmed that they were not given full insight into the AA prior to it being submitted by AGN. We recommend that AGN considers a wider role for the AGN Reference Group as part of its ongoing stakeholder engagement program.

Retailer Reference Group

AGN's Retailer Reference Group was formed in November 2014, and comprised representatives from four retailers of natural gas in the South Australian market. AGN states that the key role of the Retailer Reference Group is identical to that of the AGN Reference Group, i.e. 'to challenge, guide and review the process of developing and implementing our stakeholder engagement program'.[13] However, the Retailer Reference Group appears to have engaged much more directly on the substance of the Access Arrangement proposal as it impacts on retailers. AGN's discussions with retailers included the opportunity to review and refine proposed

[8] AGN Five Year Plan for the South Australian Natural Gas Distribution Network (2016-2021), Customer Overview, P9
[9] AGN Access Arrangement Information, P63
[10] AGN Access Arrangement Information, P44
[11] AGN Access Arrangement Information, P45
[12] AGN Access Arrangement Information, Attachment 3.4 *External Engagement Meeting Summaries*
[13] AGN Access Arrangement Information, P45

Access Arrangement terms and conditions, provide input to development of proposed tariff structures, and collaborate on approaches to better supporting vulnerable consumers. In our view, engagement with retailers has been conducted at the 'consult' and 'involve' levels of the International Association of Public Participation's Spectrum,[14] and has been very effective.

Stakeholder Workshops

The key inputs to AGN's consumer engagement research were the deliberative workshops held with gas consumers and key advocacy groups.[15] Two workshops were held with natural gas consumers in Adelaide, and two in major regional centres. A total of 54 participants representing residential and business customers attended the deliberative workshops. A further workshop was held with twelve members from key advocacy groups in attendance. The purpose of this workshop was to discuss the findings from the four consumer workshops, and to seek direct input on workshop topics on behalf of the communities that these twelve members represent.

The CCP as a whole has previously raised concerns with the AER regarding the use of Willingness-to-Pay surveys to justify business expenditure proposals.[16] Therefore, we welcome AGN's general approach to the use of stakeholder feedback:
"*The incentives included in our AA proposal have a sound asset management/planning foundation. That is, all initiatives included in our AA proposal reflect actions that AGN consider are required to ensure the ongoing safe and reliable supply of Reference Services. The stakeholder engagement was primarily used to inform the scope and delivery of those initiatives.*" [17]

Care was taken with workshop presentation material to enable participants to gain an understanding of the gas supply chain, the regulatory regime, and components of a retail gas bill, and to provide an estimate of changes to retail gas bills over the next AA period.[18] When asked to consider willingness-to-pay questions, there were two elements of customer service where participants were offered decreases in service reliability and price, as well as increases.

Our concerns with the design and conduct of the workshops, and interpretation of workshop results are outlined below:

- There were a limited number of participants (n=54), and we question whether the results are statistically significant.
- As highlighted by earlier CCP advice to the AER, the most reliable approach to willingness-to-pay surveys is to undertake a "discrete choice experiment" in which consumers are offered a range of options of prices and services. This was only addressed in a very limited way in the AGN workshops.
- We consider that the use of anonymous voting methods is essential in such workshops. Without the benefit of anonymity, participants who are not confident to express a view are easily swayed by the opinions of others in the group, and the expectation of providing the 'correct' answer. This may be a factor in the observed difference in willingness-to-pay between workshop participants and respondents to the on-line survey, as on-line responses are generally anonymous, and not influenced by the opinions of others.
- Workshop participants were provided with an indication of the future price path for consumers over the next five years.[19] Unfortunately the price path provided at the workshops does not appear to be consistent with the price path presented in the Access Arrangement proposal. In particular, the 5% increases in real terms in distribution tariffs for year 2 to year 5 were apparently not provided in the workshops. Had workshop participants been aware of the proposed price increases, they may have had different views about willingness-to-pay for certain potential new investments.

[14] IAP2 at http://www.iap2.org.au/resources/iap2s-public-participation-spectrum
[15] AGN Access Arrangement Information, P53
[16] http://www.aer.gov.au/sites/default/files/Consumer%20engagement%20advice_140707.pdf
[17] AGN Access Arrangement Information, P60
[18] AGN Access Arrangement Information, Attachment 3.7
[19] AGN Access Arrangement Information, Attachment 3.7, P12

As a consequence, we believe that the willingness-to-pay results have a high margin for error. We would give some credence to willingness-to-pay results that show very high level of customer support (as against lower levels of customer support, or support that is largely from stakeholders other than customers). For example, if over 80% of customers show willingness to pay, that cannot be ignored. Otherwise, we advise against assuming customer support for initiatives based solely on willingness-to-pay results.

We understand that outcomes from the workshops and survey were subsequently analysed within the business, and various plans and proposals were modified as a result. For example, AGN only received 44% workshop support to the question: "Would you be prepared to pay up to $3 per year more for AGN to install remote meter reading devices?"[20] AGN then states that it "redesigned the project to better align with stakeholder views".[21] However, we see no evidence that stakeholders who had previously rejected the proposal were asked whether they would now support the project after its redesign.

With the exception of the level of confidence around willingness-to-pay results, we consider that the stakeholder engagement program was conducted at the 'Consult' and 'Involve' levels of the International Association of Public Participation's Spectrum, and has been effective in providing customer insights to inform aspects of the development of the Access Arrangement proposal.

Online Survey

An on-line survey and stakeholder engagement website were the tools employed by AGN for its broader community engagement. The results were disappointing, with only 124 natural gas consumers in South Australia responding to the survey. This response rate was not considered statistically significant. Despite this, Deloitte was able to report that:

- survey respondents lacked an understanding of the regulatory model; and
- the survey data provides an indication of the underlying reluctance of the broader public to pay for additional services.[22]

The fact that both of the tools employed were based on on-line communication channels would have precluded those without Internet access and those who do not have the technology or skills to engage through a website from participating. This would include some older consumers, those with accessibility issues, and some segments of vulnerable consumers. In addition, the absence of options for community engagement in other languages presents a further impediment for consumers whose first language is not English. These customers and community segments may not have had adequate opportunities for engagement with AGN.

Engagement with the broader customer base and the community appears to have been ineffective.

Large Customers

AGN's strategy for engaging with large customers was the use of one-on-one targeted interviews, including discussions about demand forecasts. Thirty large customers were invited to participate, but only three participated, and only to a limited degree. It is suggested that the low level of interest was because AGN is in regular contact with large consumers through business-as-usual operations. In the absence of information on how engagement with large consumers has influenced the preparation of the Access Arrangement proposal, we are unable to comment on the effectiveness of this engagement.

Other Stakeholders

Other stakeholders identified by AGN and with whom they engaged included the Essential Services Commission of South Australia (ESCOSA), the South Australian Energy and Water Ombudsman (EWOSA), the South Australian Office of the Technical Regulator (OTR), and the Conservation Council of South Australia.[23] We have no specific further comments on these engagements.

[20] AGN Access Arrangement Information, P63
[21] AGN Access Arrangement Information, P119
[22] AGN Access Arrangement Information, P54
[23] AGN Access Arrangement Information, P50

AGN engaged with the Network Facilitator stakeholder group identified in the Stakeholder Engagement Strategy only through a Consultation Workshop and the online survey.[24]

Measurement and Review

AGN has developed Key Performance Indicators to measure the performance of its stakeholder engagement program, and has assessed its performance against those measures.

AGN has not yet undertaken a review of its Stakeholder Engagement Program to assess the costs and benefits, and to identify how the program might be improved.

AER Consultation Timetable

During our meeting with AGN's consumer representatives in Adelaide, representatives of large customers advised us that they considered the four week period allowed for detailed analysis of AGN's proposal, preparation of a submission, and exercise of the necessary organisational approval processes, to be insufficient to allow meaningful contribution. This is an issue for consideration by the AER with respect to its own Consumer Engagement Program.

4. Rate of Return

AGN is proposing a rate of return or Weighted Average Cost of Capital (WACC) of 7.23%. AGN is also proposing departures from the AER's RoR Guideline.[25] This approach has not been endorsed by AGN's customers and stakeholders.

While we recognise that the proposed WACC is a significant reduction from the 10.28% approved for the current period, we consider the proposed WACC to be inappropriately high, and do not support any departures from the RoR Guideline. The CCP as a whole has provided the AER with a paper outlining its views on rate of return.[26] We incorporate the contents of that paper by reference in this submission as providing our views as a sub-panel on how the AER should address AGN's proposed rate of return. In addition, we are aware that the AER's 2015 decisions on rate of return for the NSW and ACT electricity distribution networks are currently a matter for consideration by the Australian Competition Tribunal. The Tribunal's determinations on rate of return will also be relevant for AGN.

[24] AGN Access Arrangement Information, P50
[25] AGN Access Arrangement Information, P175-176
[26] http://www.aer.gov.au/sites/default/files/CCP%20report%20prepared%20for%20AER%20Board%20-%20Rate%20of%20Return.pdf

5. Operating Expenditure (opex)

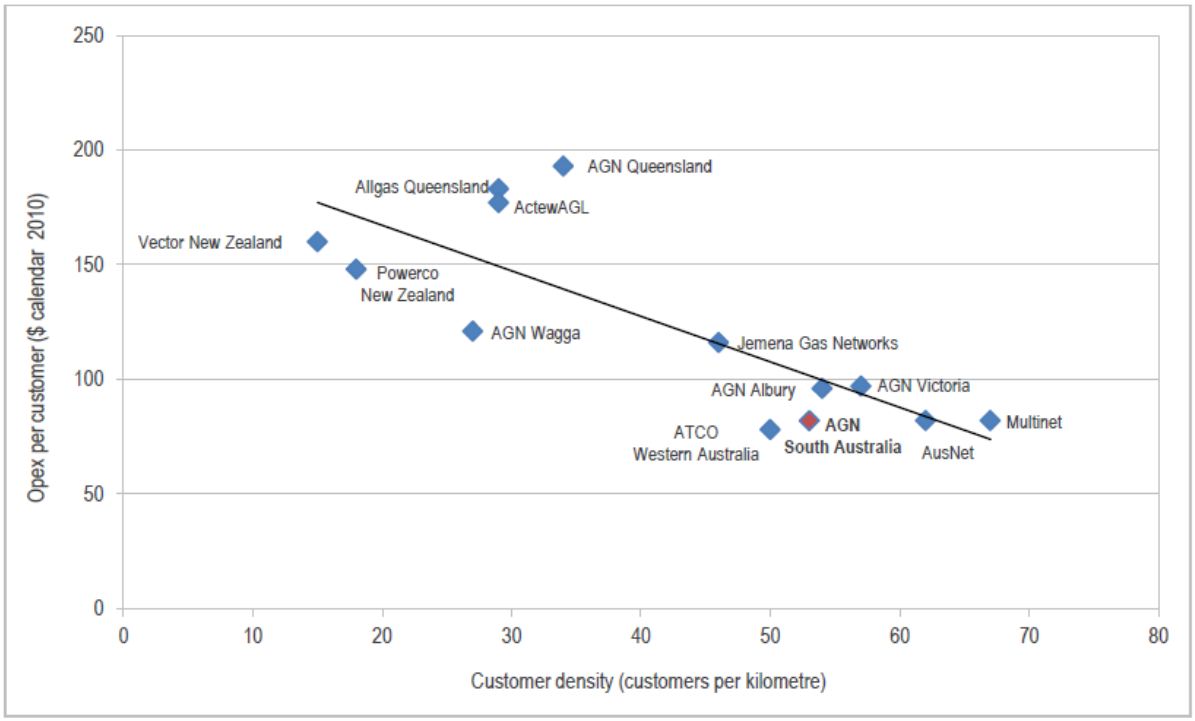
AGN is proposing to invest $353 million in operating expenditure (opex) over the next AA period, which is $14 million or approximately 4% lower that the AER allowance in the current period. However, it is $18 million or approximately 5% higher than the expected actual operating expenditure in the current period, given that AGN incurred operating expenditure around 9% below that approved by the AER for the current AA period.[27]

AGN states that its proposed opex, excluding the impact of rising wholesale gas prices on the cost of purchasing gas that is lost on its network, is consistent ($334 million) with that incurred in the current AA period ($335 million), despite (for example) growing customer numbers and increased input costs.[28]

Base Year

AGN has proposed 2014/15 as the base year for forecasting opex for the next AA period. AGN suggests that the *Benchmarking Australian Gas Networks' South Australian Business Operating and Capital Costs using Partial Performance Indicators* report prepared by Economic Insights[29] confirms that the 2014/15 base year reflects prudent and efficient opex.

The Economic Insights report presents the following analysis of opex per customer versus customer density for Australian and New Zealand gas networks.



Note: All numbers in Figure 7.2 are averages 2007/08 to 2012/13.

Source: Economic Insights 2015, "Benchmarking Australian Gas Networks' South Australian Business Operating and Capital Costs Using Partial Performance Indicators", May 2015, pg. 9. Provided as Attachment 4.2.

The assessment by Economic Insights advises that "Comparisons of opex per customer and asset cost per customer indicate that AGN SA appears to equal or outperform its peers in relation to opex per customer".[30] The assessment made by Economic Insights in *The Productivity Performance of Australian Gas Networks' South Australian Gas Distribution System* concludes: "Taking the differences in network density into account, the

[27] AGN Access Arrangement Information, P8
[28] AGN Access Arrangement Information, P8
[29] AGN Access Arrangement Information, Attachment 4.2
[30] AGN Access Arrangement Information, Attachment 4.2 P iv

results of this study indicate that AGN SA is most likely to be an efficient performer".[31] This suggests that AGN's performance may be close to the efficient frontier and that opex is efficient and prudent. However, the benchmarking assessment is based on average benchmarking data from 2007/08 to 2012/13. It does not include analysis of data from the proposed base year 2014/15. While this analysis is indicative of AGN's performance, it does not directly support the claim that 2014/15 reflects prudent and efficient opex. We expect the AER to confirm the efficiency of the proposed base year by extending the Economic Insights benchmarking or by other means.

Operations and Maintenance

AGN will make a considerable investment in mains replacement in the current AA period ($248 million). 1072 kilometres of cast iron and unprotected steel mains will be replaced together with 100 kilometres of high-density polyethylene mains. AGN also proposes to spend $417 million on mains replacement programs in the next AA period. Key drivers for this program include reducing gas leakage from the network, and reducing the incidence of unplanned outages on the network. This level of investment should result in significant savings in operations and maintenance costs over the next AA period. We advise the AER to review base year and roll forward opex forecasts to ensure that the benefits of the investment in mains replacement are reflected in lower operations and maintenance forecasts over the five-year period.

During the current AA period, AGN has made a large investment in Information Technology ($24.0 million). The main driver of this expenditure is the development and implementation of an Enterprise Asset Management System which provides AGN with a single integrated asset management system.[32] AGN is also proposing a further substantial investment in Information Technology projects for the next AA period ($59.7 million). Many of these projects are aimed at improving business operations and streamlining business processes. Examples include Applications Renewal, the Geospatial Information System, Mobility IT, and Business Intelligence. The business cases for IT projects typically identify the anticipated cost savings resulting from these projects. We advise the AER to confirm that the identified cost savings have been incorporated into opex forecasts.

Outsourcing Arrangement

AGN outsources the operation of its network to APA Asset Management (APA) under an Operating and Management Agreement (OMA) entered into in 2007 (the 2007 OMA). The services provided by APA under the OMA include:[33]

- operating and maintaining each network;
- planning, designing and constructing network extensions;
- preparing and settling with AGN the budget for each financial year;
- providing AGN with regular information on financial and other management issues; and
- reading meters and billing retailers.

In consideration for operating the networks, AGN pays for the actual costs incurred by APA in providing these services, a margin and incentive payments. The margin is recovered through a Network Management Fee (NMF), which AGN reports has been subject to extensive review by the AER in previous AA review processes.

The AER should consider whether AGN is continuing to act prudently and efficiently by outsourcing the operation and maintenance of its network to the APA Group, and whether the arrangement, inclusive of the NMF, is still reflective of the lowest sustainable cost of providing reference services.

AGN has reported increase in employee and contractor employee numbers: 434 in 2011, 648 in 2014.[34] This increase of almost 50% in employee and contractor employee numbers is not apparently explained elsewhere, and it is unclear how it sits against the outsourcing to APA. We would have expected the outsourcing to mean

[31] AGN Access Arrangement Information, Attachment 4.1 Piii
[32] AGN Access Arrangement Information, P78
[33] AGN Access Arrangement Information, P32-33
[34] AGN Access Arrangement Information, P35

that peaks and troughs of manpower requirements are managed by APA, rather than directly affecting AGN's own employee numbers.

Unaccounted for Gas (UAFG)

AGN reports that UAFG volumes have fallen by 34% over the current AA period, largely as a result of the mains replacement program.[35] As previously noted, 1172 kilometres of mains were replaced in the current period. The mains replacement program in the next AA period is forecast to increase by 100 kilometres, or approximately 8%. However, the corresponding forecast reduction in UAFG volumes in the next AA period is only 18.5%.[36]

It would be expected that the sections of the network of most concern in relation to leaks would have been replaced in the earlier years of the replacement program, and this might explain why the forecast reduction in UAFG volumes in the next AA period is lower than in the current period. We advise the AER to review the UAFG forecasts, and seek to confirm whether this is the case.

We would also expect the reduction in leaks to be reflected in opex reductions for example in the costs of responding to emergencies and investigating reported leaks.

We endorse the proposal to amend the Retail Market Procedures to transfer the responsibility for supplying UAFG in South Australia from AGN to retailers and self-contracting users, on the basis that:

- those parties are best placed to manage and minimise the cost of UAFG purchases;
- the need to forecast wholesale gas prices five years ahead and include set UAFG allowances in opex for the next AA period in a time of wholesale gas price uncertainty is avoided; and
- AGN would continue to be accountable for minimising the volume of gas losses on their network.

We encourage the AER to enable this change to be accommodated within the next regulatory period.

[35] AGN Access Arrangement Information, P115
[36] AGN Access Arrangement Information, Attachment 7.3, Figure 5.2

6. Capital Expenditure (capex)

AGN is proposing to invest $699 million in capital expenditure over the next AA period. This is 28% higher than the AER allowance in the current period ($547 million), and 46% higher than the expected actual expenditure in the current period ($479 million).[37] It is notable that AGN will underspend capex by $68 million in this period, while proposing considerably increased capex in the next period. If there were projects budgeted for in the current period, they should be excluded from the capex budget in the next period, to avoid the same capex being approved twice.

The proposal to invest $699 million in capital expenditure over the next AA period contrasts with the much smaller proposed regulatory depreciation over the next period of under $100 million.[38] The effect of this difference on the Regulated Asset Base (RAB) is discussed below.

The breakdown of proposed capex is shown in the following table.[39]

$2014/15 million	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Mains Replacement	83.0	82.4	82.7	86.2	82.4	**416.7**
Meter Replacement	4.6	4.4	4.1	3.3	2.6	**19.0**
Augmentation	1.8	9.8	4.9	2.7	1.0	**20.1**
Telemetry	0.3	0.3	0.2	0.2	0.2	**1.2**
Regulators	2.9	2.9	3.1	3.2	3.0	**15.1**
Information Technology	12.1	20.1	16.2	9.6	8.7	**66.7**
Growth Assets	20.7	20.9	21.7	28.2	22.1	**113.7**
Other Distribution System	9.8	8.3	8.1	7.6	7.3	**41.1**
Other Non-Distribution System	1.5	1.2	1.0	1.0	1.0	**5.5**
Total Capex	**136.7**	**150.3**	**142.0**	**141.9**	**128.2**	**699.1**

Note: Totals may not add due to rounding.

Regulated Asset Base (RAB)

The proposed capex investment program over the next AA period will have the effect of increasing the RAB from $1,428.8 million to $2,116.0 million, an increase of 48%.[40] The RAB is expected to double over the 10 year period spanning the current and previous AA arrangements. This extraordinary rate of growth is occurring at a time of decreasing gas demand across the network. Residential demand in the next AA period is forecast to be 17% less than in the current period, while commercial demand is forecast to reduce by 6%.[41]

These two trends result in higher prices for consumers being 'locked in' for both the next and future AA periods. AGN states that from 2016 onwards, price growth of 5% per annum is forecast in line with the growth in the RAB.[42] In this environment, we do not consider that the proposed rate of increase of the RAB, and hence prices, is in the best long term interests of consumers. For the 2016-2021 period, consumers have expectations of flat (or reducing) prices. This was also reflected in the price path forecasts presented in AGN's Stakeholder Workshops.

[37] AGN Access Arrangement Information, P9
[38] AGN Access Arrangement Information, P165
[39] AGN Access Arrangement Information, Table 8.16
[40] AGN Access Arrangement Information, Table 9.11
[41] AGN Access Arrangement Information, Pages 79, 80 and 241
[42] AGN Five Year Plan for the South Australian Natural Gas Distribution Network (2016-2021), Customer Overview, P14

We therefore urge the AER to consider carefully both the prudency and the timing of the proposed capital investment program.

AGN has stated that "the ongoing (and likely higher rates of) decline in gas usage puts at risk the ability for AGN to efficiently recover the value of the RAB through the continual application of straight-line depreciation".[43] AGN begins to address this problem by considering whether an alternative to straight-line depreciation may be appropriate. We suggest that this issue may actually indicate that the problem is instead in the proposed increase to the value of the RAB.

Our concerns with specific aspects of the capex program are discussed below.

Mains Replacement

AGN is proposing a significant capex expenditure on its Mains Replacement Program (MRP) over the next AA period, comprising:

(a) Replacement of all remaining (862 kilometres) of cast iron (CI) and unprotected steel (UPS) mains – $224 million; and
(b) Replacement of 411 kilometres of high-density polyethylene (HDPE) mains – $131.2 million.[44]

These two programs together account for approximately 60% of the total forecast capex.

HDPE Replacement

The HDPE Replacement Program is driven primarily by failures relating to old HDPE mains, and that AGN's analysis has shown that the early generation HDPE mains are approaching the end of their useful life and are prone to failure under certain conditions.[45] AGN reports that there is an emerging issue with the integrity of HDPE mains, with increasing evidence that such mains are susceptible to sudden brittle crack failures under certain conditions.[46] This issue is recognised internationally, and AGN has engaged the North American Gas Technology Institute to review AGN's technical and operational risk reduction strategies.[47] We expect the AER to engage appropriate technical experts to assess the necessity and proposed extent of AGN's HDPE Replacement Program. In particular, the AER might consider whether the proposed program should instead be extended to complete beyond the 2016-2021 regulatory period.

AGN advises that the older HDPE mains date back to the 1970s. The proposed HDPE replacement program will result in pipes being replaced after 40-50 years. The expected life of mains pipelines is generally in the order of 60 years.[48] A large-scale early replacement of HDPE assets is proposed. We are concerned about the cost impacts for consumers who have already paid for the existing assets, continue to pay a return on the residual asset values in the RAB, and are now being faced with re-funding a significant portion of the regulated asset base. We request that the AER considers an approach that will not disadvantage consumers should a large early asset replacement program be endorsed.

CI and UPS Replacement

The AER Decision pertaining to the current AA period stated that:

"…Envestra [AGN] has established a requirement for the replacement of its cast iron and unprotected steel mains to maintain and improve safety of services and to maintain the integrity of services in accordance with

[43] AGN Access Arrangement Information, P161
[44] AGN Access Arrangement Information, Figure 8.2, Table 8.1, Table 8.2
[45] AGN Access Arrangement Information, P135
[46] AGN Access Arrangement Information, Attachment 8.2, P23
[47] AGN Access Arrangement Information, Attachment 8.2, P51
[48] AGN Access Arrangement Information, P162

the NGR. The AER has reached this conclusion for a number of reasons. Most importantly, the AER has concerns about the safety risk posed through the leakage of gas from Envestra's distribution network."[49]

AGN has identified benefits already accruing from this program as follows:

- 50% reduction in CI and UPS mains and service leaks;
- 36% reduction in CI mains breaks;
- 60% reduction in customer reported supply complaints related to water in mains; and
- 34% reduction in UAFG.

As mentioned above, it would be expected that the sections of the network of most concern in relation to leaks would have been replaced in the earlier years of the replacement program, and that the safety risk posed through the leakage of gas from the network has now been significantly reduced. This view is supported by much lower predictions for the volume of UAFG following the mains replacement in the current AA period. Given the pressure on gas prices for consumers as a result of the extensive HDPE Replacement program proposed for the next AA period, we question the need for the CI and UPS Replacement program to continue at the same rate in the next AA period. We advise the AER to review the current drivers for the CI and UPS Replacement program based on performance to date, and assess whether this program could be extended into the following regulatory period.

Unit Rates

AGN reports that in the current period, it will replace 1172 kilometres of mains at a cost of $247.7 million.[50] This equates to a cost per kilometre of $211,348. In the next period, the forecast is to replace 1273 kilometres of mains at a cost of $416.7 million.[51] This equates to a cost per kilometre of $327,337. It is not clear why unit rates should increase to such an extent over the next period. We suggest the AER investigates the estimates that underpin these forecasts.

Information Technology

Expenditure within the current period is expected to be $24.0 million,[52] although the AER allowance was $12.1 million. Investment in IT in the next regulatory period is forecast to be $66.7 million.[53] This represents a 180% increase over the actual expenditure for the current period, and more than 5 times the AER allowance for the current period. This forecast is even more surprising given the opportunities to share IT development costs within the group of AGN network businesses.

While we understand the need for ongoing investment in IT to support the business, the driver for this dramatic increase in investment levels is not apparent. As indicated by AGN in its explanation of variations between actual and allowed capex in the current period,[54] Enterprise Management Systems are large and complex, and typically are challenging to implement. GIS systems are similarly complex. We have concerns regarding AGN's ability to implement such an ambitious IT investment program in the timeframe, and also regarding the ability of the business to accommodate the associated level of business change.

Given the pressure on gas prices for consumers as a result of the extensive Mains Replacement program proposed for the next AA period, we question the need for the proposed level of expenditure on IT, noting that much of it is discretionary expenditure, and the plan includes projects which have been assessed at a lower priority level (level 3), with others assessed at the higher priority 2 level.

We advise the AER to engage independent IT experts to assess:

- The feasibility of successful and efficient implementation of the proposed IT program.

[49] AGN Access Arrangement Information, P37
[50] AGN Access Arrangement Information, Table 4.4
[51] AGN Access Arrangement Information, Table 8.16
[52] AGN Access Arrangement Information, P77
[53] AGN Access Arrangement Information, P151
[54] AGN Access Arrangement Information, P78

- The reasonableness of project cost estimates.
- The appropriateness of the proposed upgrade cycles in the Applications Upgrade Plan.[55]
- Where costs for network-wide projects have been allocated to AGN, whether the appropriate driver has been use for the cost allocation e.g. number of employees, asset base, customer numbers.
- Whether costs associated with each project have been properly allocated as capital or operating e.g. data cleansing, process redesign, training.
- Whether operating efficiencies resulting from the IT investment have been properly identified. The IT business cases do not appear to include a 'return on investment' or 'payback period' assessment.

We also encourage the AER to consider benchmarking IT expenditure against similar businesses.

We are also concerned at IT investments targeting productivity improvements for the field workforce, for example Mobility IT Business Case SA59. Our understanding is that APA provides and manages the field workforce that operates and maintains AGN's assets. APA must be responsible for its own work and workforce management systems. They should not form part of AGN's regulated asset base.

Other Capital Projects

AGN has proposed a capital project to relocate vulnerable meter installations at a cost of $2.34 million (Business Case SA75).[56] This project was one of the projects considered by customers in the willingness-to-pay workshops. Customers were asked if they would be willing to pay for this initiative at an estimated cost of $0.50 per annum. This equates to a total project cost of around $1.05 million, approximately half of the cost now being proposed. AGN has reported support of 52% of workshop participants for this project,[57] which in our view is not a conclusive finding given the degree of accuracy of workshop outcomes. The Stakeholder Insights Report concluded that "most customers thought owners should pay – or at least make a contribution towards the cost".[58] On this basis we do not believe that the full cost of relocation of vulnerable meters should be included in the regulated revenue, and consider that further customer engagement on this issue would be beneficial.

There are several projects classified as capex which could potentially be considered as maintenance activities (opex). We advise the AER to review the classification of the following projects:

- Pitting Issues Under Sleeves (Business Case SA21a)
- Relocation of Meters (Business Case SA75)
- Valve Corrosion Protection (Business Case SA09)
- Replacements Associated with Non-Compliant Meter Installations (Business Case SA 32)

[55] AGN Access Arrangement Information, Attachment 7.1 P249
[56] AGN Access Arrangement Information, P145
[57] AGN Access Arrangement Information, P63
[58] AGN Stakeholder Insights Report, P20

7. Incentive Arrangements

AGN is proposing the following incentive arrangements to apply from 1 July 2016:

- The retention of the AER's Efficiency Benefit Sharing Scheme (EBSS), albeit modified to strengthen the financial incentive to improve opex efficiency;
- The introduction of the AER's Capital Expenditure Sharing Scheme (CESS), also modified to strengthen the financial incentives to improve capex efficiency; and
- The introduction of a Network Innovation Scheme to promote lower cost and/or improved service delivery through innovation.[59]

AGN is also proposing that a customer service incentive scheme be introduced during the next AA period, commencing on 1 July 2017.

Efficiency Benefit Sharing Scheme (EBSS)

The EBSS provides rewards for reducing actual opex below the allowed opex. However, the scheme only has value for driving true efficiency, and for consumers' long-term interests, if the allowed opex is set at an efficient and prudent level.

We support continued application of the EBSS provided there is confidence that AGN's opex forecasts are set at an efficient and prudent level.

AGN is proposing that the sharing of any efficiency gain or loss be increased from the current rate of 30% retained by the business to 50%, such that efficiencies are shared equally with consumers. We do not support the proposed change to the current allocation of benefits from the EBSS between AGN and customers.

Capital Efficiency Sharing Scheme (CESS)

Where an EBSS is in place, we support the application of a complementary CESS.

We consider that the EBSS and the CESS work together to ensure that there no bias towards one form of expenditure over another. We do not support the proposed change to the current allocation of benefits from the CESS between AGN and customers.

Network Innovation Scheme

AGN is proposing to introduce a Network Innovation Scheme to encourage long-term research and development into means for improving the provision and cost efficiency of services.[60] The scheme would allow AGN to recover after-the-fact up to $1 million per year of expenditure incurred that relates to innovation through the annual Reference Tariff Variation Mechanism. Expenditure under this category would be excluded from the operation of the EBSS and the CESS.

We consider that it is important for businesses to invest in innovation that is in the long term interest of consumers. We support the proposed scheme, provided that it encourages long-term research and development in the interest of consumers. To qualify under the scheme, the expenditure should be on research in which AGN would not have invested in the absence of the scheme, and it should fit with AGN's operating environment, with steeply declining demand for gas, as discussed below.

Customer Service Incentive Scheme

AGN intends to undertake consultation in 2016 with a view to introducing a customer service incentive scheme on 1 July 2017, to provide a meaningful incentive on the business to improve customer service performance. AGN has suggested that its scheme parameters might include customer service incentive strength of ±1% of revenue.[61]

AGN's Stakeholder Engagement determined that customers are generally satisfied with AGN's service and response times.[62] In its March 2015 Draft Decision on AGN's service standards to apply from 2016 to 2021, ESCOSA noted:

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[59] AGN Access Arrangement Information, P194
[60] AGN Access Arrangement Information, P201-205
[61] AGN Access Arrangement Information, P200-201
[62] AGN Stakeholder Insights Report, P14

"This review has not identified any areas of Australian Gas Networks' (AGN) service that require improvement through the introduction of service standards with performance targets …"[63]

ESCOSA's Final Decision in June 2015 was consistent with the Draft Decision: "The Commission will not introduce any service standards with performance targets for AGN for the 2016-2021 regulatory period."[64]

Based on this feedback, we do not consider that a Customer Service Incentive Scheme is warranted.

[63] AGN Access Arrangement Information, P58
[64] AGN Access Arrangement Information, Attachment 3.10

8. Demand Forecasts

Chapter 14 of AGN's Access Arrangements Information document details AGN's approach to demand forecasts. Demand forecasts are particularly important for a network business as they drive capex and opex forecasts, as well as the setting of prices in reference tariffs.

AGN engaged Core Energy Group to develop forecasts of gas consumption and customer numbers over the period from 2014/15 to 2020/21 (total forecast period), which encompasses the next AA period.

In summary, Core Energy expects recent trends to continue over the forecast period, that is:

- slowing growth in customer connections; and
- continued trend decline in average consumption per connection.

Since regulatory determinations began in 1998/99, AGN has only achieved (exceeded) demand forecasts that were set in regulatory determinations for its volume customers once. On average over the 16-year period from 1998/99 to 2013/14, actual volumes have been around 5.1% below the forecasts.

In the current (2011/12 to 2015/16) AA period, AGN estimates that its inability to achieve the volume benchmarks has led to a $57 million under recovery in actual revenue. However, the over-forecasts may have led to over-forecasting of AGN's opex and capex requirements; this is not made clear in the Access Arrangements Information.

AGN states that the primary reason for the variance is that actual consumption per connection is declining at a faster rate than forecast. This reflects various drivers, including warming weather trends, continuous improvements in energy efficiency (appliance efficiency and building thermal efficiency), customer appliance preferences (electric reverse-cycle air-conditioning instead of gas space heating), customer response to increasing energy prices, and the significant installation of solar equipment in recent years.

These challenges are expected to continue over the next AA period, particularly given:

- further substantial increases in renewable generation – a high penetration of 'green' electricity reduces the environmental driver for customers to use natural gas;
- the emergence of new technologies – including continual technological improvements in distributed generation, battery storage and electric vehicles (which will reduce the unit price of electricity by resulting in a step change in volumes and/or make consumers more electricity focused in their appliance choice/use);
- further increases in the penetration rates of reverse-cycle air-conditioners – which reduces the up-front cost of switching from gas to electricity; and
- a move to cost reflective electricity network prices – in areas with a peak summer load, such as South Australia, electricity tariffs would increase during peak times in summer and decrease in off-peak times in winter (i.e. during periods of peak (winter) gas demand).

We concur with AGN that it is important to put in place accurate demand forecasts. We are therefore concerned that there are several factors that Core Energy were not able to quantify which may result in lower than expected residential consumption, including:

- The potential emergence of new technology such as battery storage and electric vehicles, which could result in customers choosing electric appliances over their gas equivalents;

- The impact of cost-reflective electricity tariffs which were introduced by SAPN in July 2014 and will be progressively rolled-out to new and altered connections from July 2017; and
- The impact of the change to water heating policy for homes with no current gas connection.

In order to put in place accurate demand forecasts, the AER may need to quantify the effects of these factors that have not already been taken into account in AGN's demand forecasts, and hence have also not been taken into account in AGN's capex and opex proposals.

We emphasise to the AER the need to ensure that capex and opex proposals are in line with the demand forecasts. It is anomalous to see capex and opex growth forecasts to support ongoing network growth while forecasts are showing demand declining at a fast rate. AGN's vision[65] includes "volume growth", which may be driving network investment plans that do not sit well with steeply declining demand forecasts.

9. Pipeline Services

AGN is proposing to continue to provide three Haulage Reference Services:

- Domestic Haulage Service
- Demand Haulage Service
- Commercial Haulage Service.

Each Haulage Reference service will include provision and maintenance of a standard metering installation, as well as meter reading and associated data services.[66] This approach is now common across gas distribution businesses in Australia.

For electricity distribution businesses in the NEM, provision and maintenance of meters, and meter reading and associated data services have been progressively separated from standard control services to facilitate the introduction of contestability in metering. As new metering and meter data businesses emerge to serve the needs of electricity consumers, opportunities will arise to extend those services to gas consumers. The current inconsistencies between the approach to metering and meter data services in electricity and gas networks will however, create barriers to the potential introduction of competition for gas consumers. Gas businesses such as AGN are exploring new technologies such as remote meter reading, smart meters and in-home displays.

We consider that contestability in energy metering and meter data services is in the long term interests of all energy consumers in the NEM. In dual fuel areas, we envisage synergies for meter data service providers across electricity and gas meters. We advise the AER to consider moving towards a consistent approach to the issue of contestability of metering and meter data services across the NEM.

10. Conclusion

In conclusion, we wish to thank AGN for the opportunity to observe a Stakeholder Workshop, and to meet with AGN to discuss their proposal. In general we would like to acknowledge the assistance provided to the sub-panel by AGN staff.

David Prins and Robyn Robinson

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[65] AGN Access Arrangement Information, P34
[66] AGN Access Arrangement Information, P103