

Attachment 8.8

Capex business cases – South Australia

SA Final Plan July 2021 – June 2026
July 2020

Part 5: Pages 422-478 (SA137, SA138 & SA139)

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SA137 – Digital Customer Experience

1.1 Project approvals

Table 1.1: Business case SA137 – Project approvals

Prepared by	Kristen Pellew, Head of Stakeholder Engagement
Reviewed by	Chris Hewson, Head of Customer Growth
Approved by	Andrew Staniford, Chief Customer Officer

1.2 Project overview

Table 1.2: Business case SA137 – Project overview

Description of the problem / opportunity	<p>Current customer communications and notifications are often one-way, highly manual and paper based. Communication regarding planned maintenance involves letter box drops addressed to the householder which are often mistaken for junk mail and left unread. Communications about meter changes and resolving issues encountered during meter reading are facilitated through a physical card being left at the door. Each of these scenarios can result in customers not being aware of information relating to works at their premises or in their local community.</p> <p>Customers currently have limited opportunities for self-service. Our website capability is currently limited to checking gas availability based on postcode. Phone and email remain the predominant avenues for customers to contact us, as opposed to online channels.</p> <p>We therefore propose to invest in our digital capabilities, enhancing two-way interactions and customer notifications by installing a customer relationship management system and improved web functionality.</p> <p>The core case for investment is driven by the need to achieve proactive reporting, tailored responsive support and confidentiality for our 688 life support and vulnerable customers. This is particularly important given our ongoing obligation to protect consumers and the market during COVID-19, as per the AER Statement of Expectations.</p> <p>Improving the technology stack will also enable AGN to meet the changing customer and regulatory needs, and customer expectations that our digital services are as easily accessible as those provided by other energy participants. This investment will set us in good stead to achieving customer communication goals and align with our vision to be the leading gas infrastructure business in Australia.</p>
Untreated risk	As per risk matrix = Moderate
Options considered	<ul style="list-style-type: none"> • Option 1 – Certified mail (no digital capability uplift) – Refresh content of notification letters and implement a certified mail standard when delivering notifications for life support customers (no capital costs) • Option 2 – Analytics and self-service – Implement a basic analytics capability and SMS solution to notify life support customers of planned maintenance that will affect their gas service. Uplift self-service capabilities (\$0.4 million) • Option 3 – Customer Relationship Management (CRM) and self-service – Implement a CRM to capture, track, respond to and update customers on enquiries and requests. Uplift self-service capabilities (\$2.2 million) • Option 4 – SAP CRM and self-service – Implement a SAP CRM, in line with the AGIG OneERP IT Strategy. Uplift self-service capabilities (\$6.1 million)
Proposed solution	Option 3 is the recommended option. It represents the most prudent and efficient level of investment needed to ensure ongoing compliance and proactive reporting, and to respond to the shift in customer and regulatory expectations.
Estimated cost	The forecast direct capital cost (excluding overhead) during the next access arrangement (AA) period (July 2021 to June 2026) is \$2.2 million.

	\$'000 2019/20	21/22	22/23	23/24	24/25	25/26	Total
Capex		364.1	1,151.0	347.4	294.3	-	2,156.8
There is also an operating cost associated with the preferred option, as profiled in the following table.							
	\$'000 2019/20	21/22	22/23	23/24	24/25	25/26	Total
Opex		6.7	293.1	334.4	346.9	346.9	1,328.0
Note that these new digital customer experience operating costs are being proposed as a step change in our opex forecast, averaging around \$0.3 million per year.							
Basis of costs	All costs in this business case are expressed in real unescalated dollars at December 2019 unless otherwise stated. Some tables may not add due to rounding.						
Alignment to our vision	<p>This investment aligns with the Delivering for Customers aspect of our vision, as it will dramatically improve our customers' ability to interact with us, and will enhance the overall quality of our service.</p> <p>It also aligns with our objective to remain Sustainably Cost Efficient, as the proposed CRM solution will allow us to engage with customers and process queries efficiently. The CRM solution is also designed to be scalable, meaning it can grow and be modified to meet our requirements and those of our customers as they change over time, at a relatively low cost. Introducing better digital capabilities also brings us into line with what is becoming industry standard for network businesses in Australia.</p>						
Consistency with the National Gas Rules (NGR)	<p>This project complies with the following National Gas Rules (NGR):</p> <p>NGR 79(1) – the proposed solution is consistent with good industry practice, several practicable options have been considered, and market rates have been tested to achieve the lowest sustainable cost of providing this service.</p> <p>Though Option 4 ultimately achieves the same level of operational risk reduction as Option 3, it does this at a higher cost. We therefore consider Option 3 better meets the requirements of NGR 79(2).</p> <p>NGR 79(2) – proposed capex is justifiable under NGR 79(2)(c)(iii) and (iv). This is because the CRM solution is necessary to allow us to comply with our regulatory obligations, particularly with regard to communicating with vulnerable customers in line with the <i>AER Statement of Expectations of energy businesses: Protecting consumers and the energy market during COVID-19</i>¹¹¹. Improved CRM is also necessary to enable us to service existing levels of customer demand.</p> <p>NGR 74 – the forecast costs are based on typical vendor market rates, published licence fees and standard implementation costs. The estimate has been arrived at on a reasonable basis and represents the best estimate possible in the circumstances.</p> <p>NGR 91 – the proposed solution is consistent with good industry practice, and is consistent with what a prudent service provider acting efficiently to achieve the lowest sustainable cost of service delivery would do, with four practicable options having been considered to address the identified risks and the least cost option being selected.</p>						
Treated risk	As per risk matrix = Low						
Stakeholder engagement	We are committed to operating our networks in a manner that is consistent with the long-term interests of our customers. To facilitate this, we conduct regular stakeholder engagement to understand and respond to the priorities of our customers and stakeholders. Feedback from stakeholders is built into our asset management considerations and is an important input when developing and reviewing our expenditure programs.						

¹¹¹ Though the AER's Statement of Expectations was released in response to the COVID-19 crisis, it is reasonable to assume the same expectations around customer communication and protecting vulnerable customers will apply going forward (post-COVID).

<p>Other relevant documents</p>	<p>Customer preferences and expectations have been explored and assessed through a series of workshops. Insights from these workshops found customers expect our communication channels and service options to reflect broader market trends, which increasingly means offering a variety of digital communication channels.</p> <p>Customers highlighted their interest in online options for engaging with us on topics of:</p> <ul style="list-style-type: none"> • outages (planned and unplanned); • maintenance and works, including mains replacement; • establishing new gas connections; • raising queries about metering; and • submitting feedback to us. <p>Customer feedback emphasises that customers expect we will find a balance between concerns regarding gas prices and a technology solution that enables better communication through a variety of channels. We submit that our proposed investment in improving our digital capabilities is consistent with customer expectations.</p>
	<ul style="list-style-type: none"> • Attachment 8.2 Strategic Asset Management Plan • Attachment 7.2 Opex Business Cases – SA140 • Attachment 8.6 IT Investment Plan

1.3 Background

Over the past five years, we have worked to enhance the digital experience for our customers in South Australia. Initiatives such as the Builders' Portal originated in South Australia and has since been rolled out nationally to enable these customers to submit connection requests online. We are looking to extend our digital capability to enable more of our customers to engage with us as and when they want and, for example, monitor requests online with timely feedback on the status of the connection.

Compared to an electricity distributor such as SA Power Networks (SAPN), when it comes to customers, we are 'low touch'. Just as SAPN is the sole electricity distributor, we are the sole gas distributor in South Australia. We have fewer customer interactions than SAPN¹¹², however, there are common circumstances where customers need to communicate with us. For example, customers regularly need to contact us regarding renovations and new connections. We also need to communicate frequently with consumers about issues such as planned and unplanned outages.

Historically, our communication services have been predominantly manual and paper based. Shifts in technology are leading to changing expectations among our customers and our regulators. Customers expect communication processes to be simple and to utilise tools they would use when communicating with any other supplier, such as online and mobile technology.

Regulators also expect network businesses to be able to communicate more effectively. For example the Australian Energy Regulator's (AER) recent *Statement of Expectations of energy businesses: Protecting consumers and the energy market during COVID-19*¹¹³ sets new expectations with regard to protecting vulnerable customers and keeping customers informed about issues and works. The AER requires that energy businesses:

- do not disconnect any residential or small business customers who may be in financial stress (including small businesses eligible for the JobKeeper Payment), without their agreement, before 31 July 2020 and potentially beyond;

¹¹² We have between 60,000 to 80,000 customer interactions per year, compared to the millions of customer interactions per year that electricity distributors have.

¹¹³ <https://www.aer.gov.au/publications/corporate-documents/aer-statement-of-expectations-of-energy-businesses-protecting-consumers-and-the-energy-market-during-covid-19>

- prioritise clear, up-to-date communications with customers about the issues addressed in this Statement, including by keeping website, social media and call centre waiting and hold messages up to date, so customers can readily access updates when they need them and relieve some pressure on affected call centres; and
- minimise the frequency and duration of planned outages for critical works, and provide as much notice as possible to assist households and businesses to manage during any outage.

While we endeavour to engage with customers as effectively as possible, our capabilities in this space are limited by the technology currently available to us.

1.3.1 Limitations of current customer communication processes

Our website currently allow customers to search their postcode to check if gas is available in their area, however, this is the extent of any self-service capability with the exception of the Builders' Portal. Our customers connect with us predominately through phone and email, with only a small subset of customers engaging through the Builders' Portal.

While customers value the current services, insights gained through customer consultation¹¹⁴ highlight their desire to engage with us through additional avenues such as our website and other digital means. The primary touch points where our customers expect communication are:

- connections;
- planned maintenance, including meter changes;
- meter readings; and
- outages.

Increasing and maintaining gas connections is critical to customer and business growth. The current connection process is one-way, with customers being able to request connections but unable to receive status updates. Recent customer engagement¹¹⁵ highlighted that our customers want more visibility, transparency and effective status communications. Empowering customers to have more control over the connection process through digital avenues will elevate the overall experience of connecting to gas.¹¹⁶

Current processes for communicating with customers on planned maintenance and meter changes rely on a letter box notification addressed to the occupier/householder of the address. These paper based notifications are often left unread and treated as junk mail, resulting in customers being unaware of information relating to proposed works at their premises or in their local community.

Meter reads can also be problematic, as we currently have no way to provide advance notice of the meter read. **If the meter reader can't access the meter, (for example there's a dog in the yard) a card is left in the letter box and the meter read may have to be estimated.** The repercussions of this process may be a poor customer experience, a wrongly estimated bill and the resulting possibility of a formal complaint.¹¹⁷ Customers have stated a desire for the ability to submit self-

¹¹⁴ KPMG AGN Customer Engagement Report

¹¹⁵ ibid

¹¹⁶ Isobar AGIG Digital Strategy 2021-2025 Proposal

¹¹⁷ <https://www.smh.com.au/business/they-were-ridiculously-high-flood-of-complaints-over-eyewatering-gas-bills-20171011-gygm4.html>

read meter reading data online which will enable more personal control and visibility into their usage.¹¹⁸

In 2018, an unplanned gas outage occurred in the western suburbs of Adelaide. It affected approximately 460 customers and highlighted the constraints faced by us in communicating with customers proactively and responsively. During the outage, we published a banner notification on our website, however, we did not possess the tools to actively contact those affected by the outage to acknowledge the issue and provide an estimated time for resolution.

The Office of the Technical Regulator (OTR) was notified of the incident, and in response stated that it expected us to be able to notify customers. It appeared unaware that we do not hold the necessary information and has inadequate non-secure systems.

1.3.1.1 Communicating with life support customers

We also manage an ongoing risk with regard to identifying and interacting with vulnerable customers. Our 688 customers on life support rely on energy providers to consider their interests and to ensure they are kept informed about their supply. We have two specific circumstances under which communication must be made with life support customers in a specified time frame, in line with regulatory requirements:

- **Four (4) days' notice of any planned works**¹¹⁹
- Five (5) day time frame to send an information pack and medical confirmation form if a customer registers with us as a life support customer (rather than through the retailer).¹²⁰

As described above, the current method of alerting our customers to interruptions to supply is highly manual and as a result prone to error. Currently, information about life support customers is provided to us by the retailer in the form of an excel spreadsheet. This spreadsheet contains the basic information of life support customers, being address, and Meter Identification Reference Number (MIRN). With this minimal information, and our dependence on receiving up-to-date and valid information from retailers, we are unable to support these customers in the way that the regulator expects.

To adequately support and prioritise these customers, we need a digital capability to store sensitive information and any communication between us and the customer, consistent with data security and integrity compliance requirements.

1.3.2 Improving our communication capabilities

This business case considers four options to improve our ability to communicate effectively with customers. For each option we have considered whether the solution meets business needs, is scalable and is compliant with privacy and regulatory requirements. We have also considered the costs, risks and benefits to us and to customers.

¹¹⁸ KPMG AGN Customer Engagement Report

¹¹⁹ <https://www.aer.gov.au/news-release/aer-takes-energy-companies-to-task-on-life-support>

¹²⁰ <https://www.aer.gov.au/system/files/AER%20Life%20support%20registration%20guide%202019.pdf>

1.4 Risk assessment

Risk management is a constant cycle of identification, analysis, treatment, monitoring, reporting and then back to identification (as illustrated in Figure 1.1). When considering risk and determining the appropriate mitigation activities, we seek to balance the risk outcome with our delivery capabilities and cost implications. Consistent with stakeholder expectations, safety and reliability of supply are our highest priorities.

Our risk assessment approach focuses on understanding the potential severity of failure events associated with each asset and the likelihood that the event will occur. Based on these two key inputs, the risk assessment and derived risk rating then guides the actions required to reduce or manage the risk to an acceptable level.

Our risk management framework is based on:

- AS/NZS ISO 31000 Risk Management – Principles and Guidelines;
- AS 2885 Pipelines-Gas and Liquid Petroleum, and
- AS/NZS 4645 Gas Distribution Network Management.

The Gas Act 1997 and Gas Regulations 2012, through their incorporation of AS/NZS 4645 and the Work Health and Safety Act 2012, place a regulatory obligation and requirement on us to reduce risks rated high or extreme to low or negligible as soon as possible (immediately if extreme). If it is not possible to reduce the risk to low or negligible, then we must reduce the risk to as low as reasonably practicable (ALARP).

When assessing risk for the purpose of investment decisions, rather than analysing all conceivable risks associated with an asset, we look at a credible, primary risk event to test the level of investment required. Where that credible risk event has an overall risk rating of moderate or higher, we will undertake investment to reduce the risk.

Seven consequence categories are considered for each type of risk:

- 1 **Health & safety** – injuries or illness of a temporary or permanent nature, or death, to employees and contractors or members of the public
- 2 **Environment** (including heritage) – impact on the surroundings in which the asset operates, including natural, built and Aboriginal cultural heritage, soil, water, vegetation, fauna, air and their interrelationships
- 3 **Operational capability** – disruption in the daily operations and/or the provision of services/supply, impacting customers
- 4 **People** – impact on engagement, capability or size of our workforce
- 5 **Compliance** – the impact from non-compliance with operating licences, legal, regulatory, contractual obligations, debt financing covenants or reporting / disclosure requirements
- 6 **R Reputation & customer** – impact on stakeholders’ opinion of AGN, including personnel, customers, investors, security holders, regulators and the community
- 7 **Financial** – financial impact on AGN, measured on a cumulative basis

Figure 1.1: Risk management principles



A summary of our risk management framework, including definitions, has been provided in Attachment 8.10.

The risk event associated with not investing in digital customer experience is an inability to appropriately triage and respond to client needs, particularly with regard to life support and vulnerable customers. This also translates into compliance risk as the regulatory demands evolve in response to changing conditions.

The untreated risk¹²¹ rating is presented in Table 1.3.

Table 1.3: Untreated risk

Untreated risk	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Occasional	Occasional	Occasional	Moderate
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Significant	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Moderate	Moderate	Moderate	

1.5 Options considered

We have considered the following options relating to improving our customer communication capabilities:

- **Option 1** – Certified mail (no digital capability uplift) – Refresh content of notification letters and implement a certified mail standard when delivering notifications for life support customers;
- **Option 2** – Analytics and self-service – Implement a basic analytics capability and SMS solution to notify life support customers of planned maintenance that will affect their gas service. Uplift self-service capabilities;
- **Option 3** – Customer Relationship Management (CRM) and self-service – Implement a CRM to capture, track, respond to and update customers on enquiries and requests. Uplift self-service capabilities; or
- **Option 4** – SAP CRM and self-service – Implement a SAP CRM, in line with the AGIG OneERP IT Strategy. Uplift self-service capabilities.

These options are discussed in the following sections.

1.5.1 Option 1 – Certified mail

Under Option 1 we propose to keep the paper-based method of informing life support customers, however we will send letters by certified mail rather than standard post. We do not propose any digital capability enhancements under this option.

We will refresh the content of the customer notification letter and implement a certified mail standard for the delivery of notifications to life support customers. This option would provide AGN with a paper trail to ensure a personalised letter (rather than the current 'Dear Occupier') is delivered to the life support customers and provided to them with a minimum four days' notice.

Experience shows customers often fail to read letters that are addressed to the occupier of household, resulting in customers not being aware of information relating to proposed works at

¹²¹ Untreated risk is the risk level assuming there are no risk controls currently in place. Also known as the 'absolute risk'.

their premise or in their local community. The probability of the notice being read increases if it is addressed to a particular individual and they are required to sign for it.

This option leaves digital communication channels and self-service capabilities unchanged, with customer interactions restricted to post, phone, email and our website. Existing business processes would remain largely unchanged. Manual effort to cross-reference the planned maintenance schedule and compare this against the spreadsheet detailing the streets and suburbs of life support customers would be required.

The advantage of this option is that it requires little additional cost to implement (no capital costs would be required to implement certified mail). It would also increase the likelihood we will be compliant with regulatory requirements to notify customers within specific timeframes.

However, this option would result in not uplift of our digital capability. It would not enhance two-way communications and does not align with customer expectations of being able to communicate with us via multiple channels.

1.5.1.1 Cost assessment

There is no capital cost associated with this option. However, the following additional operating costs would be required:

- An additional [REDACTED] FTE will be required to review the planned maintenance schedule and cross-reference this against the life support spreadsheet.
- Certified mail costs at approximately \$4.59 per prepaid envelope including postage¹²², plus additional overhead for the manual effort required to write out customer details on the envelope and then enter the tracking number online to document the date it was signed for and delivered.¹²³

The estimated additional operating costs, which we would recover via a step change to our opex forecast, are summarised in Table 1.4.

Table 1.4: Cost estimate – opex – Option 1, \$'000 2019/20

Option 1 (opex)	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Implement registered post	150.1	150.1	150.1	150.1	150.1	750.5
Total	150.1	150.1	150.1	150.1	150.1	750.5

1.5.1.2 Risk assessment

Option 1 reduces the likelihood of the compliance, reputational and financial risk from occasional to unlikely. However, the risk consequence remains significant. As a result, the overall risk rating remains moderate.

¹²² Registered post letters – Australia Post <https://auspost.com.au/business/marketing-and-communications/business-letter-services/bulk-mail-options/registered-post-imprint>

¹²³ We have made assumptions on the proportion of customers that are life support customers, and the impact of planned maintenance events in relation to customer interruptions to estimate the number of life support customers we will need to notify per month over the course of the AA period. We estimate this is 2 notifications per month.

Table 1.5: Risk assessment – Option 1

Option 1	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Unlikely	Unlikely	Unlikely	Moderate
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Significant	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Moderate	Moderate	Moderate	

Security vulnerabilities are still present in this option, as there is no robust data storage solution in place. Life support details remain in spreadsheets, therefore the risk of manual error remains. This solution also fails to address current limitations with regard to storage of sensitive data.

While the cost associated with this solution is low, we consider the residual risks far outweigh any benefit to be gained in choosing the cheapest option. We also consider that a moderate risk rating in this case is not ALARP.

1.5.1.3 Alignment with vision objectives

Table 1.6 shows how Option 1 aligns with our vision objectives.

Table 1.6: Alignment with vision – Option 1

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	N
A Good Employer – Health and Safety	-
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	N
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	N

Option 1 would not align with *Delivering for Customers*, as it does not offer any improvement in our current service for non-life support customers. Current communication practices will remain for all customers who are not on the life support spreadsheet.

Option 1 would also not be *Sustainably Cost Efficient*, as maintaining the risk associated with manual handling of life support customer data would not be socially responsible. Though Option 1 is the lowest cost option, it fails to bring our customers communication capabilities up to industry standard and is likely only to result in costs to improve our digital customers solutions being deferred to future AA periods.

1.5.2 Option 2 – Basic analytics/reporting solution and self-service capability

Option 2 proposes a combination of an analytics solution, an SMS/email solution and a refresh of the website to incorporate some self-service capability. Similar to Option 1, this option predominately focuses on our life support customers as well as vulnerable customers.

At present, retailers provide us with spreadsheets containing the data of life support customers, which then requires the manual consolidation of information from multiple systems to complete our reporting activities. With such a heavy reliance on spreadsheets, this presents inherent security risks, particularly around privacy, governance and the risk of human error.

If a life support customer submitted a complaint stating they were not notified of planned works that would interrupt their supply, we are liable for a non-compliance fine. Current processes rely on a contractor completing the letter box notification drops with no receipt of delivery.

The analytic tool proposed to be introduced in this option would take relevant information from different data sources, specifically the life support spreadsheets, Geospatial Information System (GIS) and Outage Management System (OMS) into a coherent, visually immersive and interactive dashboard, which would allow us to target communications to life support and vulnerable customers. This solution will enable SMS or email notifications to be sent to these customers as preferred. This option would address the notification requirements around life support customers whilst removing the manual cross-referencing that is required in Option 1.

A refresh of the website to encompass self-service capabilities is also included in this option. Self-service capabilities have been suggested in line with customer preferences¹²⁴ and prevalent digital features offered in the wider business community. The functionality for the self-service would include:

- interactive maps displaying outages and planned works;
- online registration for outage notifications;
- connection request portal which provides status updates; and
- online registration of vulnerability.

Enhancements to our website would enable customers to interact digitally. This would include providing information on vulnerabilities if a customer desired. This information would allow us to support and assist these customers and engage with the new voluntary reporting requests from the regulator.

This option allows for the collection of customer information through the website. The more data we are able to obtain from customers themselves, the more we are able to provide a better service and support customers when needed.

However, a significant disadvantage of this option is that the data collection required to deliver this option is incompatible with present data security and privacy requirements. There is no robust mechanism or platform to store the customer information.

¹²⁴ KPMG AGN Customer Engagement Report

1.5.2.1 Cost assessment

The estimated direct capital cost of this option is \$0.4 million. This estimate is based on typical vendor market rates, published license fees and standard implementation costs.

Table 1.7: Cost estimate – capex - Option 2, \$'000 2019/20

Option 2 (capex)	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Website enhancement	224.9	-	-	-	-	224.9
Analytics tool	96.1	-	-	-	-	96.1
Automated SMS	45.6	-	-	-	-	45.6
Total	366.6	-	-	-	-	366.6

There are additional operating costs associated with this option, as there will be an ongoing requirement to operate and maintain the enhanced analytics and reporting solutions. The estimated additional operating costs, which we would recover via a step change to our opex forecast, as summarised in Table 1.8.

Table 1.8: Cost estimate – opex - Option 2, \$'000 2019/20

Option 2 (opex)	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Website enhancement	112.5	150.0	150.0	150.0	150.0	712.5
Analytics tool	17.2	20.6	20.6	20.6	20.6	99.6
Automated SMS	23.0	27.7	27.7	27.7	27.7	133.9
Total	152.7	198.3	198.3	198.3	198.3	946.0

1.5.2.2 Risk assessment

Option 2 increases the overall risk from moderate to high. Though implementing the new analytics and reporting systems reduces the likelihood of a compliance or financial risk event, it presents a new risk in terms of private data storage.

Under Option 2 customers will be able to log their details online (self-service capability). As more personal data becomes available the potential consequences of a data breach increases. Option 2 does not include a robust data storage solution. As a result, the reputational risk consequence of a private data breach increases from significant to major, leading to a high overall risk rating.

Table 1.9: Risk assessment – Option 2

Option 2	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Unlikely	Occasionally	Unlikely	High
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Major	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Moderate	High	Moderate	

This option increases the risk from moderate to high, therefore it is not consistent with the requirements of our risk management framework.

1.5.2.3 Alignment with vision objectives

Table 1.10 shows how Option 2 aligns with our vision objectives.

Table 1.10: Alignment with vision – Option 2

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	Y
A Good Employer – Health and Safety	-
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	N
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	N

Option 2 aligns with *Delivering for Customers* as it offers enhanced customer communication capabilities, including a self-service portal. This option is therefore in line with customer expectations.

However, Option 2 is not *Sustainably Cost Efficient*, primarily due to the fact it introduces an increased risk associated with data privacy. Handling large volumes of customer data without a commensurate improvement in secure data storage capabilities is not socially responsible. The analytics and reporting tools proposed under Option 2 are also not consistent with industry standards for digital capability.

1.5.3 Option 3 – CRM solution with self-service capability

Option 3 builds upon the reporting, notification and self-service functionality discussed in Option 2. This option embodies all previous features to assist life support and vulnerable customers whilst extending capability to be more inclusive of the broader customer base.

Option 3 includes the implementation of a flexible CRM solution with foundational functionality. It also incorporates the self-service elements discussed previously, with the additional functionality for submission of meter self-read data online.

The clear difference between this option and Option 2 is the ability to securely store data and meet our privacy requirements. The delivery of a more personalised service is unachievable under Option 2 due to the privacy and security concerns, but is bolstered in Option 3 by a CRM platform that is both secure and robust in the storage of information.

A CRM solution would also enable customers to provide us with information that would allow better service provision. This could include:

- customer preferences for communication channels;
- interest in specific energy related topics for ongoing provision of targeted information;
- information relating to accurate meter readings, potentially eliminating skips and estimated reads; and
- health related issues and details of appliances installed (knowing if a vulnerable customer has gas heating in winter could drive prioritisation of emergency response).

A CRM would provide us with the back-end capability to underpin improvements in customer communication channels. It would allow us to capture, track, respond and update customers on their enquiries and requests.

Option 3 would address the security issues around customer data raised in the previous option, irrespective of whether the information is provided by the retailer or directly from the customer. A CRM solution would allow for customer information to be categorised and segmented, and security roles assigned to appropriate users. For example, access to sensitive information regarding vulnerable customers could be restricted to selected staff.

A robust platform will enable us to attend to our most vulnerable customers. As part of the self-service functionality, customers can provide details on their vulnerabilities if they so choose. They can register through the portal enabling us to assess, for example, a disconnection request received **from the retailer against the customer's information to determine if the disconnection is appropriate.**

The self-service functionality takes on a new dimension in Option 3, extending the channels in which customers can interact. Customers would have the ability to submit self-read meter data through a mobile application. This option now has the underlying foundation - a CRM -to safely store this customer information. It would also support us in response to customer complaints regarding non-receipt of notifications and mitigate risk by having a digital delivery status.

A meter reading app would allow customers more personal control over their service and allow them to engage at a time, place and channel that suits. Customers can create an account and submit their meter readings, alleviating property access issues and potentially creating a tangible, financial benefit by reducing the number of meter readers required.

Touch points with customers are often sporadic, and as such, the scenarios where customer communications are required are quite specific. An agile CRM would allow us to address these specific scenarios whilst also possessing the capability to scale up and address future scenarios as digital customer needs grow.

A flexible CRM that uses out-of-the-box connectors to our core SAP solution would also allow us to **effectively 'plug and play' this solution into the existing SAP architecture. This solution can be hosted** either locally or in the cloud. It would provide the ability to gradually collect customer data without large upfront costs and enables us to incrementally establish a CRM without incurring significant spend if issues arise due to non-provision of data or minimal customer adoption of self-service capabilities.

1.5.3.1 Cost assessment

The estimated direct capital cost of this option is \$2.2 million. This estimate is based on typical vendor market rates, published license fees and standard implementation costs. The CRM enhancements outlined in Table 1.11 will:

- achieve tighter service integration and greater service efficiencies through technology and process integration with retailers; and
- increase the frequency of reports and updates from the field, facilitating agile working practices through digitisation of key workflows.

Table 1.11: Cost estimate – capex – Option 3, \$'000 2019/20

Option 3	2021/22	2022/23	2023/24	2024/25	2025/26	Total
CRM Implementation	-	870.8	-	-	-	870.8
Website enhancement	318.5	-	-	-	-	318.5
Meter reading app development	-	-	347.4	-	-	347.4
Website upgrade - II - customer portal	-	280.2	-	-	-	280.2
Automated SMS	45.6	-	-	-	-	45.6
CRM enhancements	-	-	-	294.3	-	294.3
Total	364.1	1,151.0	347.4	294.3	-	2,156.8

There are additional operating costs associated with this option, as there will be an ongoing requirement to operate and maintain the enhanced digital capabilities and CRM solution. This represents a new activity and was developed in response to feedback through our customer and stakeholder engagement program. We discuss this opex step change in Chapter 7 of our Final Plan. The estimated additional operating costs are summarised in Table 1.12.

Table 1.12: Cost estimate – opex – Option 3, \$'000 2019/20

Option 3	2021/22	2022/23	2023/24	2024/25	2025/26	Total
CRM implementation	-	140.9	127.3	127.3	127.3	522.7
Website enhancement	6.7	20.0	20.0	20.0	20.0	86.7
Meter reading app development	-	-	17.5	30.0	30.0	77.5
Website upgrade - II - customer portal	-	97.0	120.0	120.0	120.0	457.0
Automated SMS	-	35.1	49.7	49.7	49.7	184.1
CRM enhancements	-	-	-	-	-	-
Total	6.7	293.1	334.4	346.9	346.9	1,328.0

1.5.3.2 Risk assessment

Option 3 meets customer and regulatory expectations. However, in contrast to Option 2, this solution contains customer privacy and data security at its core. It is capable of managing all customer interactions and data, and applying special security around our most vulnerable customers. It reduces the likelihood of compliance, reputational and financial risk events occurring from occasional to rare (noting that the reputational risk consequence increase to major due to the large volumes of private customer data being managed). Option 3 therefore reduces the overall risk from moderate to low.

Table 1.13: Risk assessment – Option 3

Option 3	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Low
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Major	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Negligible	Low	Negligible	

Reducing the overall risk to low is consistent with our risk management framework.

1.5.3.3 Alignment with vision objectives

Table 1.14 shows how Option 3 aligns with our vision objectives.

Table 1.14: Alignment with vision – Option 3

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	Y
A Good Employer – Health and Safety	-
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	Y
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	Y

Option 3 aligns with Delivering for Customers as it offers a new communication functionality in line with customers' expectations. It is also Sustainably Cost Efficient as it offers digital capabilities in line with industry standards and data storage capabilities that meet current privacy requirements.

Option 3 also achieves the necessary risk reduction at a lower overall cost than Option 4 (Option 4 is discussed in the following section)

1.5.4 Option 4 – SAP CRM with self-service capability

Option 4 mirrors Option 3, however this option specifies that the technical solution will be a SAP CRM. A SAP CRM would enable us to upgrade to a solution which is globally recognised and in line with AGIG's long term OneERP SAP strategy.

A fully integrated solution would provide the ability to easily connect the SAP CRM to other modules within SAP such as the Enterprise Asset Management (EAM) module. This would allow us to seamlessly access a holistic view of the customer, for example, aligning data from CRM and EAM, would enable us to see at a glance how many service requests and the types of service requests for a customer, regardless of the property. It would allow us to readily validate or confirm vulnerable customer status or life support requirements.

SAP CRM has a high level of functionality and capability, all of which is enabled immediately upon implementation, with limited ability to scale or constrain the solution as required. The SAP CRM will provide all the same functionality as the CRM outlined in Option 3, for example case management, reporting, workflows and push notifications. However, they are enabled immediately and can't be paced with a slow and gradual take up.

This option also includes all self-service capabilities mentioned in Option 3, such as online outage maps, connection request portal for all customers and the meter reading application. Similar to Option 3, SAP CRM provides the option to be hosted either on premise or in the cloud. This solution incorporates security mechanisms as per Option 3 to store and categorise customer data based on security privileges to protect sensitive customer information.

Notwithstanding the benefits that a SAP CRM solution would bring, a SAP solution is more expensive than the leading CRMs ranked by Gartner. Given Option 3 achieves a similar level of risk reduction as Option 4, it could be argued that the cost of this solution is disproportionate to the benefits.

1.5.4.1 Cost assessment

The estimated direct capital cost of this option is \$6 million. This estimate is based on typical vendor market rates, published license fees and standard implementation costs.

Table 1.15: Cost estimate – capex - Option 4, \$'000 2019/20

Option 4	2021/22	2022/23	2023/24	2024/25	2025/26	Total
CRM implementation	-	5,064.0	-	-	-	5,064.0
Website enhancement	318.5	-	-	-	-	318.5
Meter reading app development	-	-	347.4	-	-	347.4
Website upgrade - II - customer portal	-	280.2	-	-	-	280.2
Automated SMS	45.6	-	-	-	-	45.6
Total	364.1	5,344.2	347.4	-	-	6,055.7

There are additional operating costs associated with this option, as there will be an ongoing requirement to operate and maintain the enhanced digital capabilities and CRM solution. The estimated additional operating costs, which we would recover via a step change to our opex forecast, are summarised in Table 1.16.

Table 1.16: Cost estimate – opex – Option 4, \$'000 2019/20

Option 4	2021/22	2022/23	2023/24	2024/25	2025/26	Total
CRM implementation	-	1,257.0	3,600.0	3,600.0	3,600.0	12,057.0
Website enhancement	6.7	20.0	20.0	20.0	20.0	86.7
Meter reading app development	-	-	17.5	30.0	30.0	77.5
Website upgrade - II - customer portal	-	97.0	120.0	120.0	120.0	457.0
Automated SMS	-	35.1	49.7	49.7	49.7	184.1
Total	6.7	1,409.1	3,807.2	3,819.7	3,819.7	12,862.3

1.5.4.2 Risk assessment

As per Option 3, the solution proposed under Option 4 reduces the overall risk rating from moderate to low. This option meets customer and regulatory expectations. Like Option 3, it holds customer privacy and data security at its core. It is capable of managing all of our customers and applying special security around our most vulnerable. It therefore reduces the risk from moderate to low. However, in contrast to Option 3, the cost associated with implementing and maintaining this solution is disproportionately high compared to the value to be gained by customers.

Table 1.17: Risk assessment – Option 4

Option 4	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Low
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Major	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Negligible	Low	Negligible	

Reducing the overall risk to low is consistent with our risk management framework. The disadvantage with Option 4 compared with Option 3 is the cost. We therefore consider this a less prudent course of action.

1.5.4.3 Alignment with vision objectives

Table 1.18 shows how Option 4 aligns with our vision objectives.

Table 1.18: Alignment with vision – Option 4

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	Y
A Good Employer – Health and Safety	-
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	N
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	Y

Option 4 aligns with Delivering for Customers as it offers a new communication functionality in line with customers' expectations.

Option 4 aligns in part with our vision to be Sustainably Cost Efficient as it offers data storage capabilities that meet current privacy requirements. However, the cost of Option 4 is disproportionate to the benefits, particularly when we consider Option 3 achieves a similar level of risk reduction for a significantly lower cost.

1.6 Summary of costs and benefits

Table 1.19 presents a summary of how each option compares in terms of the estimated capital cost in the next AA period, the residual risk rating, and alignment with our vision objectives.

Table 1.19: Comparison of options

Option	Estimated cost (\$ million)	Treated residual risk rating	Alignment with vision objectives
Option 1	0.0	Moderate	Does not align with <i>Delivering for Customers</i> or <i>Sustainably Cost Efficient</i>
Option 2	0.4	High	Aligns with <i>Delivering for Customers</i> but does not align with <i>Sustainably Cost Efficient</i> due to ongoing security and privacy concerns.
Option 3	2.2	Low	Aligns with <i>Delivering for Customers</i> and aligns with <i>Sustainably Cost Efficient</i>
Option 4	6.1	Low	Aligns with <i>Delivering for Customers</i> however it does not align with <i>Sustainably Cost Efficient</i> , as the implementation and maintenance costs are materially higher than Option 3

1.7 Recommended option

Option 3 has been identified as the most prudent and efficient option. It represents the most efficient level of investment needed to ensure ongoing compliance and support for all customers, meeting the increasing regulatory and customer demands.

1.7.1 Why is the recommended option prudent?

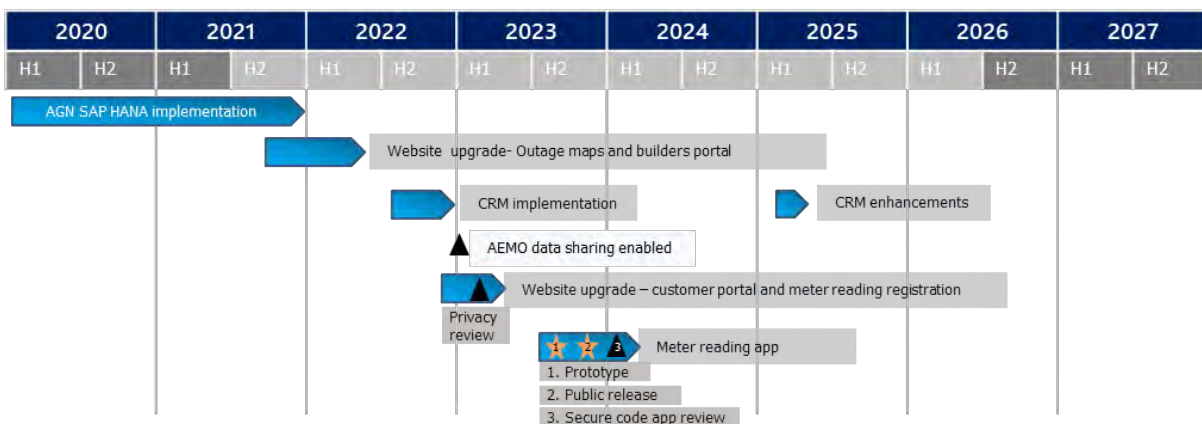
Option 3 is the most prudent solution because it:

- provides significant enhancement to current communication channels by allowing self-service and two way communication;
- provides robust security features so customer data, particularly life support and vulnerable customer information, complies with privacy legislation;
- provides customers with more transparency and visibility over their interactions with us; and
- does not require the significant additional investment needed in a fully integrated SAP solution.

Furthermore, the recommendation also aligns with business needs in that it:

- fulfils all of the principles and meets our objective of creating a back end foundational capability to support improvements in customer digital interactions;
- has an architecture which will easily adapt and scale to our current and future needs without any loss in quality of service. Quick deployment of software plug-ins mean there is no need to invest in a complex integration layer;
- complies with privacy legislation and incorporates the provision of robust security features that **control users' access**;
- satisfies all regulatory obligations. Life support customers can be notified of maintenance activities in the required time with evidentiary justification provided. The voluntary reporting requested by the regulator is also able to be completed; and
- provides us with a platform which is prudent and efficient. It is futureproof through its ability to scale and expand as needs change and grow.

As shown in the roadmap below, the proposed implementation of Option 3 takes into account the other major programs of work going on. To ensure Option 3 is delivered, each of the components has been planned to be implemented to suit resource availability, solution dependencies and changes in data sharing regulations. It is well paced and within industry standards.



1.7.2 Estimating efficient costs

Expenditure related to this project includes capex and opex. Operating costs are being proposed as a step change in our opex forecast, averaging around \$0.2 million per year.

The cost estimate for Option 3 is based on:

- estimated market rates for external labour/approximate salary and on-costs for internal labour and estimated effort; and
- relevant licencing and other vendor development and support costs.

The overall project is made up of the following sub-projects, each of which has been costed separately:

- CRM Implementation;
- Website enhancement;
- Meter reading app development;
- Website upgrade - II - customer portal;
- Automated SMS; and
- CRM enhancements.

Labour costs included in the estimate include project management, solution and infrastructure/cyber architects, business analysts, developers, testers, trainers, business as usual support.

The combined capital and operating costs for the recommended option are presented in Table 1.20.

Table 1.20: Cost estimate, \$'000 2019/20

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Capex	364.1	1,151.0	347.4	294.3	-	2,156.8
Opex	6.7	293.1	334.4	346.9	346.9	1,328.0
Total	370.8	1,444.1	681.8	641.2	346.9	3,484.8

The following tables show the costs escalated to June 2021 dollars.

Table 1.21: Escalated digital customer solution capex cost estimate, \$'000

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Total unescalated (\$ Dec 19)	364.1	1,151.0	347.4	294.3	-	2,156.8
Escalation	12.3	44.5	15.6	14.9	-	87.2
Total escalated (\$ Jun 21)	376.4	1,195.5	363.0	309.2	-	2,244.0

Table 1.22: Escalated digital customer solution opex cost estimate, \$'000

	2021/22	2022/23	2023/24	2024/25	2025/26	2021/22
Total unescalated (\$ Dec 19)	6.7	293.1	334.4	346.9	346.9	1,328.0
Escalation	0.2	11.3	15.0	17.5	19.3	63.4
Total escalated (\$ Jun 21)	6.9	304.4	349.4	364.4	366.2	1,391.4

1.7.3 Consistency with the National Gas Rules

In developing these forecasts, we have had regard to Rule 79 and Rule 74 of the NGR. With regard to all projects, and as a prudent asset manager/network business, we give careful consideration to whether capex is conforming from a number of perspectives before committing to capital investment.

NGR 79(1)

The proposed solution is prudent, efficient, consistent with accepted and good industry practice and will achieve the lowest sustainable cost of delivering pipeline services:

- Prudent – The expenditure is necessary in order to continue to meet customer and regulatory expectations, and is of a nature that a prudent service provider would incur.
- Efficient – Implementing a CRM is the most practical and effective option. It is also the most cost effective option. Given the nature of data that we are required to hold and the privacy and data legislation that surrounds it, a CRM that is capable of plugging in to our existing architecture is the most efficient. Work will be carried out by internal staff and external contractors as skills demand requires. Any work carried out by external contractors will be based on competitively tendered rates. The expenditure is therefore of a nature that a prudent service provider acting efficiently would incur.
- Consistent with accepted and good industry practice – Other energy Distributors in South Australia have set what may be seen as a benchmark for customer digital interaction with a distributor. Whilst the nature of the electricity distributor in South Australia is different to our business, customers continue to expect similar digital capability. As conditions have evolved, the regulator expects more of us in dealing with vulnerable customers. This sets expectations of a minimum capability that we are unable to achieve with current systems and processes.
- To achieve the lowest sustainable cost of delivering pipeline services – The proposed solution (Option 3) achieves the necessary risk reduction and improvement in customer capabilities at a lower capital cost than Option 4. The ongoing operating costs are also considerably lower than Option 4. The other options considered do not deliver the required risk reduction or customer benefits. Therefore, the chosen option is consistent with the objective of achieving the lowest sustainable cost of service delivery.

NGR 79(2)

Proposed capex is justifiable under NGR 79(2)(c)(iii) and (iv). This is because the CRM solution is necessary to allow us to comply with our regulatory obligations, particularly with regard to communicating with vulnerable customers in line with the AER Statement of Expectations of energy businesses: Protecting consumers and the energy market during COVID-19¹²⁵. Improved CRM is also necessary to enable us to service existing levels of customer demand.

NGR 74

The forecast costs are based on typical vendor market rates, published licence fees and standard implementation costs. The estimate has therefore been arrived at on a reasonable basis and represents the best estimate possible in the circumstances.

¹²⁵ Though the AER's Statement of Expectations was released in response to the COVID-19 crisis, it is reasonable to assume the same expectations around customer communication and protecting vulnerable customers will apply going forward (post-COVID).

NGR 91

The proposed solution is consistent with good industry practice, and is consistent with what a prudent service provider acting efficiently to achieve the lowest sustainable cost of service delivery would do, with four practicable options having been considered to address the identified risks and the least cost option being selected.

Appendix A – Comparison of risk assessments for each option

Untreated risk	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Occasional	Occasional	Occasional	Moderate
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Significant	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Moderate	Moderate	Moderate	

Option 1	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Unlikely	Unlikely	Unlikely	Moderate
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Significant	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Moderate	Moderate	Moderate	

Option 2	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Unlikely	Occasional	Unlikely	High
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Major	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Moderate	High	Moderate	

Option 3	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Low
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Major	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Negligible	Low	Negligible	

Option 4	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Low
Consequence	Minimum	Minimum	Minimum	Minimum	Significant	Major	Significant	
Risk Level	Negligible	Negligible	Negligible	Negligible	Negligible	Low	Negligible	

SA138 – AGIG IT Strategy & Roadmap

1.1 Project approvals

Table 1.1: Business case SA138 – Project approvals

Prepared by	Amber Smith, IT Manager
Reviewed by	Wayne Samuels, Manager IT Commercial
Approved by	Andrew Staniford, Chief Customer Officer

1.2 Project overview

Table 1.2: Business case SA138 – Project overview

Description of the problem / opportunity	<p>This project will develop a stable and aligned Information Technology (IT) environment across all AGIG entities, which will enable all AGIG businesses to deliver AGIG's vision of being the leading gas infrastructure business in Australia by delivering for customers, being a good employer and being sustainably cost efficient.</p> <p>The AGIG IT Strategy and Roadmap was developed in late 2019 with a clear technology roadmap set out for the following five years. The objectives of this program were to:</p> <ul style="list-style-type: none"> • better deliver the AGIG corporate strategy and individual business unit operating strategies and plans; • support feedback from our stakeholders, regulators and customers that they value reliable and safe delivery of energy to our customers backed up by timely support when they need help; • address specific issues and risks common to all AGIG businesses, including cyber security, likelihood of errors and poor management decisions based on the incorrect or untimely information, and employee frustration due to lack of access to data and ability to collaborate effectively; and • achieve economies of scale in purchasing and support costs. <p>To facilitate this, a two stage program was developed. Stage 1, which started in 2020, involved delivering a foundational program to ensure effective use collaboration, appropriate management of cyber risks and leveraging economies of scale. This also included initial components of a larger program to improve reporting capabilities, empowering management with more accurate and timely information.</p> <p>Stage 2 plans to build on and leverage the foundational program via several transformational initiatives. In particular, this includes the 'OneERP' project – development of a standardised enterprise resource planning (ERP) system across the AGIG group. Having a standard ERP system will allow us to remove the heavy customisation, and therefore the substantial risks, associated with local finance systems.</p> <p>We will also continue the Stage 1 program to improve reporting capabilities by adopting standardised reporting tools and data structures, which will provide access to the 'right' information quickly, reliably and dynamically.</p> <p>The majority of Stage 1 work is being completed in the current AA period. The remainder of Stage 1, along with Stage 2, is planned for the next AA period and is expected to be completed by 2025/26.</p>
Untreated risk	As per risk matrix = Moderate
Options considered	<ul style="list-style-type: none"> • Option 1 – Do nothing more, halt AGIG IT Strategy and Roadmap investment and continue to run disparate IT environments across AGIG (\$0 upfront capex) • Option 2 – Undertake foundational AGIG IT initiatives only (\$1 million) • Option 3 – Undertake foundational and transformational initiatives in line with the AGIG IT Strategy and Roadmap (\$14 million)

Proposed solution	<p>Option 3 is the proposed solution. In the next AA period we will undertake foundational and transformational AGIG IT initiatives in line with the AGIG IT Strategy and Roadmap developed in late 2019. This includes completing the foundational and cyber initiatives underway, rationalising core application platforms, improving data governance and delivering One ERP. Completing the AGIG IT Strategy and Roadmap initiatives in line with the plan developed will:</p> <ul style="list-style-type: none"> • improve our ability to respond to and mitigate cyber risks; • reduce employee frustrations around collaboration and access to accurate and timely data and information; • standardise and streamline finance and decision making processes across AGIG; and • ensure our finance and decision making processes are delivered in line with AGIG’s financial and governance controls. 														
Estimated cost	<p>The forecast direct capital cost (excluding overhead) during the next access arrangement (AA) period (July 2021 to June 2026) is \$14 million.</p> <table border="1" data-bbox="472 645 1431 857"> <thead> <tr> <th data-bbox="472 645 783 723">\$'000 2019/20</th> <th data-bbox="783 645 815 723">21/22</th> <th data-bbox="815 645 863 723">22/23</th> <th data-bbox="863 645 975 723">23/24</th> <th data-bbox="975 645 1038 723">24/25</th> <th data-bbox="1038 645 1134 723">25/26</th> <th data-bbox="1134 645 1431 723">Total</th> </tr> </thead> <tbody> <tr> <td data-bbox="472 734 783 857">Foundational and transformational initiatives</td> <td data-bbox="783 734 815 857">730.3</td> <td data-bbox="815 734 863 857">977.3</td> <td data-bbox="863 734 975 857">4,304.1</td> <td data-bbox="975 734 1038 857">5,502.1</td> <td data-bbox="1038 734 1134 857">1,993.2</td> <td data-bbox="1134 734 1431 857">13,507.0</td> </tr> </tbody> </table>	\$'000 2019/20	21/22	22/23	23/24	24/25	25/26	Total	Foundational and transformational initiatives	730.3	977.3	4,304.1	5,502.1	1,993.2	13,507.0
\$'000 2019/20	21/22	22/23	23/24	24/25	25/26	Total									
Foundational and transformational initiatives	730.3	977.3	4,304.1	5,502.1	1,993.2	13,507.0									
Basis of costs	<p>All costs in this business case are expressed in real unescalated dollars at December 2019 unless otherwise stated. Some tables may not add due to rounding.</p>														
Alignment to our vision	<p>This project aligns with the <i>Delivering for Customers</i> aspect of our vision as it ensures our employees and digital platforms can provide timely and relevant information to support our customer service functions.</p> <p>This project also aligns with our vision objective of being <i>A Good Employer</i>, as it addresses employee frustrations highlighted in our 2018 and 2019 Employee Engagement Surveys by delivering rationalised, fit-for-purpose IT systems across AGIG that enable collaboration and timely access to accurate data and information.</p> <p>It is also <i>Sustainably Cost Efficient</i> as it standardises finance systems and processes across AGIG reducing the likelihood of errors, streamlining processes and introducing economies of scale in the procurement and management of these systems through combined purchasing power.</p>														
Consistency with the National Gas Rules (NGR)	<p>This project complies with the following National Gas Rules (NGR):</p> <p>NGR 79(1) – the proposed foundational and transformational IT initiatives that will be pursued are consistent with good industry practice, several practicable options have been considered, and we have received independent expert advice as well as tested market rates across initiatives to ensure this project reflects the lowest sustainable cost of providing services. There has been significant internal consultation and use of independent experts to ensure that the individual initiatives pursued within this project are prudent, efficient, consistent with accepted good industry practice and achieve lowest sustainable cost of delivering services.</p> <p>NGR 79(2) – the proposed capex is justifiable under NGR 79(2)(c)(ii), as it is necessary to maintain the integrity of services.</p> <p>NGR 74 – the forecast costs are based on the latest market rate testing and independent expert costing of project options considered in the AGIG IT Strategy and Roadmap. The estimates have therefore been arrived at on a reasonable basis and represent the best estimates possible in the circumstances.</p>														
Treated risk	<p>As per risk matrix = Low</p>														
Stakeholder engagement	<p>We are committed to operating our networks in a manner that is consistent with the long term interests of our customers. To facilitate this, we conduct regular stakeholder engagement to understand and respond to the priorities of our customers and stakeholders. Feedback from stakeholders is built into our asset management considerations and is an important input when developing and reviewing our expenditure programs.</p>														

<p>Other relevant documents</p>	<p>Our customers have told us their top three priorities are price/affordability, reliability of supply, and maintaining public safety. They also told us they expect timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues.</p> <p>Further our IT systems are integral in supporting our day to day operations and it is important that our employees are equipped with the right tools to do their jobs effectively. In our last two Annual Employee Surveys, the disjointed IT systems that exist across the AGIG group have been highlighted as a key frustration of our employees.</p> <p>These frustrations centred around the disparate systems between the AGIG business units. For example, during the COVID-19 isolation, our employees could not join other AGIG employees on Microsoft Teams meetings. Sharing documents needs to be done through dedicated network shares creating multiple instances of documents.</p> <p>The proposed AGIG IT Strategy and Roadmap will provide rationalised, fit-for-purpose IT systems across AGIG. This will be more cost effective over the medium to long term and will help us to realise greater efficiencies across the group, ultimately benefitting our customers through lower prices.</p>
	<ul style="list-style-type: none"> • Attachment 8.2 Strategic Asset Management Plan • Attachment 8.6 IT Investment Plan • AGIG IT Strategy and Roadmap

1.3 Background

The SA natural gas distribution networks deliver gas to over 450,000 consumers. To maintain integrity of services, and to allow us to manage data, communicate with customers, and conduct our day-to-day business, we rely heavily on IT systems, processes and infrastructure. Our stakeholders, regulators and customers have made it clear that they value a reliable and responsive service, backed up by timely support and secure data handling. Having robust IT systems is integral to this.

In 2017, AGN, Multinet Gas Networks and Dampier Bunbury Pipeline came together to form Australian Gas Infrastructure Group (AGIG). AGIG operates across multiple Australian jurisdictions, bringing together a wealth of expertise and experience that allows its various businesses to share knowledge, information and resources for the benefit of customers.

AGIG's scale and breadth of resources presents opportunity to deliver benefits for our customers in South Australia. Not least, it allows us to review and rationalise our IT systems and infrastructure across the group, moving to shared platforms where practicable.

We have already begun the IT rationalisation journey. In 2019, we developed the AGIG IT Strategy and Roadmap (see Appendix D) to deliver stable and aligned IT management processes, architectures, procurement and certain core technology platforms across AGIG to ensure we are well equipped to deliver on our vision of being the leading gas infrastructure business in Australia.

The process to develop the AGIG IT Strategy and Roadmap considered our needs as a group, the external context we operate in, technology drivers in our industry and the needs of each AGIG business based on the current IT landscapes and pre-planned initiatives. The individual initiatives within the AGIG IT Strategy and Roadmap were developed with input from technology specialists, business stakeholders and independent experts, and consideration of alignment to our vision, values and consistency with the National Gas Rules (NGR).

Our aim is to achieve economies of scale, while keeping pace with technology advances. In the short term, this has required national coordination of applications renewals, replacement and upgrades (see business case SA117). This initial coordination means there has been an increase in IT investment during the current AA period compared to historical levels. This is necessary to bring some of our legacy systems up to a reasonable standard, or to invest in the new systems that will replace the multitude of state-based technologies. However, over the longer term we expect

coordinating our IT investment into a national program will reduce the overall ongoing cost for our customers, and better support the safe, reliable and efficient operation of our network.

Figure 1.1 outlines the initiatives in the AGIG IT Strategy and Roadmap, the estimated implementation timeframes, and the percentage of costs for each initiative allocated to us.

Figure 1.1: AGN initiative roadmap

		AGN share	2020	2021	2022	2023	2024	2025
Foundational Initiatives								
T4T-01	Rationalise and Consolidate Data Centre and Infrastructure Devices	20%	█					
T4T-02	Consolidate & Modernise Networks	20%	█					
T4T-03	Optimise End User Environment	15%	█	█				
T4T-04	Enhance the Collaboration and Communication Platform	15%		█	█			
T4T-05	Uplift Cyber Security Technology & Capabilities	20%	█	█	█	█		
T4T-06	Rationalise Application Integration Platforms	0%	█	█				
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities (7A.1 and 7A.2)	20%	█	█				
T4T-08	DBP Opex to Capex	0%	█					
T4T-09	Optimise IT Sourcing Model	20%	█	█				
T4T-10	Uplift IT Operating Model and Governance	0%	█					
Transformational Initiatives								
T4B-01	DBP & AGN Finance	33%	█	█				
T4T-06-A	Rationalise Application Integration Platforms	25%		█	█	█		
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities (7A.3)	33%				█	█	
T4T-07B	Establish Data Architecture, Reporting & Governance: Optimise Data Management and Operations	33%			█	█	█	
T4B-02	One ERP	60%				█	█	█

Note: T4T-07A has three components; 7A.1 Optimise existing reporting function; 7A.2 AGIG reporting policies/governance; and 7A.3 Build centralised reporting function/capability. The first two components (7A.1 and 7A.2) form part of the foundational initiatives, with 7A.3 being delivered post 2022 as part of the transformational initiatives.

The initiatives in the AGIG IT Strategy and Roadmap have been prioritised and allocated to each of the AGIG businesses based on the proportion of benefits each business would receive from the initiative. The majority of systems are used by AGN businesses in multiple Australian jurisdictions (SA, Victoria, etc.). The national AGN cost of AGIG IT Strategy and Roadmap initiatives are then allocated to each network every year on the basis of customer numbers in the respective networks. This ensures no cross-subsidisation, with the cost to each business reflecting the volume of **customers that it serves. As at 31 December 2019, South Australia accounted for 35.8% of AGN's total customer numbers.**

Delivery of the AGIG IT Strategy and Roadmap started in late 2019, with AGN **SA's proportion of costs** in the current AA period for initiatives underway totalling \$2.4 million. IT allowances were set for the current AA period (in 2016). Though the Strategy and Roadmap was not developed at the time of the AA determination for the current period, we have been able to deliver some of these initiatives alongside those approved in the period and still remain within our allowances.

For many of the AGIG IT Strategy and Roadmap initiatives underway, the remaining scope of work and investment over the next five years is key to deliver on the outcomes of the strategy and to realise any medium and long term benefits from the investment already undertaken. In addition to the foundational and DBP and AGN Finance initiatives underway, there are four transformational

initiatives proposed for the next AA period. These initiatives will address some key IT challenges in our business.

One ERP

The largest and most significant cost component of the 2019-2024 AGIG IT Strategy and Roadmap is the One ERP project. One ERP seeks to develop and implement consistent IT processes across AGIG, moving all businesses on to a single enterprise resource planning (ERP) platform. This initiative will see the establishment of a group-wide IT shared service centre, helping improve organisational agility and productivity by providing the business with better IT solutions and fewer manual processes.

One ERP commences in 2020/21, with delivery of the DBP and AGN Finance project, which will focus on developing and implementing consistent finance processes, reporting and reporting procedures, budgeting and auditing. It will also build capability for statutory, tax, regulatory and other special purpose accounting and allow business performance monitoring functions to be automated and consistently applied across AGIG.

The project will replace the existing disparate ERP systems (DBP's Microsoft Dynamics and AGN's SAP Business One) with the new industry-standard SAP Hanna and will leverage and build on work already completed in DBP.

The IT Strategy and Roadmap proposes to commence the project to replace ERPs for:

- DBP from 2020;
- AGN from 2022; and
- Multinet Gas Networks by 2025.

The One ERP initiative is expected to be completed by 2025 and will achieve an aligned finance environment across AGIG which will provide supporting tools and standardised processes in line with good industry practice.

Information about the total cost of the AGIG IT Strategy and Roadmap is provided in Appendix B.

1.4 Risk assessment

Risk management is a constant cycle of identification, analysis, treatment, monitoring, reporting and then back to identification (as illustrated in Figure 1.2). When considering risk and determining the appropriate mitigation activities, we seek to balance the risk outcome with our delivery capabilities and cost implications. Consistent with stakeholder expectations, safety and reliability of supply are our highest priorities.

Our risk assessment approach focuses on understanding the potential severity of failure events associated with each asset and the likelihood that the event will occur. Based on these two key inputs, the risk assessment and derived risk rating then guides the actions required to reduce or manage the risk to an acceptable level.

Our risk management framework is based on:

- AS/NZS ISO 31000 Risk Management – Principles and Guidelines;

Figure 1.2: Risk management principles



- AS 2885 Pipelines-Gas and Liquid Petroleum; and
- AS/NZS 4645 Gas Distribution Network Management.

The Gas Act 1997 and Gas Regulations 2012, through their incorporation of AS/NZS 4645 and the Work Health and Safety Act 2012, place a regulatory obligation and requirement on us to reduce risks rated high or extreme to low or negligible as soon as possible (immediately if extreme). If it is not possible to reduce the risk to low or negligible, then we must reduce the risk to as low as reasonably practicable (ALARP).

When assessing risk for the purpose of investment decisions, rather than analysing all conceivable risks associated with an asset, we look at a credible, primary risk event to test the level of investment required. Where that credible risk event has an overall risk rating of moderate or higher, we will undertake investment to reduce the risk.

Seven consequence categories are considered for each type of risk:

- 1 Health & safety – injuries or illness of a temporary or permanent nature, or death, to employees and contractors or members of the public
- 2 Environment (including heritage) – impact on the surroundings in which the asset operates, including natural, built and Aboriginal cultural heritage, soil, water, vegetation, fauna, air and their interrelationships
- 3 Operational capability – disruption in the daily operations and/or the provision of services/supply, impacting customers
- 4 People – impact on engagement, capability or size of our workforce
- 5 Compliance – the impact from non-compliance with operating licences, legal, regulatory, contractual obligations, debt financing covenants or reporting / disclosure requirements
- 6 Reputation & customer – **impact on stakeholders'** opinion of AGN, including personnel, customers, investors, security holders, regulators and the community
- 7 Financial – financial impact on AGN, measured on a cumulative basis

A summary of our risk management framework, including definitions, has been provided in Attachment 8.10.

The primary risk event being assessed is that maintaining disparate IT systems, management and procurement arrangements across AGIG (or in AGN compared to the other AGIG businesses) will compromise our ability to maintain an IT environment that is robust and resilient to cyber threats (and effectively deliver cyber security training that accurately covers the breadth of our IT environment to our employees). This could leave us vulnerable to a cyber-attack, resulting in system failure with the potential to impact customer services and at significant remediation costs. It could also result in release of sensitive information, which would breach our regulatory obligations and negatively affect our reputation.

Security breaches, unavailability of corporate systems and release of sensitive information gives rise to people, customer/reputational, compliance and financial consequences, as follows:

- *People* – a security breach resulting from a successful phishing attack on an employee can have an impact on employee security, morale and mental wellbeing. There is also the ongoing risk of employee frustration as a result of not being able to access and share information across AGIG efficiently.

- *Compliance* – a security breach rendering our corporate systems unavailable may result in us not complying with a range of legal and regulatory reporting obligations, for example service standards set out in the South Australian Gas Distribution Code.¹²⁶
- *Reputation and customer* – a security breach may result in confidential customer data being compromised which in turn can impact on our reputation. There also remains an ongoing reputational risk resulting from having disparate, incompatible IT systems across the businesses within AGIG, meaning consumers receive a varying customer experience in each jurisdiction.
- *Financial* – a security breach rendering our corporate systems unavailable may result in us incurring significant remediation costs.

Note that unlike a security breach on our operational systems (as contemplated in business case SA 139), a breach on corporate systems would likely have a minor operational impact, as our corporate systems are not necessarily directly used to operate the network.

We estimate the overall risk rating if the risk to corporate systems is not addressed is moderate. While the likelihood of most risks occurring are rated unlikely, the ongoing issues with disparate systems lead to a people and reputational risk likelihood of occasional. The risk consequences for people, compliance, reputation and finance are rated significant.

The untreated risk¹²⁷ rating is presented in Table 1.3.

Table 1.3: Risk rating – untreated risk

Untreated risk	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Occasional	Unlikely	Occasional	Unlikely	Moderate
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Low	Negligible	Low	Moderate	Moderate	Moderate	Moderate	

1.5 Options considered

The following options have been identified to address the identified risks with maintaining disparate IT environments across AGIG, or within AGN compared to other AGIG businesses, as well as the opportunities to reduce medium and long term costs through rationalization, streamlining and access to economies of scale. These options have been assessed with consideration of the investment that has been undertaken/committed through to 30 June 2021.

- **Option 1** – Do nothing more, halt AGIG IT Strategy and Roadmap investment and continue to run disparate IT environments across AGIG;
- **Option 2** – Undertake foundational AGIG IT initiatives only; or
- **Option 3** – Undertake foundational and transformational initiatives in line with the AGIG IT Strategy and Roadmap.

These options are discussed in the following sections.

¹²⁶ <https://www.escosa.sa.gov.au/ArticleDocuments/580/130905-GasDistributionCode-GDC06.pdf.aspx?Embed=Y>

¹²⁷ Untreated risk is the risk level assuming there are no risk controls currently in place. Also known as the 'absolute risk'.

1.5.1 Option 1 – Do Nothing more

Option 1 would see a cessation of all AGIG IT Strategy and Roadmap initiatives currently under way and we would continue to run disparate IT environments across AGIG.

In particular, under this option we would not complete the following initiatives that are underway:

- Optimise End User Environment;
- Enhance the Collaboration and Communication Platform;
- Uplift Cyber Security Technology and Capabilities;
- Rationalise Application Integration Platforms;
- Establish Data Architecture, Reporting and Governance: Improve Reporting Capabilities; and
- Optimise IT Sourcing Model.

While we would complete the DBP and AGN Finance project, we would not implement the following transformational initiatives:

- Rationalise Application Integration Platforms;
- Component 7A.3 of the Establish Data Architecture, Reporting and Governance: Improve Reporting Capabilities, which proposed to build centralised reporting functions/capabilities;
- Establish Data Architecture, Reporting and Governance: Optimise Data Management and Operations; and
- One ERP.

This means the full benefits of the DBP and AGN Finance project (such as enabling improved reporting capabilities and optimising data management and operations) would not be delivered.

1.5.1.1 Cost assessment

As this option would see us implement no further AGIG IT Strategy and Roadmap initiatives past 30 June 2021, it requires no upfront capex in the next AA period. In the medium to long term this approach would see us incur additional opex costs in the management of disparate IT systems, and forego the opportunity to rationalise and streamline our IT environments and corporate processes across AGIG.

For many of the AGIG IT Strategy and Roadmap initiatives underway, the remaining scope of work and investment over the next five years is key to deliver on the outcomes of the strategy and to realise any medium and long term benefits from the investment already undertaken.

1.5.1.2 Risk assessment

Option 1 will not deliver the uplift cyber security technology and capabilities identified as required to ensure our corporate IT environment is robust and resilient to cyber threats. As such it leaves the untreated risk unchanged as shown in Table 1.4.

Table 1.4: Risk assessment – Option 1

Option 1	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Occasional	Unlikely	Occasional	Unlikely	Moderate
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Low	Negligible	Low	Moderate	Moderate	Moderate	Moderate	

This option is not consistent with the requirements of our risk management framework, which requires us to address high or moderate risks to low or as low as reasonably practicable (ALARP).

1.5.1.3 Alignment with vision objectives

Table 1.5 shows how Option 1 aligns with our vision objectives.

Table 1.5: Alignment with vision – Option 1

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	N
A Good Employer – Health and Safety	N
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	N
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	N

Option 1 does not align with our objective of *Delivering for Customers*, as it will not allow us to uplift our IT capabilities and provide a level of service commensurate with that expected by our customers. It will not enable effective collaboration and access to timely and accurate information relating to customer service.

Option 1 also does not align with being *A Good Employer*. It would see continued employee frustration (as indicated in the 2019 engagement survey) that the current disparate systems do not allow for collaboration across AGIG entities and hinders access to timely and accurate information. Further, it will compromise our ability to effectively deliver cyber security training that accurately covers the breadth of our IT environment to our employees. A security breach resulting from a successful phishing attack on an employee may have adverse effects to employee mental wellbeing.

Option 1 is not *Sustainably Cost Efficient* as it will not allow us to uplift our systems to a level commensurate with industry standards. More significantly, we will forego the opportunity to achieve economies of scale and leverage cost savings by having standard IT systems and processes rolled out across AGIG.

1.5.2 Option 2 – Foundational initiatives

This option would see us roll out the foundational initiatives identified in the AGIG IT Strategy and Roadmap. Table 1.6 summarises the initiatives that would be completed over the next AA period under this option.

Table 1.6: Option 2 – AGIG IT Strategy and Roadmap Foundational Initiatives

Code	Initiative
T4T-03	Optimise End User Environment
T4T-04	Enhance the Collaboration and Communication Platform
T4T-05	Uplift Cyber Security Technology & Capabilities
T4T-07A (7A.1 and 7A.2)	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities
T4T-09	Optimise IT Sourcing Model

A number of these initiatives are already underway in 2020 and will ensure that users can effectively collaborate (T4T 03-04), cyber risks are managed (T4T-05) and economies of scale can be leveraged (T4T-09). Under this option, we will complete the delivery of these initiatives in the next AA period, and will also commence the delivery of initiative T4T-07A, Establish Data Architecture, Reporting and Governance: Improve Reporting Capabilities.

T4T-07A is the first component of a larger program that will improve the reporting capabilities to empower management with more accurate and timely information through improved reports. The first two stages (7A.1 and 7A.2) are the foundational components of the project, which will optimise the existing reporting function and implement AGIG reporting policies/governance. These will establish the basis for the transformational component of this project (7A.3), which will build centralised reporting functions and capabilities.

1.5.2.1 Cost assessment

The forecast direct capital cost of this option (to AGN SA) is \$1 million over the next AA period. The profile of spend is provided in Table 1.7 and builds on the \$2.4 million already invested on AGIG IT Strategy and Roadmap initiatives for AGN SA in the current AA period.

Further detail on the cost of each initiative is provided in Appendix C.

Table 1.7: Cost estimate – Option 2, \$'000 2019/20

Option 2	2021/22	2022/23	2023/24	2024/25	2025/26	Total next AA period
Foundational Initiatives	390.2	281.0	179.0	179.0	-	1,029.2
Total	390.2	281.0	179.0	179.0	-	1,029.2

The key driver for this option is to ensure that we can realise the full benefits of the investments already made across AGIG in the current AA period. It will also ensure our employees can effectively collaborate and access timely and accurate information about our business and our customers as required in their day-to-day work.

This option will also reduce the medium to long term costs associated with foundational aspects of a standardised IT environment and associated processes across AGIG.

1.5.2.2 Risk assessment

This option does not reduce the risk from moderate. Delivering the foundational initiatives in the AGIG IT Strategy and Roadmap is only the first step in the IT improvement and consolidation journey, therefore the full suite of risk mitigations will not take effect.

The foundational initiatives will reduce the likelihood of people and reputational risk from rated occasional to unlikely, as it represents an improvement on the existing systems. We therefore expect

instances of employee frustrations as well as the likelihood of reputational damage to decrease. However, this option does not fully implement rationalised and streamlined processes, therefore the risk likelihood would not be reduced to remote. The overall risk therefore remains moderate.

Table 1.8: Risk assessment – Option 2

Option 2	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Moderate
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Low	Negligible	Low	Moderate	Moderate	Moderate	Moderate	

Option 2 is not aligned with our risk management framework as it does not reduce the currently moderate risk to low or ALARP. We consider delivering the full suite of transformational initiatives is a practicable and affordable alternative to solely delivering the foundational initiatives, and that the transformational initiatives that would reduce the risk rating further. Therefore Option 2 is not considered ALARP.

1.5.2.3 Alignment with vision objectives

Table 1.9 shows how Option 2 aligns with our vision objectives.

Table 1.9: Alignment with vision – Option 2

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	Y
A Good Employer – Health and Safety	Y
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	N
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	Y

Option 2 aligns with our objective of *Delivering for Customers* as it would provide robust and resilient corporate systems with a reduced risk of a security breach that could compromise sensitive customer information. It will also enable effective collaboration and access to timely and accurate information relating to customer service.

Completing the foundational AGIG IT Strategy and Roadmap initiatives would address a known employee frustration and provide a consistent IT experience and effective systems of collaboration for employees. It therefore meets our vision objective of being *A Good Employer*.

Option 2 partially aligns with being *Sustainably Cost Efficient*. It will deliver cyber technology and capabilities that are in line with good industry practice and aligned across AGIG. It will also provide effective systems of collaboration for employees and rationalise the costs of IT system management and procurement for foundational initiatives. However, not delivering the One ERP project means we cannot streamline a number of core business processes that support business reporting and decision making, adding unnecessary complexity and cost over the medium to long term.

1.5.3 Option 3 – Foundational and transformational initiatives

This option would see the full delivery of foundational and transformational initiatives identified in the AGIG IT Strategy and Roadmap. Table 1.10 summarises the initiatives that would be completed over the next AA period under this option.

Table 1.10: Option 3 – AGIG IT Strategy and Roadmap Foundational and Transformational initiatives

Code	Initiative
Foundational	
T4T-03	Optimise End User Environment
T4T-04	Enhance the Collaboration and Communication Platform
T4T-05	Uplift Cyber Security Technology & Capabilities
T4T-07A (7A.1 and 7A.2)	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities
T4T-09	Optimise IT Sourcing Model
Transformational	
T4T-06-A	Rationalise Application Integration Platforms
T4T-07A (7A.3)	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities
T4T-07B	Establish Data Architecture, Reporting & Governance: Optimise Data Management and Operations
T4B-02	One ERP

As outlined under Option 2, a number of these initiatives are already underway in 2020 and will ensure that users can effectively collaborate (T4T 03-04), cyber risks are managed (T4T-05) and economies of scale can be leveraged (T4T-09). Under this option, we will complete the delivery of these initiatives in the next AA period, and will also commence the delivery of initiative T4T-07A, Establish Data Architecture, Reporting and Governance: Improve Reporting Capabilities.

In addition, four transformational initiatives will also be delivered under this option. IT application platforms will be standardised across AGIG (T4T-06-A). As an example, rationalising the WebMethods and Dell Boomi integration platforms to one fit-for-purpose platform will achieve economies of scale in purchasing and support costs. Undertaking the second component of T4T-07A (7A.3) will adopt standardised reporting tools and data structures to a broader scope of corporate systems which will provide access to the 'right' information quickly, reliably and more dynamically than is currently possible. This is supported by T4T-07B with optimised data management and operations critical to improving reporting capabilities as it ensures the underlying data is accurate and managed.

The One ERP project is the most significant cost component in this business case, accounting for 75 per cent of the cost of the overall program. One ERP commences in 2020/21, with delivery of the DBP and AGN Finance project, which will focus on developing and implementing consistent finance processes, reporting and reporting procedures, budgeting and auditing. It will also build capability for statutory, tax, regulatory and other special purpose accounting and allow business performance monitoring functions to be automated and consistently applied across AGIG.

The project will replace the existing disparate ERP systems (DBP's Microsoft Dynamics and AGN's SAP Business One) with the new industry-standard SAP Hanna and will leverage and build on work already completed in DBP.

The IT Strategy and Roadmap proposes to commence the project to replace AGN's ERP from 2022.

The One ERP initiative is expected to be completed by 2025 and will achieve an aligned finance environment across AGIG which will provide supporting tools and standardised processes in line with good industry practice.

1.5.3.1 Cost assessment

The forecast direct capital cost of this option (to AGN SA) is \$14 million over the next AA period. The profile of spend is provided in Table 1.11 and builds on the \$2.4 million already invested on AGIG IT Strategy and Roadmap initiatives for AGN SA in the current AA period.

Further detail on the cost of each initiative is provided in Appendix C.

Table 1.11: Cost estimate – Option 3, \$'000 2019/20

Option 3	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Foundational initiatives	390.2	281.0	179.0	179.0	-	1,029.2
Transformational initiatives	340.1	696.2	4,125.1	5,323.1	1,993.2	12,477.7
Total	730.3	977.3	4,304.1	5,502.1	1,993.2	13,507.0

The key additional cost in this option is the One ERP initiative (\$10 million) to standardise finance processes, systems and reporting for statutory, tax, regulatory and other special purpose accounting requirements. This will deliver medium and long term benefits including management decisions which are supported by automated, dynamic, accurate and timely reporting. It is also expected to reduce/avoid the costs and risks associated with keeping multiple heavily customised finance systems and processes across AGIG from the subsequent AA period (July 26 to June 31).

1.5.3.2 Risk assessment

This option reduces the risk from high to low. Delivering the full program of foundational and transformational initiatives identified in the AGIG IT Strategy and Roadmap reduces the likelihood of people, compliance, reputational and financial risks arising from unlikely to remote. This is because systems are integrated, information sharing capability between businesses is dramatically improved, and the robustness of corporate systems means a significant security breach is less likely to occur.

Table 1.12: Risk assessment – Option 3

Option 3	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Remote	Remote	Remote	Remote	Remote	Remote	Remote	Low
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Negligible	Negligible	Negligible	Low	Low	Low	Low	

Option 3 therefore aligns with our risk management framework, as it reduces the current moderate risk rating to low.

1.5.3.3 Alignment with vision objectives

Table 1.13 shows how Option 3 aligns with our vision objectives.

Table 1.13: Alignment with vision – Option 3

Vision objective	Alignment
Delivering for Customers – Public Safety	-

Vision objective	Alignment
Delivering for Customers – Reliability	-
Delivering for Customers – Customer Service	Y
A Good Employer – Health and Safety	Y
A Good Employer – Employee Engagement	-
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	Y
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	Y

Option 3 aligns with our objective of *Delivering for Customers*. Specifically, it provides robust and resilient corporate systems with a reduced risk of a security breach that could compromise sensitive customer information. IT capability will be uplifted to a level commensurate with our customers' expectations. It will also enable effective collaboration and access to timely and accurate information relating to customer service.

Completing the foundational and transformational AGIG IT Strategy and Roadmap initiatives would address a known employee frustration and provide a consistent IT experience and effective systems of collaboration for employees. It will also provide an improved toolset and consistent processes for key reporting functions. It therefore meets our vision objective of being *A Good Employer*.

Option 3 is consistent with being *Sustainably Cost Efficient* as it will deliver cyber technology and capabilities that are in line with good industry practice and aligned across AGIG. It will also provide effective systems of collaboration for employees, rationalise the costs of IT system management and procurement and streamline core business processes to support business reporting and decision making, removing unnecessary complexity and cost over the medium to long term. It will reduce manual data manipulation and allow more dynamic analysis, which is likely to lead to improved productivity and better informed decision making.

1.6 Summary of costs and benefits

Table 1.14 presents a summary of how each option compares in terms of the estimated cost, the treated risk and alignment with our vision objectives.

Table 1.14: Comparison of options

Option	Estimated cost (\$ million)	Treated residual risk rating	Alignment with vision objectives
Option 1	0	High	Does not align with Delivering for Customers, A Good Employer or Sustainably Cost Efficient
Option 2	1.0	Moderate	Aligns with Delivering for Customers and being A Good Employer but is not as Sustainably Cost Efficient as Option 3.
Option 3	13.5	Low	Aligns with Delivering for Customers, A Good Employer and is more Sustainably Cost Efficient than Option 2.

1.7 Recommended option

Option 3, to implement the full program of foundational and transformational AGIG IT Strategy and Roadmap initiatives in the next AA period is the proposed solution.

Under this option we will invest \$14 million in AGN SA on the following initiatives:

- Optimise End User Environment;
- Enhance the Collaboration and Communication Platform;
- Uplift Cyber Security Technology & Capabilities;
- Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities (7A.1 & 7A.2);
- Optimise IT Sourcing Model;
- Rationalise Application Integration Platforms;
- Establish Data Architecture, Reporting and Governance: Improve Reporting Capabilities (7A.3);
- Establish Data Architecture, Reporting and Governance: Optimise Data Management and Operations; and
- One ERP.

This project will be delivered through a mix of internal and external resources under the governance and management of the AGIG Group IT project controls.

1.7.1 Why is the recommended option prudent?

Option 3 is recommended because:

- **it aligns AGN's IT environment to standardised architectures, platforms, management and support processes across AGIG which will;**
 - ensure consistency for employees, management and customers when accessing and using information to make decisions;
 - enable effective collaboration across AGIG which was identified as a frustration in the 2019 employee engagement survey;
 - reduce the risks associated with unmanaged document control caused by the current file sharing, rather than collaboration, systems;
 - align our systems to a standardised and industry good practice approach to cyber security which will ensure that systems are robust and resilient to threats, that threats can be appropriately mitigated or rectified and that the costs of managing cyber technology and capabilities are as low as possible; and
 - allow for our corporate finance processes to be standardised and delivered through an industry leading enterprise resource planning system that can deliver dynamic, automated, accurate and timely reporting across a number of accounting needs, reducing complexity and ongoing costs in subsequent AA periods;
- reduces the untreated risk to low in line with our risk management framework;
- is consistent with stakeholder requirements and our vision; and
- the delivery of the scope of works is achievable in the time frame envisaged.

1.7.2 Estimating efficient costs

The AGIG IT Strategy and Roadmap project developed high level costing estimates for each of the identified initiatives. These cost estimates were developed by an independent expert and were informed by significant engagement with internal stakeholders to understand the current environment and business requirements, sourcing market and vendor quotes and advice, industry norms and historical costs of delivering similar projects (both within AGIG businesses and with other clients of the independent expert).

The total costs for each of the initiatives is included in Appendix B.

All costings in the body of this business case represent AGN SA's proportion of total cost. The proportion of cost allocated to each AGIG business has been estimated based on the relative value each receives from the project. The AGN national cost has then been allocated to each of AGN's networks every year on the basis of customer numbers in the respective networks. This ensures no cross-subsidisation, with the cost to each business reflecting the volume of customers that it serves. As at 31 December 2019, SA accounted for 35.8 per cent of AGN's total customer numbers.

The total project costs consider the internal labour, external labour and materials/other costs to deliver the project. The forecast cost breakdown by initiative is shown in Table 1.15 below.

Table 1.15: Cost estimate – Option 3, \$'000 2019/20

Code	Initiative	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Foundational initiatives							
T4T-03	Optimise End User Environment	48.3	-	-	-	-	48.3
T4T-04	Enhance the Collaboration and Communication Platform	102.0	102.0	-	-	-	204.1
T4T-05	Uplift Cyber Security Technology & Capabilities	161.1	179.0	179.0	179.0	-	698.1
T4T-07A(7A.1 and 7A.2)	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	22.9	-	-	-	-	22.9
T4T-09	Optimise IT Sourcing Model	55.8	-	-	-	-	55.8
Total foundational		390.2	281.0	179.0	179.0	-	1,029.2
Transformational initiatives							
T4T-06-A	Rationalise Application Integration Platforms	340.1	340.1	170.1	-	-	850.3

Code	Initiative	2021/22	2022/23	2023/24	2024/25	2025/26	Total
T4T-07A(7A.3)	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	-	-	312.9	312.9	-	625.9
T4T-07B	Establish Data Architecture, Reporting & Governance: Optimise Data Management and Operations	-	226.5	453.0	226.5	-	906.0
T4B-02	One ERP	-	129.6	3,189.1	4,783.7	1,993.2	10,095.6
Total transformational		340.1	696.2	4,125.1	5,323.1	1,993.2	12,477.7
Total all initiatives		730.3	977.3	4,304.1	5,502.1	1,993.2	13,507.0

All expenditure related to this project is capex. A detailed forecast cost breakdown of each initiative is provided in Appendix C.

The following table shows the costs escalated to June 2020/21 dollars.

Table 1.16: Escalated cost estimate (\$ real 2020/21)

	2021/22	22/23	23/24	23/25	25/26	Total
Total unescalated (\$ Dec 19)	730.3	977.3	4,304.1	5,502.1	1,993.2	13,507.0
Escalation	24.6	37.8	192.9	278.2	111.1	644.6
Total escalated (\$ Jun 21)	754.9	1,015.1	4,497.0	5,780.3	2,104.3	14,151.6

1.7.3 Consistency with the National Gas Rules

In developing these forecasts, we have had regard to Rule 79 and Rule 74 of the NGR. With regard to all projects, and as a prudent asset manager/network business, we give careful consideration to whether capex is conforming from a number of perspectives before committing to capital investment.

NGR 79(1)

The proposed solution is prudent, efficient, consistent with accepted and good industry practice and will achieve the lowest sustainable cost of delivering pipeline services:

- Prudent** – The investment is necessary in order to maintain the integrity of IT systems. The proposed initiatives are the most practical and effective option to appropriately support our employees and management in prudently managing our networks, and provide timely customer support. It is therefore of a nature that a prudent service provider would incur.

- Efficient – The proposed initiatives were developed by an independent expert with significant engagement with internal stakeholders across AGIG. They will rationalise and streamline IT environments and associated business processes across AGIG reducing medium to long term costs (of both system support costs and associated business processes). The cost estimates reflect independent expert costing and market information available at the time. The expenditure is therefore of a nature that a prudent service provider acting efficiently would incur.
- Consistent with accepted and good industry practice – The proposed initiatives will deliver enterprise resource planning and cyber technology and capabilities that are consistent with accepted and good industry practice. In particular, highly customised financial and reporting processes is not recognised as good industry practice, and owners of critical infrastructure are increasing their understanding, management and investment in cyber security to reduce the risk of adverse impact of a cyber-attack to the environment and customers.
- To achieve the lowest sustainable cost of delivering pipeline services – The One ERP initiative is necessary to simplify the management of finance across AGIG and avoid future risks and costs associated with heavily customised finance operations. Failure to address cyber risk would increase the likelihood and impacts of an adverse impact of a cyber event that could cause significant people, compliance, reputational and financial impacts for us and our customers. Improved collaboration, data management and reporting is also likely to enable efficiencies in future AA periods. This project is therefore consistent with the objective of achieving the lowest sustainable cost of delivering services.

NGR 79(2)

The proposed capex is justifiable under NGR 79(2)(c)(ii), as it is necessary to maintain the integrity of services. Cyber risk is increasing in our industry and having aligned cyber technology and capabilities across AGIG ensures our systems are robust and resilient to cyber-attack. Differing IT environments does not lend well to a coordinated and effective approach to cyber security at the lowest possible cost. It is therefore important that IT environments and cyber technology and capabilities are aligned.

Our One ERP initiative will introduce more automated, accurate, dynamic and timely reporting across **a number of business needs, improving management's access to information when making decisions.** The medium to long term costs and risks associated with disparate finance processes and systems across AGIG are likely to be material in terms of extra staffing costs, re-work, additional training and errors (which could lead to less optimal decisions that impact the integrity of other network assets).

We therefore consider Option 3 best meets the requirements of NGR 79(2).

NGR 74

The forecast costs are based on the latest market rate testing and project options were developed by an independent expert as part of the AGIG IT Strategy and Roadmap process. The estimates have therefore been arrived at on a reasonable basis and represent the best estimate possible in the circumstances.

Appendix A – Comparison of risk assessments for each option

Untreated risk	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Occasional	Unlikely	Occasional	Unlikely	Moderate
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Low	Negligible	Low	Moderate	Moderate	Moderate	Moderate	

Option 1	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Occasional	Unlikely	Occasional	Unlikely	Moderate
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Low	Negligible	Low	Moderate	Moderate	Moderate	Moderate	

Option 2	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Moderate
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Low	Negligible	Low	Moderate	Moderate	Moderate	Moderate	

Option 3	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Remote	Remote	Remote	Remote	Remote	Remote	Remote	Low
Consequence	Minor	Minimal	Minor	Significant	Significant	Significant	Significant	
Risk Level	Negligible	Negligible	Negligible	Low	Low	Low	Low	

Appendix B – AGIG IT Strategy and Roadmap total initiative costings

		2021/22	2022/23	2023/24	2024/25	2025/26	Total
Foundational initiatives							
T4T-03	Optimise End User Environment	\$ 900.0	\$ -	\$ -	\$ -	\$ -	\$ 900.0
T4T-04	Enhance the Collaboration and Communication Platform	\$ 1,900.0	\$ 1,900.0	\$ -	\$ -	\$ -	\$ 3,800.0
T4T-05	Uplift Cyber Security Technology & Capabilities	\$ 2,250.0	\$ 2,500.0	\$ 2,500.0	\$ 2,500.0	\$ -	\$ 9,750.0
T4T-06	Rationalise Application Integration Platforms	\$ 300.0	\$ -	\$ -	\$ -	\$ -	\$ 300.0
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	\$ 319.5	\$ -	\$ -	\$ -	\$ -	\$ 319.5
T4T-09	Optimise IT Sourcing Model	\$ 780.0	\$ -	\$ -	\$ -	\$ -	\$ 780.0
Total		\$ 6,449.5	\$ 4,400.0	\$ 2,500.0	\$ 2,500.0	\$ -	\$ 15,849.5
Transformational initiatives							
T4T-06-A	Rationalise Application Integration Platforms	\$ 3,800.0	\$ 3,800.0	\$ 1,900.0	\$ -	\$ -	\$ 9,500.0
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	\$ -	\$ -	\$ 2,625.0	\$ 2,625.0	\$ -	\$ 5,250.0
T4T-07B	Establish Data Architecture, Reporting & Governance: Optimise Data Management and Operations	\$ -	\$ 1,900.0	\$ 3,800.0	\$ 1,900.0	\$ -	\$ 7,600.0
T4B-02	One ERP	\$ -	\$ 603.4	\$ 14,846.9	\$ 22,270.3	\$ 9,279.3	\$ 47,000.0
Total		\$ 3,800.0	\$ 6,303.4	\$ 23,171.9	\$ 26,795.3	\$ 9,279.3	\$ 69,350.0
Total		\$ 10,249.5	\$ 10,703.4	\$ 25,671.9	\$ 29,295.3	\$ 9,279.3	\$ 85,199.5

Appendix C – Cost estimates

Option 2 – Foundational Initiatives

		Total Cost of Initiatives (from Appendix B)	AGN Portion	AGN SA Portion	AGN South Australia Allocation					
		Total			2021/22	2022/23	2023/24	2024/25	2025/26	Total
Foundational initiatives										
T4T-03	Optimise End User Environment	\$ 900.0	15%	35.8%	\$ 48.3	\$ -	\$ -	\$ -	\$ -	\$ 48.3
T4T-04	Enhance the Collaboration and Communication Platform	\$ 3,800.0	15%	35.8%	\$ 102.0	\$ 102.0	\$ -	\$ -	\$ -	\$ 204.1
T4T-05	Uplift Cyber Security Technology & Capabilities	\$ 9,750.0	20%	35.8%	\$ 161.1	\$ 179.0	\$ 179.0	\$ 179.0	\$ -	\$ 698.1
T4T-06	Rationalise Application Integration Platforms	\$ 300.0	0%	35.8%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	\$ 319.5	20%	35.8%	\$ 22.9	\$ -	\$ -	\$ -	\$ -	\$ 22.9
T4T-09	Optimise IT Sourcing Model	\$ 780.0	20%	35.8%	\$ 55.8	\$ -	\$ -	\$ -	\$ -	\$ 55.8
Total		\$ 15,849.5			\$ 390.2	\$ 281.0	\$ 179.0	\$ 179.0	\$ -	\$ 1,029.2

Option 3 – Foundational and Transformational Initiatives

		Total Cost of Initiatives (from Total)	AGN Portion	AGN SA Portion	AGN South Australia Allocation					
					2021/22	2022/23	2023/24	2024/25	2025/26	Total
Foundational initiatives										
T4T-03	Optimise End User Environment	\$ 900.0	15%	35.8%	\$ 48.3	\$ -	\$ -	\$ -	\$ -	\$ 48.3
T4T-04	Enhance the Collaboration and Communication Platform	\$ 3,800.0	15%	35.8%	\$ 102.0	\$ 102.0	\$ -	\$ -	\$ -	\$ 204.1
T4T-05	Uplift Cyber Security Technology & Capabilities	\$ 9,750.0	20%	35.8%	\$ 161.1	\$ 179.0	\$ 179.0	\$ 179.0	\$ -	\$ 698.1
T4T-06	Rationalise Application Integration Platforms	\$ 300.0	0%	35.8%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	\$ 319.5	20%	35.8%	\$ 22.9	\$ -	\$ -	\$ -	\$ -	\$ 22.9
T4T-09	Optimise IT Sourcing Model	\$ 780.0	20%	35.8%	\$ 55.8	\$ -	\$ -	\$ -	\$ -	\$ 55.8
Total		\$ 15,849.5			\$ 390.2	\$ 281.0	\$ 179.0	\$ 179.0	\$ -	\$ 1,029.2
Transformational initiatives										
T4T-06-A	Rationalise Application Integration Platforms	\$ 9,500.0	25%	35.8%	\$ 340.1	\$ 340.1	\$ 170.1	\$ -	\$ -	\$ 850.3
T4T-07A	Establish Data Architecture, Reporting & Governance: Improve Reporting Capabilities	\$ 5,250.0	33%	35.8%	\$ -	\$ -	\$ 312.9	\$ 312.9	\$ -	\$ 625.9
T4T-07B	Establish Data Architecture, Reporting & Governance: Optimise Data Management and Operations	\$ 7,600.0	33%	35.8%	\$ -	\$ 226.5	\$ 453.0	\$ 226.5	\$ -	\$ 906.0
T4B-02	One ERP	\$ 47,000.0	60%	35.8%	\$ -	\$ 129.6	\$ 3,189.1	\$ 4,783.7	\$ 1,993.2	\$ 10,095.6
Total		\$ 69,350.0			\$ 340.1	\$ 696.2	\$ 4,125.1	\$ 5,323.1	\$ 1,993.2	\$12,477.7
Total		\$ 85,199.5			\$ 730.3	\$ 977.3	\$ 4,304.1	\$ 5,502.1	\$ 1,993.2	\$13,507.0

Appendix D – AGIG One IT Strategy 2019-2024



SA139 – IT Infrastructure Renewal

1.1 Project approvals

Table 1.1: Business case SA139 – Project approvals

Prepared by	Amber Smith, IT Manager
Reviewed by	Wayne Samuels, Manager IT Commercial
Approved by	Andrew Staniford, Chief Customer Officer

1.2 Project overview

Table 1.2: Business case SA139 – Project overview

Description of the problem / opportunity	<p>The Infrastructure Renewal project involves upgrading desktop, telephony and network infrastructure for Australian Gas Networks (AGN) in the next access arrangement (AA) period (July 2021 to June 2026). The existing IT infrastructure is required to be refreshed in line with the asset lifecycle of the devices and equipment (typically 3 to 7 years) to ensure we continue to provide reliable, secure, compliant and efficient business processes and systems and maintain the integrity of our services.</p> <p>If the project is not carried out, our critical business systems may be exposed to higher cyber security risks and a greater risk of failure or prolonged outage. This would adversely affect the safety and integrity of services and could result in us failing to fulfil our customer and regulatory obligations under the Retail Market Procedures and other legislative and regulatory instruments.</p> <p>The work proposed in this business case forms part of the National Infrastructure Renewal program across all jurisdictions we operate in, and is consistent with the works we have delivered in the current AA period for SA (July 2016 to June 2021). It is also consistent that approved by the AER in our most recent AA decision for Victoria covering the period 1 January 2018 to 31 December 2022.</p>																
Untreated risk	As per risk matrix = High																
Options considered	<ul style="list-style-type: none"> Option 1 – Reactive upgrade of desktop, telephony and network infrastructure (no upfront capital costs) Option 2 – Proactive upgrade of desktop, telephony and network infrastructure (\$0.15 million) 																
Proposed solution	Option 2 is the proposed solution as it is the most cost effective way of dealing with the risks posed by outdated and unsupported infrastructure and is consistent with good industry practice.																
Estimated cost	<p>The forecast direct capital cost (excluding overhead) during the next AA period (July 2021 to June 2026) is \$0.15 million.</p> <table border="1"> <thead> <tr> <th>\$'000</th> <th>2019/20</th> <th>21/22</th> <th>22/23</th> <th>23/24</th> <th>24/25</th> <th>25/26</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Proactive upgrade</td> <td></td> <td>24.1</td> <td>11.2</td> <td>34.7</td> <td>24.1</td> <td>53.6</td> <td>147.7</td> </tr> </tbody> </table>	\$'000	2019/20	21/22	22/23	23/24	24/25	25/26	Total	Proactive upgrade		24.1	11.2	34.7	24.1	53.6	147.7
\$'000	2019/20	21/22	22/23	23/24	24/25	25/26	Total										
Proactive upgrade		24.1	11.2	34.7	24.1	53.6	147.7										
Basis of costs	All costs in this business case are expressed in real unescalated dollars at December 2019 unless otherwise stated. Some tables may not add due to rounding.																
Alignment to our vision	This project aligns with the <i>Deliver for Customers</i> aspect of our vision as it ensures the integrity of the IT infrastructure that supports our corporate operations and customer service. This project aligns with our vision objective of being <i>A Good Employer</i> , as it ensures reliability and availability of desktop, telephony and network infrastructure required for our employees to do their job effectively. Adopting proactive lifecycle management of IT infrastructure in line with industry practice is also <i>Sustainably Cost Efficient</i> .																

Consistency with the National Gas Rules (NGR)	<p>This project complies with the following National Gas Rules (NGR):</p> <p>NGR 79(1) – the proposed solution is consistent with good industry practice, other practicable options have been considered, and market rates have been tested to achieve the lowest sustainable cost of providing this service. Proactive asset lifecycle management of IT infrastructure is prudent, efficient, consistent with accepted good industry practice and to achieve lowest sustainable cost of delivering services.</p> <p>NGR 79(2) – Proposed capex is justifiable under NGR 79(2)(c)(ii) and (iii) as it is necessary to maintain integrity of services, and to comply with a regulatory obligation, in particular our data provision requirements under the Retail Market Procedures.</p> <p>NGR 74 – the forecast costs are based on the current market rate and are in line with historical costs incurred. The infrastructure renewal options have been based on service provider recommendations, and tested by our IT architects and third party consultants. The estimate has therefore been arrived at on a reasonable basis and represents the best estimate possible in the circumstances.</p>
Treated risk	<p>As per risk matrix = Moderate</p>
Stakeholder engagement	<p>We are committed to operating our networks in a manner that is consistent with the long-term interests of our customers. To facilitate this, we conduct regular stakeholder engagement to understand and respond to the priorities of our customers and stakeholders. Feedback from stakeholders is built into our asset management considerations and is an important input when developing and reviewing our expenditure programs.</p> <p>Our customers have told us their top three priorities are price/affordability, reliability of supply, and maintaining public safety. They also told us they expect timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues.</p> <p>Our IT infrastructure is integral in supporting our day to day operations and any deferral of upgrades from the typical asset lifecycle of devices increases the risk of security breaches, system unavailability or failure that could have adverse impacts on the safety and reliability of our services and our ability to provide the levels of customer service our customers expect and value.</p>
Other relevant documents	<ul style="list-style-type: none"> Attachment 8.6 IT Investment Plan

1.3 Background

The South Australian (SA) natural gas distribution network supplies natural gas to more than 450,000 consumers. To maintain integrity of services, and to allow us to securely store, search, and process the large volumes of data we rely on to service our customers on a daily basis, we operate and maintain IT infrastructure. Our IT infrastructure assets include servers, storage area networks (SANs), and operating systems, as well computing and telephony devices (desktops, laptops, mobile phones, switching devices).

These infrastructure assets are essential to allow us to perform our daily activities, as well as meet a range of legal and regulatory obligations, including those prescribed in the National Gas Law (NGL) and National Gas Rules (NGR), and the Retail Market Procedures (RMP)¹²⁸.

For example, our ongoing compliance with the RMP, which prescribes detailed data provisions to enable SA participation in the retail gas market, is heavily reliant on our ability to retain and provide metering and user data to the Australian Energy Market Operator in a timely manner. It is therefore vital we maintain secure, efficient and fit-for-purpose IT infrastructure.

Like all assets, these IT infrastructure items must be renewed or replaced before they reach the end of their useful life. The useful lives of IT assets can vary depending on how heavily they are

¹²⁸ AEMO, "Retail Market Procedures (South Australia) v17.0", 10 Feb 2020, https://www.aemo.com.au/-/media/files/gas/retail_markets_and_metering/market-procedures/sa/2020/retail-market-procedures-sa-version-170.pdf?la=en

used and moved around. For example, mobile assets such as laptops tend to be replaced on a three year cycle, whereas servers or SANs typically have a five year cycle.

This business case covers the IT infrastructure renewal required over the next AA period. The renewals scheduled for the next AA period are primarily driven by the asset lifecycle of these devices, however, we have also had regard to our other IT programs of work in the next AA period (as described in our IT Investment Plan, provided at Attachment 8.6). In particular, the planned infrastructure renewal will ensure our devices are compatible with the objectives of the AGIG IT Strategy and Roadmap.

Table 1.1.3 provides a summary of the existing our IT Infrastructure assets, the number that require renewal in the next AA period, and the applicable asset lifecycle.

Table 1.1.3: AGN SA IT infrastructure assets

IT infrastructure asset	Assets due for replacement next AA period	Asset lifecycle
Servers and SANs	4 servers 1 SAN	5 years
End user computing devices	38 laptops 12 desktop PCs 50 monitors	3-4 years 5 years 5 years
End user client software (e.g. Windows, Office 365, Office 365 Security)	50 desktop operating systems	3-4 years
Telephony devices (e.g. desktop phone, PBX)	50 desktop phones Backend switching devices	7 years 7 years

A summary of the proposed activities associated with renewing these infrastructure assets is provided below.

- *Servers and SAN kit* – we will upgrade servers and SAN kit in line with warranty expiry in November 2020, with the next upgrade required in November 2025. This includes updating operating systems and Citrix.
- *Intelligent Information Management System (IIMS)* – the current file server requires replacement and configuration to allow for workflows.
- *Workstations* - The desktop operating platform, laptops and associated devices are typically refreshed on a 3-7 year cycle with component upgrades on a monthly basis. Newer workstation devices require improved speeds which we will need to upgrade our internet links to provide.
- *Telephony devices* – Our telephony was replaced in the current AA period, but ageing backend switch gear will require replacement in the next AA period.
- *Wireless access points* – Our wireless access points will require upgrade as newer devices are introduced which require improved internet speeds and more capability.

The SA infrastructure renewal program forms part of the broader infrastructure renewal program across all the AGN businesses. The national cost of infrastructure renewal is allocated to each network every year on the basis of customer numbers in the respective networks. This ensures no cross-subsidisation, with the cost to each business reflecting the volume of customers that it serves. As at 31 December 2019, South Australia accounted for 35.8% of AGN's total customer numbers.

1.4 Risk assessment

Risk management is a constant cycle of identification, analysis, treatment, monitoring, reporting and then back to identification (as illustrated in Figure 1.1). When considering risk and determining the appropriate mitigation activities, we seek to balance the risk outcome with our delivery capabilities and cost implications. Consistent with stakeholder expectations, safety and reliability of supply are our highest priorities.

Our risk assessment approach focuses on understanding the potential severity of failure events associated with each asset and the likelihood that the event will occur. Based on these two key inputs, the risk assessment and derived risk rating then guides the actions required to reduce or manage the risk to an acceptable level.

Our risk management framework is based on:

- AS/NZS ISO 31000 Risk Management – Principles and Guidelines;
- AS 2885 Pipelines-Gas and Liquid Petroleum; and
- AS/NZS 4645 Gas Distribution Network Management.

The Gas Act 1997 and Gas Regulations 2012, through their incorporation of AS/NZS 4645 and the Work Health and Safety Act 2012, place a regulatory obligation and requirement on us to reduce risks rated high or extreme to low or negligible as soon as possible (immediately if extreme). If it is not possible to reduce the risk to low or negligible, then we must reduce the risk to as low as reasonably practicable (ALARP).

When assessing risk for the purpose of investment decisions, rather than analysing all conceivable risks associated with an asset, we look at a credible, primary risk event to test the level of investment required. Where that credible risk event has an overall risk rating of moderate or higher, we will undertake investment to reduce the risk.

Seven consequence categories are considered for each type of risk:

- 1 **Health & safety** – injuries or illness of a temporary or permanent nature, or death, to employees and contractors or members of the public
- 2 **Environment** (including heritage) – impact on the surroundings in which the asset operates, including natural, built and Aboriginal cultural heritage, soil, water, vegetation, fauna, air and their interrelationships
- 3 **Operational capability** – disruption in the daily operations and/or the provision of services/supply, impacting customers
- 4 **People** – impact on engagement, capability or size of our workforce
- 5 **Compliance** – the impact from non-compliance with operating licences, legal, regulatory, contractual obligations, debt financing covenants or reporting / disclosure requirements
- 6 **Reputation & customer** – impact on stakeholders' opinion of AGN, including personnel, customers, investors, security holders, regulators and the community
- 7 **Financial** – financial impact on AGN, measured on a cumulative basis

Figure 1.1: Risk management principles



A summary of our risk management framework, including definitions, has been provided in Attachment 8.10.

The primary risk event associated with not renewing IT infrastructure is that a cyber security breach occurs, compromising the confidentiality and integrity of corporate and customer data, and availability of operational and corporate systems.

Security breaches, and unavailability of operational systems can give rise to operations, customer/reputational, compliance and financial consequences, as described below.

- *Operations* – unavailability of operational systems (which are used to help us operate the network) may result in inefficient work order processing, an inability to make spatial and logical queries, and an inability to carry out timely repairs and maintenance. This can result in longer supply outages and slower emergency response.
- *Compliance* – failure in underlying infrastructure may result in outages of our core IT systems which, in turn, may lead to non-compliance with the RMP and our other regulatory and customer obligations.
- *Reputational and customer* – poorly performing IT systems and inaccurate data may result in breaches of the service standards, set out in the SA Gas Distribution Code¹²⁹. In addition, security breaches may result in confidential customer data being compromised. This in turn can impact our reputation.
- *Finance* – non-compliance with the RMP, or other obligations relating to data management can result in financial penalties. There is also the risk of having to pay a premium to resolve compatibility issues with unsupported/obsolete infrastructure if the necessary renewals are not installed.

The untreated risk¹³⁰ rating for IT infrastructure renewal is presented in Table 1.4.

Table 1.4: Risk rating – untreated risk

Untreated risk	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	High
Consequence	Minor	Minimal	Major	Significant	Major	Significant	Significant	
Risk Level	Low	Negligible	High	Moderate	High	Moderate	Moderate	

1.5 Options considered

The following options have been identified to address the risk associated with infrastructure renewal:

- **Option 1** – Reactive upgrade of desktop, telephony and network infrastructure; or
- **Option 2** – Proactive upgrade of desktop, telephony and network infrastructure.

These options are discussed in the following sections.

¹²⁹ <https://www.escosa.sa.gov.au/ArticleDocuments/580/130905-GasDistributionCode-GDC06.pdf.aspx?Embed=Y>

¹³⁰ Untreated risk is the risk level assuming there are no risk controls currently in place. Also known as the 'absolute risk'.

1.5.1 Option 1 – Reactive upgrade of desktop, telephony and network infrastructure

Option 1 would revert to an approach of maintaining IT infrastructure by reactively fixing or replacing IT assets on failure. IT infrastructure assets would not be renewed until they failed, meaning a number of assets would continue to be used beyond their useful lives, and the cost of maintaining them would be higher over the lifecycle of the assets.

1.5.1.1 Cost assessment

The benefit of this option is that no upfront capital investment is required. However, reactive replacement may come at a higher cost per replacement, as the failure of critical infrastructure such as servers may result in additional costs to expedite replacement or repair.

Reactive replacement is also likely to lead to growing inefficiencies if maintained over a longer term, including further pressure on operating costs. If IT systems become unstable, fail or are subject to security breaches, there is the potential for financial penalties for non-compliance with the RMP or other regulatory obligations.

1.5.1.2 Risk assessment

Option 1 does not adequately address the risk associated with outdated IT infrastructure, as there will remain a significant proportion of infrastructure assets that are outdated and operating beyond their useful life. Not renewing assets creates cyber security risks as devices move out of support and can no longer be patched. This option therefore does not adequately address the risk of a material cyber incident which would impact our ability to deliver services to our customers.

We consider Option 1 would not materially reduce the risk associated with IT infrastructure renewals beyond the untreated risk.

Table 1.5: Risk assessment – Option 1

Option 1	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	High
Consequence	Minor	Minimal	Major	Significant	Major	Significant	Significant	
Risk Level	Low	Negligible	High	Moderate	High	Moderate	Moderate	

As a result, the risk is not reduced to low or ALARP, and therefore Option 1 does not meet the requirements of our risk management framework.

1.5.1.3 Alignment with vision objectives

Table 1.6 shows how Option 1 aligns with our vision objectives.

Table 1.6: Alignment with vision – Option 1

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	N
Delivering for Customers – Customer Service	N
A Good Employer – Health and Safety	-
A Good Employer – Employee Engagement	N
A Good Employer – Skills Development	-

Vision objective	Alignment
Sustainably Cost Efficient – Working within Industry Benchmarks	N
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	-

Option 1 would not align with our objectives of *Delivering for Customers*, as it jeopardises the integrity of our IT infrastructure which is key for us to be able to support our customers or make informed decisions about operating, maintaining and managing our network.

It would also not align with our objective to be *A Good Employer*, as providing outdated or poorly performing devices would decrease our employee’s ability to carry out their jobs.

A reactive approach will also increase costs over the medium to long term. This option therefore does not align with our objective to be *Sustainably Cost Efficient*.

1.5.2 Option 2 – Proactive upgrade of desktop, telephony and network infrastructure

Under this option we would proactively upgrade our desktop, telephony and network infrastructure in line with asset lifecycles, as is current practice.

1.5.2.1 Cost assessment

The estimated direct capital cost of proactive IT infrastructure asset replacement is \$0.15 million. This estimate is based on historical costs as well as quoted prices for replacements of business laptops, desktops, servers and desk phones of the type currently in use.

Table 1.7: Cost estimate – Option 2, \$'000 2019/20

Option 2	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Proactive replacement	24.1	11.2	34.7	24.1	53.6	147.7
Total	24.1	11.2	34.7	24.1	53.6	147.7

1.5.2.2 Risk assessment

Option 2 reduces the risk from high to moderate. Renewing the IT infrastructure assets reduces the likelihood of a cyber security breach and associated IT system failure/inaccessibility from unlikely to remote. This reduces the operations and compliance risk to moderate.

A moderate rating is as low as reasonably practicable. This is because renewing the IT infrastructure does not reduce the risk consequence. A security breach or infrastructure failure can still carry major operational and reputation consequences, however, if we have up-to-date infrastructure a breach or failure is much less likely to happen.

Table 1.8: Risk assessment – Option 2

Option 2	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Remote	Remote	Remote	Remote	Remote	Remote	Remote	Moderate
Consequence	Minor	Minimal	Major	Significant	Major	Significant	Significant	
Risk Level	Negligible	Negligible	Moderate	Low	Moderate	Low	Low	

Reducing the overall risk to ALARP is consistent with our risk management framework.

1.5.2.3 Alignment with vision objectives

Table 1.9 shows how Option 2 aligns with our vision objectives.

Table 1.9: Alignment with vision – Option 3

Vision objective	Alignment
Delivering for Customers – Public Safety	-
Delivering for Customers – Reliability	Y
Delivering for Customers – Customer Service	Y
A Good Employer – Health and Safety	-
A Good Employer – Employee Engagement	Y
A Good Employer – Skills Development	-
Sustainably Cost Efficient – Working within Industry Benchmarks	Y
Sustainably Cost Efficient – Delivering Profitable Growth	-
Sustainably Cost Efficient – Environmentally and Socially Responsible	-

Option 2 aligns with our objectives of *Delivering for Customers*, as it would help prevent the likelihood of customer data security and customer service being compromised due to IT infrastructure failure/breach.

This project aligns with our vision objective of being *A Good Employer*, as it ensures reliability and availability of desktop, telephony and network infrastructure required for our employees to do their job effectively.

It would also promote a stable and secure IT environment that minimises outages and losses due to material cyber impacts, and ensure our systems are consistent with current industry standards. This option therefore aligns with our objective to be *Sustainably Cost Efficient*.

1.6 Summary of costs and benefits

Table 1.10 presents a summary of how each option compares in terms of the estimated cost, the residual risk rating, and alignment with our vision objectives.

Table 1.10: Comparison of options

Option	Estimated cost (\$ million)	Treated residual risk rating	Alignment with vision objectives
Option 1	no upfront capital costs	High	Does not align with <i>Delivering for Customers</i> , <i>A Good Employer</i> or <i>Sustainably Cost Efficient</i>
Option 2	0.15	Moderate	Aligns with <i>Delivering for Customers</i> , <i>A Good Employer</i> and <i>Sustainably Cost Efficient</i>

1.7 Recommended option

Option 2 is the proposed solution. This solution involves:

- upgrading the servers and supporting SAN as per the IT Asset lifecycle plan; and
- upgrading laptops, desktops and desk phones as per the IT Asset lifecycle plan.

These initiatives will be delivered across the five years of the AA period.

1.7.1 Why is the recommended option prudent?

Option 2 is the most prudent option because:

- it ensures that business operations and timely customer service will less likely be adversely impacted by system outages caused by ageing IT assets;
- IT assets and services will continue to be managed in a sustainable cost-effective way that supports the AGIG IT strategy and Roadmap initiatives;
- it maintains the organisation’s current IT asset lifecycle management approach;
- it reduces risks to an acceptable level;
- it is consistent with our vision of being a good employer and will support lower overall costs of delivering services which is sustainably cost efficient and in the long term interests of customers; and
- the scope of works is achievable in the time frame.

1.7.2 Estimating efficient costs

Infrastructure renewal is delivered through a national portfolio of projects. We use an industry standard application lifecycle management methodology and a practical framework to determine upgrade timelines and priorities.

The proposed infrastructure renewal costings have been validated by both the AGIG IT architects and independent IT strategy experts, Blue Zoo. These processes also confirmed that there is no duplication of funding request between the initiatives in this business case and those in SA138 AGIG IT Strategy & Roadmap.

Costs for capex items (e.g. workstations, laptops, monitors, desktop phones, servers and SANs) are based on current (e.g. 2019) quotes of similar style hardware from our current service provider.

The forecast cost breakdown is shown in Table 1.11.

Table 1.11: Cost estimate – Option 2, \$’000 2019/20

Option 2	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Replace servers and SAN kits					43.0	43.0
IIMS	15.2	8.0	8.0	8.0	8.0	47.3
Workstations	7.2	1.4	24.9	14.3	0.9	48.7
Telephony devices	0.7	0.7	0.7	0.7	0.7	3.4
Wireless access points	1.1	1.1	1.1	1.1	1.1	5.4
Total	24.1	11.2	34.7	24.1	53.6	147.7

The following table shows the costs escalated to June 2021 dollars.

Table 1.12: Escalated AGN IT infrastructure renewal cost estimate (\$'000)

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Total unescalated (\$ Dec 19)	24.1	11.2	34.7	24.1	53.6	147.7
Escalation	0.8	0.4	1.6	1.2	3.0	7.0
Total escalated (\$ Jun 21)	24.9	11.6	36.3	25.3	56.6	154.7

1.7.3 Consistency with the National Gas Rules

In developing these forecasts, we have had regard to Rule 79 and Rule 74 of the NGR. With regard to all projects, and as a prudent asset manager, we give careful consideration to whether capex is conforming from a number of perspectives before committing to capital investment.

NGR 79(1)

The proposed solution is prudent, efficient, consistent with accepted and good industry practice and will achieve the lowest sustainable cost of delivering pipeline services:

- **Prudent** – The expenditure is necessary in order to maintain IT assets so that we can mitigate the risk of cyber security breaches, maintain the integrity of services, and enable our employees to carry out their day-to-day activities.
- **Efficient** – Proactive replacement of infrastructure assets that are at or nearing the end of their useful lives is a more efficient approach than replacing these assets upon failure. Deferring replacement can result in higher reactive costs if critical assets fail, or penalties for non-compliance with RMP obligations.
- **Consistent with accepted and good industry practice** – proactive asset lifecycle management is good industry practice regardless of the type of asset. Energy network businesses are becoming more dependent on IT systems and provision of timely and accurate information, therefore it is good practice to make sure IT infrastructure assets are up to date and are resilient to cyber security threats.
- To achieve **the lowest sustainable cost of delivering pipeline services** – The infrastructure renewals are necessary to mitigate cyber security risks, which can result in costly service interruptions. Proactive replacement is typically also less expensive than reactive replacement. Ensuring stable IT assets will also allow the proposed investments by the SA138 AGIG IT Strategy and Roadmap business case to be appropriately exploited. The project is therefore consistent with the objective of achieving the lowest sustainable cost of delivering services.

NGR 79(2)

Proposed capex is justifiable under NGR 79(2)(c)(ii) and (iii) as it is necessary to maintain integrity of services, and to comply with a regulatory obligation, in particular our data provision requirements under the RMP.

NGR 74

The forecast costs are based on the latest market rate testing and project options consider the managed service providers recommendations to meet the business needs and ongoing program of

work identified in business case SA138 AGIG IT Strategy and Roadmap. The estimate has therefore been arrived at on a reasonable basis and represents the best estimate possible in the circumstances.

Appendix A – Comparison of risk assessments for each option

Untreated risk	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	High
Consequence	Minor	Minimal	Major	Significant	Major	Significant	Significant	
Risk Level	Low	Negligible	High	Moderate	High	Moderate	Moderate	

Option 1	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely	High
Consequence	Minor	Minimal	Major	Significant	Major	Significant	Significant	
Risk Level	Low	Negligible	High	Moderate	High	Moderate	Moderate	

Option 2	Health & Safety	Environment	Operations	People	Compliance	Rep & Customer	Finance	Risk
Likelihood	Remote	Remote	Remote	Remote	Remote	Remote	Remote	Moderate
Consequence	Minor	Minimal	Major	Significant	Major	Significant	Significant	
Risk Level	Negligible	Negligible	Moderate	Low	Moderate	Low	Low	