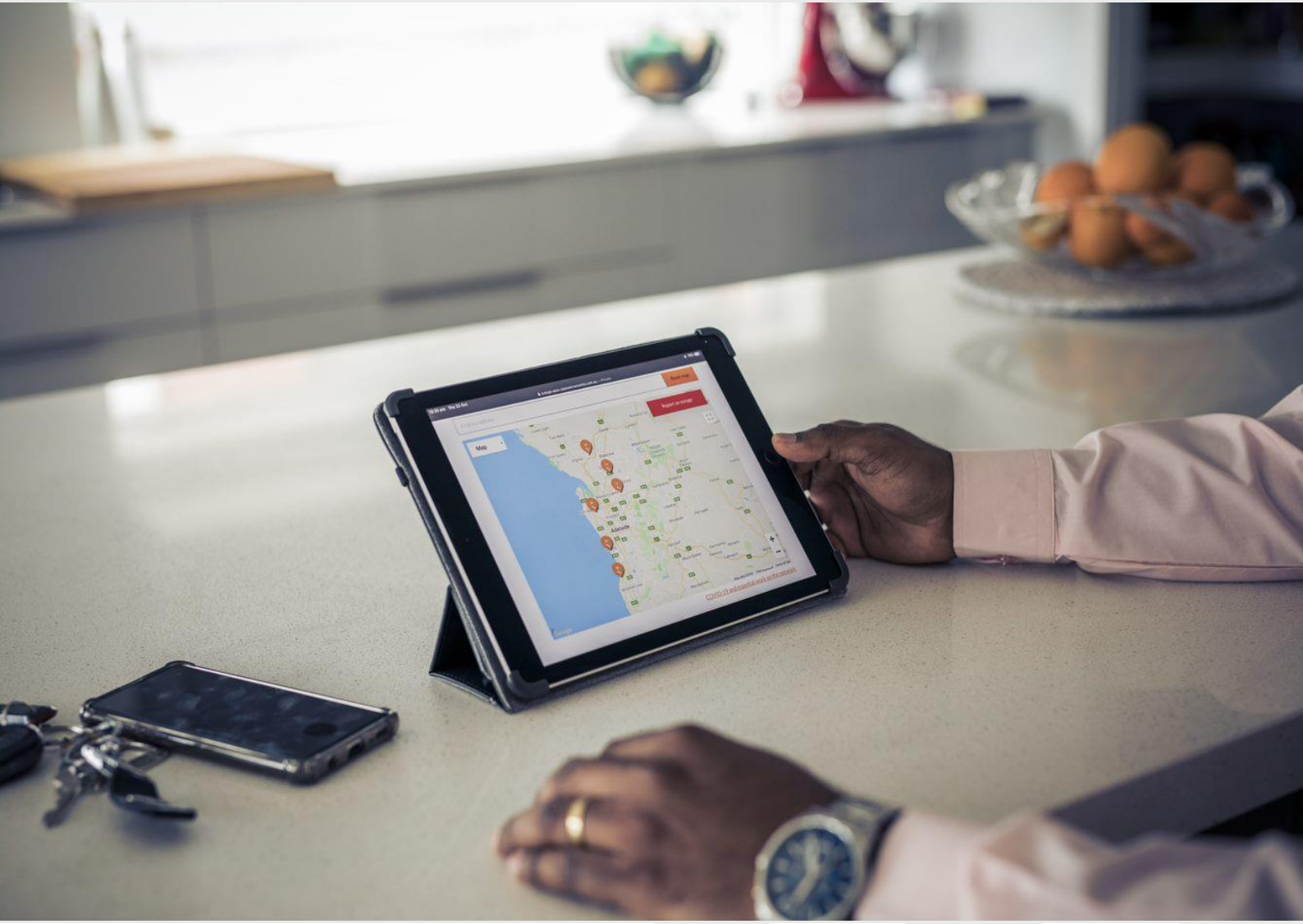


Business case: ICT Non-Recurrent - Customer Technology Program - Website Replacement

2025-30 Regulatory Proposal

Supporting document [5.12.17]

January 2024

SA Power Networks

Empowering South Australia

Contents

Glossary

Acronym / term	Definition
ABS	Australian Bureau of Statistics
ACMA	Australian Communications and Media Authority
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AI	Artificial Intelligence
API	Application programming interface
BAU	Business as usual
Capex	Capital expenditure
CALD	Culturally and linguistically diverse
CDP	Customer data platform
CER	Customer energy resources
CMS	Content management system
CRM	Customer relationship management system
DXP	Digital experience platform
EV	Electric Vehicle
ESCoSA	Essential Services Commission of South Australia
FTE	Full-time equivalent
ICT	Information and Communication Technology
IT	Information Technology
MDI	Meter data insights
NER	National Electricity Rules
NPV	Net present value
Opex	Operating expenditure
RCP	Regulatory control period
SaaS	Software as a Service
WACG	Website Accessibility Content Guidelines

1. About this document

1.1 Purpose

This business case details the justification for the non-recurrent Information and Communication Technology (**ICT**) expenditure required for the replacement of the legacy website software and content management system (**CMS**).

1.2 Expenditure category

- Non-network ICT capital expenditure (**capex**): Non-recurrent – major replacements or upgrades
- Non-Network ICT operating expenditure (**opex**): Base year adjustment – Software as a Service (**SaaS)**

1.3 Related documents

Table 1: Related documents

Title	Author	Version / date
5.12.1 - IT Investment Plan 2025-30 - Asset Plan	SA Power Networks	Jan 2024
5.12.18 - Customer Program: Customer Portals Consolidation - Business case	SA Power Networks	Jan 2024
5.12.19 - Customer Program: Customer Notification System Replacement - Business case	SA Power Networks	Jan 2024
5.12.20 - Customer Program: Meter Data Insights System Replacement - Business case	SA Power Networks	Jan 2024
5.12.21 - Customer Program: CRM Replacement & Data Consolidation - Business case	SA Power Networks	Jan 2024
5.12.22 - Customer Program: Personalised on Demand Services - Business case	SA Power Networks	Jan 2024
5.12.27 - Program Overview - Customer Technology Program	SA Power Networks	Jan 2024
5.12.27 - Program Overview - ICT Non Recurrent Customer Technology Program - Explanation	SA Power Networks	Jan 2024

2. Executive summary

This business case details the justification for the non-recurrent ICT expenditure required for the replacement of the legacy website software. The SA Power Networks external-facing website www.sapowernetworks.com.au provides the general public and industry participants with a range of key information and services and supports the quick dissemination of information to customers. The website also allows us to ensure regulatory obligations for provision of information are achieved.

The customer demand for website services is increasing, with 9.6 million page views by 2.3 million unique visitors recorded in 2022. Customers' expectations are for website services that deliver timely and accurate information and for a service that is always available, particularly during emergency events and widespread power interruptions.

Our current website is managed by an underlying content management system (CMS), which is complex and based on old technology that is no longer able to efficiently or effectively meet the demands of our customers and staff. The software has been in place since 2005 and has been upgraded and enhanced multiple times since initial implementation, but it is increasingly less fit for purpose. These challenges are becoming larger as usage increases and the energy transition becomes a more significant factor in our customers' lives. Key challenges include:

- Being unable to provide customers who require assistive technologies (such as text to speech software) with equitable access to content, including meeting the universal website accessibility (**WACG**) guideline standards.
- Meeting customer expectations for a consistent and reliable experience on both desktop and mobile devices.
- The existing solution requiring significant manual effort from multiple parties, including the vendor, to make basic content modification.
- Ensuring our website is not vulnerable to cyber security attacks and continuing to comply with security posture relevant to a critical infrastructure provider.
- The software doesn't easily allow cost-effective scalability to manage peaks in website demand.
- Costs for the website have increased over time, and will continue to do so, hence we need to ensure the website can cater for the growing demand cost effectively.
- Difficulty in easily disseminating information to the South Australian community, particularly during emergency events and natural disasters, such as the recent flooding events.

Addressing the ongoing website limitations faced by our customers and staff requires us to replace the legacy systems with a modern solution that enables us to deliver on our customer expectations in a secure, fit-for-purpose and cost-efficient manner.

The total expenditure for this preferred option **is $2.8 million[1], all of which is within the 2025–30 RCP**. **This includes $0.3 million of non-recurrent capex, $2.1 million of non-recurrent opex and $0.3 million of recurrent opex[2].** The net present value (**NPV**) over the 10-year period is **$3.9 million** and the overall residual risk rating is Low.

Other options considered were:

- **Option 0 – Maintain existing system and services as is:** Not viable as the current CMS will prevent us from meeting the evolving needs of our customers and incur ever-increasing costs for its maintenance.

[1] The financial figures in this document are in June 2022 dollars unless specified otherwise.
[2] The recurrent opex will be funded through business efficiencies. This is included for completeness on the NPV and we are not proposing a step change. We will seek to offset the costs with expected benefits.

- **Option 2 - Replacement with modern website and advanced capabilities:** Not recommended due to higher level of cost, increased complexity and governance, and lack of resourcing to manage a more advanced digital service.

Table 2: Costs, benefits and risks of alternative options relative to the base case over the 10-year period, $m, $ June 2022 real[3].

	Total program costs			2025 to 2030 costs			Benefits	NPV[4]	Residual Risk level[5]	Ranking
Option	**Capex**	**Opex**	**Total**	**Capex**	**Opex**	**Total**				
Option 0 – maintain existing system and services as is (Base case)[6]	–	–	–	–	–	–	–	–	High	Not credible
Option 1 – Replacement of the current legacy solution with a modern website solution **(Recommended Option)**	0.3	2.5	2.8	0.3	2.5	2.8	8.4	3.9	Low	1
Option 2 – Replacement with modern website and advanced capabilities	0.4	8.0	8.4	0.4	4.6	5.0	8.4	-0.5	Medium	2

The preferred option was selected because it provides:

- a cloud-based solution with modern architecture, enabling low cost and the flexibility to scale up when demand increases and to scale down in periods of low demand
- the ability to meet accessibility standards, providing wider accessibility for customers across desktop and mobile devices
- the ability to provide up-to-date information to customers
- a reduced level of vendor resources required to maintain the website
- consolidation of all forms within a single form management system, providing a consistent interface with customers and improving ease of data collection and extraction
- improved efficiency of website content management by enabling content authoring and publishing by business users
- a modern solution which supports improved cyber security.

[3] Note: Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding.
[4] NPV of the proposal over 10-year cash flow period from 1 July 2025 to 30 June 2035, based on discount rate of 4.05%.
[5] The overall risk level for each option after the proposed option is implemented.
[6] The costs and NPV of option 0 (base case) have been set to zero as the costs associated with this option have been included as benefits of other options as appropriate.

3. Background

3.1 The scope of this business case

The scope of this business case is to replace the legacy CMS that manages our external-facing website. A modern CMS will enable us to easily maintain and make changes to the website and can allow multiple contributors to create content and publish across channels, ensuring consistency of messaging, as required, for each of our customer cohorts.

Our website services an extensive number of customer cohorts, including:

- Residential households
- Vulnerable customers (life-support customers, aged demographic etc)
- Large customers (large supermarkets etc)
- Small-to-medium-enterprise business
- Developers
- Generators
- Imbedded networks
- Electricians
- Solar installers
- Tech providers
- Meter readers
- Retailers

We also have obligations to publish information on our website. These obligations come from the Essential Services Commission of South Australia (**ESCoSA**) and the Australian Energy Regulator (**AER**). They require periodic update and have varying storage requirements. Types of information that need to be made available include:

- Reliability and compliance strategies relating to performance measures set out in the Electricity Distribution Code
- Cost allocation methodology outlining how our costs are allocated, as required by the AER
- Distribution loss factor methodology, as required by the National Electricity Rules (**NER**)
- Distribution Annual Planning Report, as per the National Electricity Rules (Schedule 5.8)
- Tariffs and pricing outlining the distribution electricity pricing and costs for alternative control services
- Regulatory Investment Test for Distribution notices and reports for proponents to respond to.

3.2 Our performance to date

Our existing solution was first implemented in 2005 – almost 20 years ago. The vendor was contracted to provide the underlying CMS, and today we are still using this solution to manage and maintain our existing website. Separate software is used for digital forms and for campaign management across the website and social media, covering topics such as floods and apprenticeship opportunities at SA Power Networks.

Customer demand has significantly increased for website services

The overall user demand for data from the SA Power Networks website has significantly increased over time – in 2022, we observed 9.6 million website page views, showing significant growth over the last five years (refer to Figure 1: Website page views trend line and Figure 2: Website statistics).

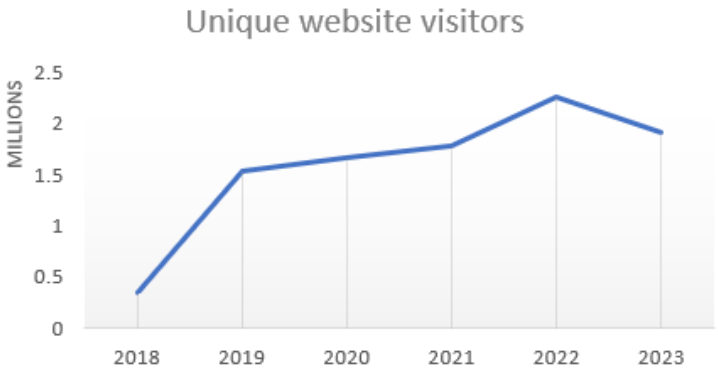


Figure 1: Website page views trend line

Traffic to our website is weather dependent, in 2023, there was a slight decrease in website traffic as we did not experience as many extreme weather events in this period.

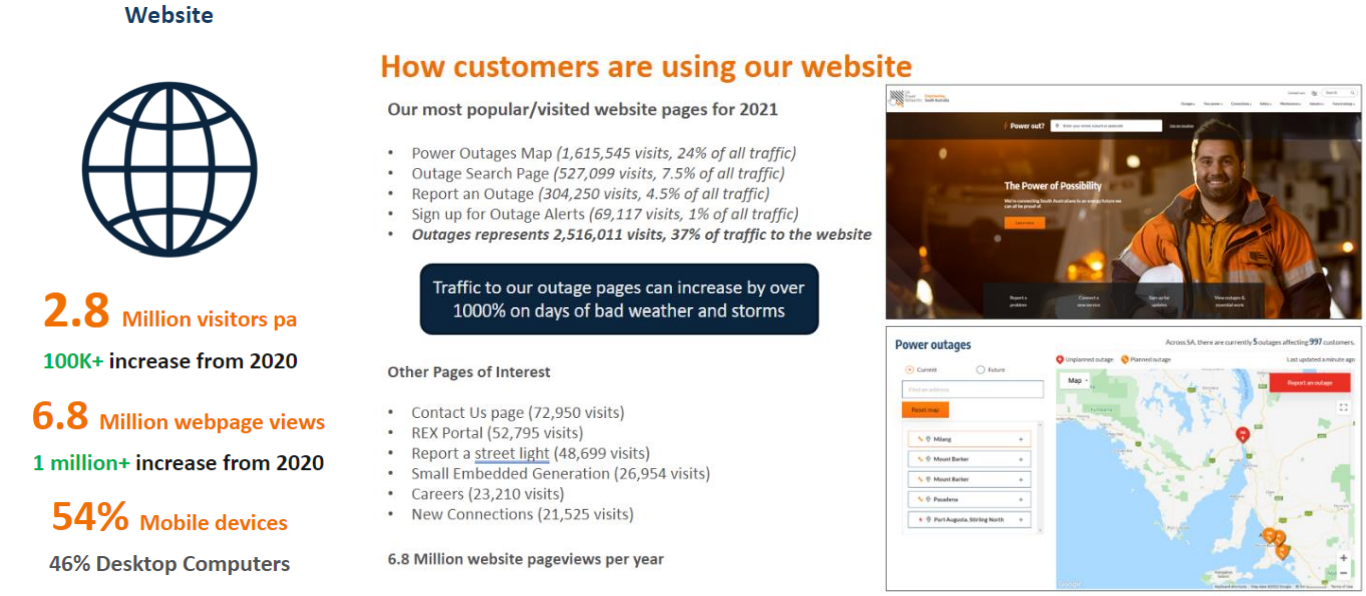


Figure 2: Website statistics

Customers preference mobile devices

In 2022 and 2023, 60% of SA Power Networks' website traffic was via a mobile device (tablets and mobile phones) and this percentage only continues to grow. Unfortunately, many of the website pages have not been designed to enable a mobile-friendly experience. For example, this can be as simple as the screen not being designed to fit a mobile device, though it can still be accessed, albeit with some difficulty. Or it can be examples where pages cut off, so the user needs to swipe on screen to make content visible, as shown in examples 1 and 2, below.

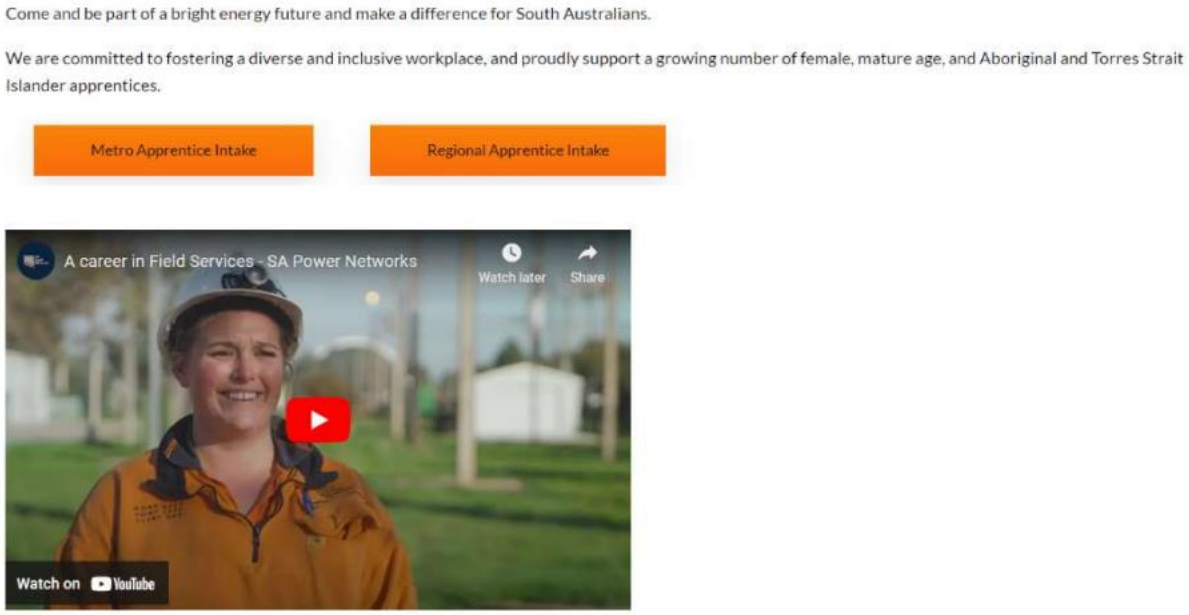
Having less-intuitive webpages creates an inability to present content consistently on customers' preferred devices – a challenge considering a majority of internet access is by mobile phone (93%), as shown in

Trends and Developments in Telecommunications 2020–21[7] by the Australian Communications and Media Authority (**ACMA**).

Example 1: Accessibility issues
Page: https://www.sapowernetworks.com.au/about-us/careers/early-careers-programs/apprenticeship-program/

Desktop screenshot

The content is designed to display as below. Note the orange buttons and the video are clearly visible.



Mobile screenshot

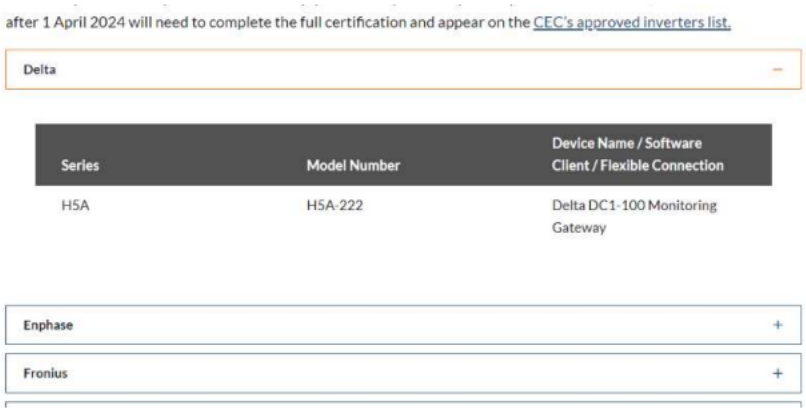
Actual display on mobile below. Note the button needs to be swiped and the video is cut off.

[7] ACMA – Communications and media in Australia – Trends and developments in telecommunications 2020–21

Example 2: Accessibility issues
Page: https://www.sapowernetworks.com.au/industry/flexible-exports/compatible-equipment/

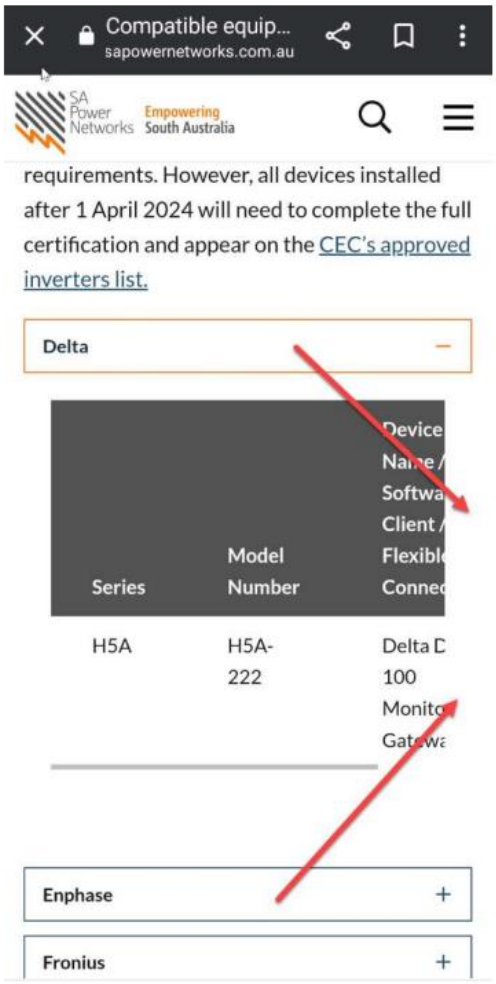
Desktop screenshot

We have a number of tables on this page. Note the screenshot below is how the content should display.



Mobile screenshot

Actual display on mobile shows the content cut off and the user needs to swipe to access it.



This experience leads to frustration and a poor customer experience.

3.3 Drivers for change

Our customers' digital expectations of us continue to grow. Our need to engage better with customers, through the channels of their choice, takes on a growing importance. We need to make technology investment decisions that are appropriate for an essential service provider and are aligned to our customers' needs and deliver customer-based outcomes, on a platform that can be easily maintained and mitigates cyber threats.

We have identified a number of key drivers for change:

Useability

The overall customer experience is negatively impacted as navigation to information through mobile platforms is often hard or even impossible. Due to technology advances across the world, customers now expect a personalised customer experience based on their needs and historical interactions with us. Being able to engage through a modern website that has look-and-feel and navigation capabilities that conform to modern standards and practices and enables a wide range of accessibility options for customers, is essential.

Accessibility

We are currently non-compliant with modern accessibility standards. This prevents a material percentage of our customers from accessing the information and facilities available on the website and an even higher percentage cannot access potentially vital information from their mobile device, such as those customers that a reliant on assistive technologies for example text to speech software. We need a modern CMS technology that considers customers' core needs from the foundational architecture up, for example, meeting accessibility standards (WACG compliant) and delivering mobile capabilities.

We have benchmarked (using TAW, an analysis tool for website accessibility[8]), and the results show that we offer a poor standard of website accessibility for our customers (refer to Table 3: Website accessibility rankings in power and utilities sector). SA Power Networks has an opportunity to provide improved accessibility that meets the needs of our customers.

Table 3: Website accessibility rankings in power and utilities sector

Distributor	Rating
Australian Gas Networks	Very poor
Transgrid	Very poor
SA Power Networks	Poor
Powercor/Citipower	Poor
Jemena	OK
Tas Gas Networks	OK

Effort and cost to maintain

The website must be updated frequently to ensure customers have access to up-to-date information. However, we currently face significant overheads in effectively managing our website content. Examples include:

- Simple changes in a modern CMS, such as establishing simple workflows to improve website change governance, would otherwise be able to be made by our capable in-house digital channels team, but currently require vendor support.

[8] https://www.tawdis.net/

- Times of emergency, such as bushfire or flood – our current time-consuming content update processes become especially problematic, as our customers rely on our website being up to date with relevant information.
- Ensuring we can meet ESCoSA and the AER obligations to publish information on our website that requires periodic update and has varying storage requirements.
- Web forms need to be easily created and managed to ensure a seamless data capture mechanism exists for customers using website services.

At present, our website is unable to scale up or down when required, based on periods of high customer demand. The website faces escalations in demand during severe storm events as customers seek outage-related information. A cloud-based CMS solution offers an opportunity to reduce costs by providing more modern, scale-up and scale-down features in response to escalations in demand.

3.4 Industry practice

It is common practice among industry to meet customers' digital services expectations and provide an easy-to-use website service.

ACMA published research on Trends and Developments in Telecommunications, finding:

- Smartphones are owned by nearly every adult in Australia, providing easy access to voice and internet services for most of the population
- 93% of adults are accessing the internet via their mobile phone[9].

A paper released by the AER, titled Towards Energy Equity – A Strategy for an Inclusive Energy Market, noted that:

- One in five Australians has a disability that can make it difficult to search for and assess energy deals or to keep energy usage to an affordable level without compromising their health or welfare
- 44% of Australians have literacy levels considered to be below what is required to fully participate in society
- 45% of Australians will experience mental ill-health at some point in their life and those living with mental illness may struggle to effectively use essential services due to difficulties like making telephone calls to their service provider or navigating complex online forms[10].

In South Australia, where the number of customer energy resources (**CER**) is high and customer engagement is increasing, SA Power Networks is well known and plays a visible and active role in the lives our customers. Like every other distributor across Australia, the website plays a key role in customer information and engagement.

Along with ensuring we are providing a seamless digital experience in line with industry standards, we need to guarantee we are providing a website that is delivering the expected experience for our customers. Given that one in five of South Australians[11] report living with a disability, it is vital that we provide the right support to those who need it when accessing our website.

[9] ACMA – Communications and media in Australia – Trends and developments in telecommunications 2020–21
[10] AER – Towards energy equity strategy – October 2022.pdf
[11] DHS-1259-DIS_Inclusive-SA_FA-WEB.pdf

4. The identified need

The driver for investment action being considered in this business case is the customer requirement for equitable and easy access to critical energy service information and the containment of increasing costs to provide our website services. The key issue is that some customers are unable to access required information on their devices, or due to barriers presented by their language or their disability. These issues will escalate as customers become more dependent on the electricity network in their daily lives, and will drive up our costs to manage the legacy technology delivering these services.

In considering potential responses to this driver, we engaged with our customers on their desired service level outcomes balanced against price outcomes and considered our regulatory requirements under the NER, National Electricity Law and jurisdictional regulations. As a result of these considerations, the identified need for our website replacement is as follows:

- To respond to customers' concerns[12], identified through our consumer and stakeholder engagement process, regarding their explicit service level recommendations that we:
  - provide easy-to-access and consume information when they want it, through self-service
  - ensure equity in our services and particularly that 'nobody is left behind' or discriminated against during the energy transition
  - ensure no reduction in trust of the information on the website through adequate cyber security capabilities.
- To maintain the safety of our distribution network and system, in relation to the risks of harm to workers, consumers and community, through the provision of easy-to-access and clear information for all customers when they need it, particularly during significant outage events.
  - To ensure the best long-term efficient cost for our website services
  - To be compliant with reasonable and relevant consumer standards, in this case with reference to universal WACG[13].

[12] This is pursuant to Clause 6.5.7(c)(5A) of the NER, which requires regard to be had to the extent to which forecast expenditure seeks to address the concerns of distribution service end users identified by the distributor's engagement process.

[13] WCAG 2 Overview | Web Accessibility Initiative (WAI) | W3C

5. Comparison of options

In this section we discuss the three options considered for website services.

5.1 The options considered

We considered options for replacing our website and CMS with a secure, fit-for-purpose CMS technology that will enable us to build a functional website where all our customers can immediately access information and easily interact with us. The current CMS limitations for customers and staff, high operational cost and the cyber security vulnerabilities can only be resolved with the implementation of a new CMS.

The options explored considered the following:

- Providing the ability for our internal teams to update the website efficiently and seamlessly as needed, without support from a vendor – a factor that is particularly important in times of peak demand, such during storms, bushfires and floods.
- Ensuring that we can automatically scale our servers for changes in demand is also crucial moving forward, as evidenced by the considerable cost of maintaining servers at peak demand, to ensure we can meet customer needs.
- A full suite of modern CMS capabilities will allow us to meet WACG, which are expected of a modern utility. It will also enable mobile-friendly experiences, which our customers are increasingly expecting, as well as providing the technology basis for other components of the customer program.

Three options have been identified for the website replacement and are described in the subsequent pages. The options are driven by our responsibility to provide website services for our customers and to deliver their expected customer experience while increasing internal efficiency.

Table 4: Summary of options considered

Option	Description
Option 0 – Base case – Maintain the existing systems and services as is (Base case)	Retaining the current CMS will prevent us from meeting the needs of our customers and incur ever-increasing costs for its maintenance and up-keep. The current website has a range of inherent difficulties and prevents us meeting accessibility standards (eg, language, advanced search capability and tailored navigation) and being able to keep our customers up to date easily and seamlessly, particularly at times of peak demand. The complex CMS technology limits our ability to provide the experience our customers are expecting of us, eg, we know that in 2022, 60% of traffic to our website was via a mobile device (tablets and mobile phones), but due to the inherent complexity of maintaining our webpages and the time required to make updates, many of our website pages are not enabled for a mobile-friendly experience.
Alternative options	
Option 1 – Replacement of the current legacy solution with a modern website solution (Recommended)	This option provides a modern CMS that supports website and digital forms capabilities to enable all accessibility standards to be met and allow customers to better engage and connect with us through the website from a device of their choosing in a secure manner. This modern CMS will contain the ability to design, build and maintain a website that will simplify the process of customising, updating, and modifying the website, and will allow our customers to interact with us easily and seamlessly. By providing the software to significantly improve the creation and management of the website, as well as enabling an appropriate level of governance, it will allow our business users to author and publish content in a way that enhances customer engagement, making it easier for our customers to find what they need.

Option 2 – Replacement with modern website and advanced capabilities	This option delivers all the capabilities noted within Option 1 with the addition of advanced website capabilities, including social media, campaign management and personalisation of website. An increased level of integration will be provided across all customer portals to support customer engagement through the website, together with an associated uplift in resources. We will receive everything Option 1 provides and also gain significant flexibility to provide more channel choice and increased digital experiences for our customers.

5.2 Options investigated but deemed non-credible

In exploring options for the website replacement, we considered additional advanced artificial intelligence (**AI**)-based website features, such as chatbots, which have dramatically increased in capability, with tools such as ChatGPT offering a transformative enhancement. However, we recognise that our needs do not extend to these advanced AI capabilities. We have discounted this option based on the cost and complexity of delivering these types of services.

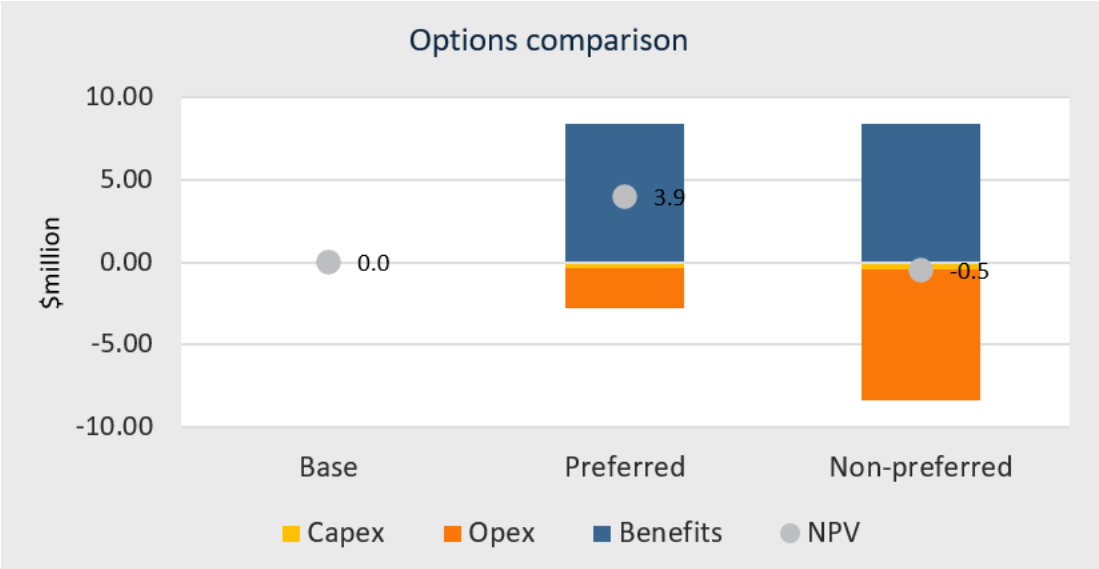
5.3 Analysis summary and recommended option

5.3.1 Options assessment results

Table 5: Costs, benefits and risks of alternative options relative to the base case over the 10-year period, $m, $ June 2022 real.

	Total program costs			2025 to 2030 costs			Benefits[14]	NPV[15]	Risk level[16]	Ranking
Option	**Capex[17]**	**Opex[18]**	**Total**	**Capex[19]**	**Opex[20]**	**Total**				
Option 0 – Maintain existing system and services as is (Base case)[21]	–	–	–	–	–	–	–	–	High	Not credible
Option 1 – Replacement of the current legacy solution with a modern website solution **(Recommended)**	0.3	2.5	2.8	0.3	2.5	2.8	8.4	3.9	Low	1
Option 2 – Replacement with modern website and advanced capabilities	0.4	8.0	8.4	0.4	4.6	5.0	8.4	-0.5	Medium	2

[14] Represents the total capital and operating benefits, including any avoided costs of undertaking Option 0 (base case), over 10-year cash flow period from 1 July 2025 to 30 June 2035 expected across the organisation as a result of implementing the proposed option.
[15] NPV of the proposal over 10-year cash flow period from 1 July 2025 to 30 June 2035, based on discount rate of 4.05%.
[16] The overall risk level for each option after the proposed option is implemented. Refer to Appendix C – risk assessment for details.
[17] Represents the total capex associated with the proposed option over the 10-year cash flow period from 1 July 2025 to 30 June 2035.
[18] Represents the total opex increase associated with the proposed option above the current level of opex, over the 10-year cash flow period from 1 July 2025 to 30 June 2035.
[19] Represents the total capex associated with the proposed option over the 5-year cash flow period from 1 July 2025 to 30 June 2030.
[20] Represents the total opex increase associated with the proposed option above the current level of opex, over the 5-year cash flow period from 1 July 2025 to 30 June 2030.
[21] The costs and NPV of option 0 (base case) have been set to zero as the costs associated with this option have been included as benefits of other options as appropriate.



Assumptions

Key assumptions to note in relation to the NPV results above include:

- While Section 5.5.2, below, includes projected cost increases under Option 0, the NPV of these has been assumed to be a cost avoidance benefit of Options 1 and 2 when calculating their NPVs. This enables them to be more easily compared to a zero base for Option 0.
- It is expected that cost reductions identified will be used to offset the additional recurrent costs of new services/platform capabilities and reduce/avoid the realisation of future cost increases.
- This project is most likely to be a SaaS solution and hence most of the implementation costs are considered operating expenditure.
- The program delivery approach assumes shared project resources across multiple projects program manager and pool of skilled delivery full-time equivalents (**FTE**), including architects, business analysts, developers and testers). This approach avoids ramp-down/ramp-up costs and supports a lower cost/more efficiency delivery. This approach is consistent with the program delivery methodology used for similar projects at SA Power Networks. If a program approach is not adopted, the efficiency opportunity is missed, resulting in an increase of 30% in costs per business case.

5.3.2 Recommended option: Option 1 – Replacement of the current legacy solution with a modern website solution

The recommended option is Option 1 – Replacement of the current legacy solution with a modern website solution. In this option, the legacy CMS will be replaced with a modern solution. It will enable all accessibility standards to be met and allow customers to better engage and connect with us through the website from a device of their choosing in a secure manner.

The solution will include a full suite of modern CMS capabilities, allowing us to meet accessibility guidelines and combine the capability of a CMS with the ability to build and design a website that will simplify customisations, updates and modifications to the website, and will allow our customers to interact with us easily while being easy for us to maintain, with a strong cyber protection.

By providing the software to significantly improve website creation and management, as well as enabling an appropriate level of governance, it will allow more efficient delivery of website services.

This solution will play a significant role in us being able to achieve our strategic vision of providing our customers with a digital experience.

We recommend Option 1 as it provides a range of benefits, including:

- A cloud-based website that can automatically scale up when demand increases and scale down in periods of low demand.
- The ability to meet accessibility standards, providing wider accessibility for customers across desktop and mobile devices.
- The ability to provide up-to-date information to customers.
- Improved efficiency of website content management by enabling content authoring and publishing by business users.
- Reduced level of vendor resources required to maintain the website.
- Consolidation of all forms within a single form management system, providing a consistent interface with customers and improving ease of data collection and extraction.
- Improve our CMS cyber security capabilities through a modern CMS solution.
- Delivering a modern and sustainable long-term solution.
- Greater degree of flexibility in build and design of the CMS.

Appendix A lists the cost and benefit models for each option. Appendix B details the SaaS opex adjustments request for the preferred option. Appendix C provides the detailed risk analysis for each option.

5.4 Comparison of options: Option 0 - Maintain existing systems and services as is

5.4.1 Description

The website needs to play a critical role in helping SA Power Networks lower our cost to serve, by allowing customers to access the right information for their needs on an easily navigable website, accessible via both desktop and mobile devices, helping to reduce the number of calls to our contact centre.

The current website has a range of inherent difficulties, and its age and complexity currently prevent us from meeting accessibility standards (e.g., language, advanced search capability and tailored navigation) and from being able to easily and seamlessly keep our customers up to date. The complex CMS technology limits our ability to provide the experience our customers are expecting of us. We know that in 2022, 60% of traffic to our website was via a mobile device (tablets and mobile phones), but due to the inherent complexity of maintaining our webpages and the time required to make updates, many of our website pages are not enabled for a mobile friendly experience. Resources are instead dedicated to what should be low-cost, business-as-usual (**BAU**) activities that constrain the teams' capacity to address these issues.

With an inability to automatically scale capacity up or down, the infrastructure has been over provisioned to ensure the website will always be available in periods of peak demand. This means we will continue to fund the costs to keep our servers operating at the existing high-demand level, even during times of low demand for our website services.

Ongoing, ad-hoc maintenance and repair costs will continue to be incurred. To make even simple changes to the website, we will need to engage the CMS vendor. The limitations of the current CMS, which prevent us from automatically migrating tested changes in the test environment to production, also mean we need to continue to invest significant time and resources into manually reproducing changes in test into the production environment[22]. This creates errors and inconsistency between the environments.

[22] Test environment is also known as the Quality Assurance System (QAS) APand Production environment or Prod is the stage where the app is live and publicly available.

The additional overhead required to mitigate potential cyber security vulnerabilities will continue, as will the need to dedicate staff resources to the manual workarounds required to support the CMS, such as when email notifications fail.

5.4.2 Costs

Table 6 details the cost of maintaining the existing system.

Table 6: Option 0 – Costs by cost type ($m June 2022 real)

Cost type	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025 – 30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Capex	–	–	–	–	–	–	–	–	–	–	–	–
One-off opex	–	–	–	–	–	–	–	–	–	–	–	–
Recurrent opex	0.0	0.1	0.1	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	1.4
Total	0.0	0.1	0.1	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	1.4

5.4.3 Risks

The specific risks that relate to this Option are listed in the table below.

Table 7: Option 0 – Risk assessment summary

Risk consequence category	Risk description	Residual risk level[23]	Risk cost[24]
Safety – Harm to a worker, contractor or member of the public	• Information changes cannot be pushed quickly enough to the website in times of emergency (eg, bushfire, electrical safety power shutoff, etc).	Medium	
Performance and growth – Financial impact	• There will be an increase in the number of manual workarounds and manual processes required to support the CMS, as well as vendor support required, as more and more customers attempt to deal with us digitally. • The CMS cannot scale down when required.	High	$500K-$5M
Performance and growth – Non-compliance with regulatory, legislative and/or other obligations	• Cyber security breach occurs due to the vulnerability of the CMS and leads to non-conformance with ESCOSA obligations.	High	$2M – $10M
Customers – Failure to deliver on customer expectations	• Non-conformance to modern accessibility standards. • Navigation to information through mobile platforms is often hard or even impossible.	High	
Overall risk level		**High**	**$2.5M – $15M**

[23] The level of risk post current controls (ie after considering what we currently do to mitigate the risk).

[24] Estimated cost of consequence(s) to SA Power Networks or its customers in an event this risk eventuates over the NPV analysis period.

5.4.4 Quantified benefits

There are no financial benefits related to adopting this option.

5.4.5 Unquantified benefits

While there is no material capital expenditure required for this option, which may be seen as a benefit, this is offset by ever-increasing operating support costs and an increasing cyber security risk.

5.5 Comparison of options: Option 1 – Replacement of the current legacy solution with a modern website solution (Recommended)

5.5.1 Description

This option allows us to deliver on our Customer Charter commitment: *"We will make it easy for you to contact us when and how you want to…*". In this option, the legacy CMS and website will be replaced with a modern solution. It will enable all accessibility standards to be met and will allow customers to better engage and connect with us through the website from a device of their choosing in a secure manner.

The solution will include modern CMS capabilities, allowing us to meet Web Content Accessibility Guidelines. It enables us to create a website that simplifies customisations, updates and modifications to it; in addition, it allows our customers to interact with us easily, with strong cyber protections. It will significantly improve the efficiency with which the website can be created and managed.

By providing the software to significantly improve the website's creation and management, as well as enabling an appropriate level of governance, it will allow our business users to author and publish content in a way that better meets customers' needs.

With this solution, customer needs will be considered from the very foundational architecture. This will allow us to meet WACG and enable all our customers to positively interact with us and our website, whether they have a preference or a need (19% of South Australia's population lives with a disability per SA Health records[1]), for additional accessibility support. It will also enable a mobile-friendly experience when accessing any pages on the site.

The added functionality and useability of this CMS will allow us to capture higher quality customer data and provide greater support for decision-making for our customers and our business.

The cloud-based CMS described in this option will have the capability to consolidate the many forms accessible on our website used for collecting customer information and service requests. This will remove the current exhaustive process of manually extracting information from these forms by utilising a single management system with improved workflow capability. We will also enhance the level of governance and control over updates and content, as well as significantly improving the cyber risk profile of the website and maintaining that profile over time.

A modern cloud-based server platform will allow us to automatically scale up capacity when demand increases (such as in response to storm events, bushfires, flooding or similar major events) and scale down in periods with lower demand, reducing our operating costs, as well as providing a consistent experience to our customers. Further efficiencies will be gained by not having to rely on vendor support to update the website, which currently comes at significant cost in time and money.

This option delivers on all our immediate needs in a cost-effective manner while still enabling us to extend capability in line with Option 2 as our customers' needs and expectations grow into the future. Therefore, we recommend Option 1.

5.5.2 Costs

Table 8: Option 1 – Costs by cost type ($m June 2022 real)

Cost type	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025 – 30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Capex	–	–	0.1	0.3	–	0.3	–	–	–	–	–	0.3
One-off Opex	–	–	1.2	0.9	–	2.1	–	–	–	–	–	2.1
Recurrent opex	0.0	0.1	0.1	0.1	–	0.3	–	–	–	–	–	0.3
Total	0.0	0.1	1.4	1.3	–	2.8	–	–	–	–	–	2.8

5.5.3 Risks

The specific risks that relate to this option are listed in the table below. This option mitigates the current state risks by providing a modern CMS designed to seamlessly support access by all our customers through an enhanced experience, while also significantly improving our cyber security and the efficiency of our internal processes.

Table 9: Option 1 – Risk assessment summary

Risk consequence category	Risk description	Residual risk level[25] (Option 1)
Safety – Harm to a worker, contractor or member of the public	• Information changes cannot be pushed quickly enough to the website in times of emergency.	Low
Performance and growth – Financial impact	• There will be an increase in the number of manual workarounds and manual processes required to support the CMS as well as vendor support required as more and more customers attempt to deal with us digitally. • The CMS cannot scale down when required. • Integration volume and complexity will complicate SA Power Networks' technology landscape.	Low
Performance and growth – Non-compliance with regulatory, legislative and/or other obligations	• Cyber security breach occurs due to the vulnerability of the CMS. • Non conformance with ESCOSA obligation.	Low
Customers – Failure to deliver on customer expectations	• Non-conformance to modern accessibility standards. Navigation to information through mobile platforms is often hard or even impossible. • Current IT and Digital Channels team resources lack expertise in the CMS software. • By opening up content authoring and publishing to a wider group of business users, we may lose control and governance over what is being published on the website.	Low
Overall risk level		**Low**

[25] The future level of risk once treatments proposed in this option have been implemented.

5.5.4 Quantified benefits

The quantified benefits of Option 1 over the 10 years of regulatory periods 2025–30 and 2030–35 include:

Cost savings

- Net reduction in the annual licence, maintenance and hosting costs from using a new, modern platform that enables us to automatically scale up and down website capacity with demand ($1.24 million).

Cost avoidance

- Avoidance of the increase in staff time spent on customer calls as the ability of customers to self-serve the information from the website will reduce the need to call SA Power Networks. This reduction offsets the expected increase in call volumes due to network activity and increased market complexity ($1.94 million)
- Avoided increase in costs that would be incurred under the Option 0 Base case ($1.43 million)
- Avoidance of a future technical debt overhead from reliance upon legacy systems ($0.71 million)
- Reduced staff and customer time in submitting and responding to written enquiries ($1.33 million)
- Reduced SA Power Networks staff effort, across IT and the business, dedicated to the effort of supporting customer engagement through the website ($0.54 million includes Digital Channel team, form maintenance and cyber security)

Customer benefit

- Reduction in the time customers spend on calls with SA Power Networks as they can easily navigate the website and source information themselves ($0.84 million)
- Reduced customer time in submitting and responding to written enquiries ($0.41 million)

Table 10: Option 1 – Benefits by expenditure type ($m Jun 2022 real)

Cost type	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025 – 30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Cost savings	–	–	–	0.2	0.2	**0.4**	0.2	0.2	0.2	0.2	0.2	**1.2**
Cost avoidance	0.0	0.1	0.1	0.4	0.5	**1.2**	0.7	0.8	1.0	1.1	1.1	**5.9**
Customer benefit[26]	–	–	–	0.0	0.1	**0.1**	0.1	0.2	0.2	0.3	0.3	**1.2**
Risk monetisation	–	–	–	–	–	**–**	–	–	–	–	–	**–**
Total	**0.0**	**0.1**	**0.1**	**0.6**	**0.8**	**1.7**	**1.0**	**1.2**	**1.4**	**1.5**	**1.6**	**8.4**

5.5.5 Unquantified benefits

Option 1 delivers a variety of benefits. We will have the ability to meet accessibility standards, providing wider accessibility for customers across desktop and mobile devices, and the ability to provide up-to-date information to customers.

This option enables content authoring and publishing by business users that is tested and approved along its migration to production environment, and we will significantly reduce security vulnerabilities to cyber-attack.

[26] Distinguishing the business benefits from direct benefit to customers, calculated as Customer Value of Time, which is consistent with submissions by other DNSPs such as CitiPower, Ausgrid, and Endeavour Energy.

5.6 Comparison of options: Option 2 – Replacement with modern website and advanced capabilities

5.6.1 Description

The solution will combine the capability of a CMS with the ability to build and design a website that will simplify customisations, updates and modifications to the website, and allows our customers to interact with us easily and seamlessly, maintaining consistency across the channels they interact with, such as website, phone, or a mobile application. It will enable advanced website capabilities, such as campaign management.

We will use our CMS to integrate content and data across a variety of systems, portals and communication channels, in addition to our website. This will enable us to provide a more comprehensive digital experience for our customers, as we will be able to integrate content and data across any system, software or website. Our customers will have personalised, seamless experiences across all of our platforms, including the website, as all platforms will leverage the same data and speak to one another.

The integration of our CMS to platforms beyond the website will also allow us to deliver highly effective and efficient campaign management and social media content, as we only need to publish material once and it can be shared across all relevant platforms in a consistent manner. This is important in time-sensitive emergencies, such as bushfires and floods. In conjunction with integrated portals to the CMS, this new CMS capability will allow us to capture a wider variety of customer data that we can use to inform decision-making across all our platforms and better meet our customers' needs.

This solution will also allow us to manage the whole digital customer experience from one platform and automate changes for easy workflows that allow us to enhance the governance over website changes in a systematic way. This solution will be able to support the consolidation of customer portals and/or the future development of an SA Power Networks mobile app through the use of application programming interfaces (**APIs**) to transfer data to and from the CMS.

This solution will play a significant role in us being able to achieve our strategic vision of providing our customers with a complete digital experience.

For this solution to deliver the full range of benefits noted above, it requires an upgrade/replacement of the current CRM as a new repository/single source of truth for customer data and the consolidation of our existing customer portals onto a single platform. These are further described in separate business cases.

5.6.2 Costs

Table 11: Option 2 – Total cost by cost type ($m June 2022 real)

Cost type	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025 – 30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Capex	–	–	0.2	0.3	–	0.4	–	–	–	–	–	0.4
One-off Opex	–	–	1.5	0.7	–	2.2	–	–	–	–	–	2.2
Recurrent opex	0.1	0.2	0.7	0.7	0.7	2.4	–	–	–	–	–	5.7
Total	0.1	0.2	2.3	1.7	1.7	5.0	–	–	–	–	–	8.4

5.6.3 Risks

This option mitigates the current state risks by providing a modern CMS designed to seamlessly support access by all our customers through an enhanced experience, while also significantly improving our cyber security and the efficiency of our internal processes. The specific risks that relate to this option are listed in the table, below.

Table 12: Option 2 – Risk assessment summary

Risk consequence category	Risk description	Residual risk level[27] (Option 2)
Safety – Harm to a worker, contractor or member of the public	• Information changes cannot be pushed quickly enough to the website in times of emergency.	Low
Performance and growth – Financial impact	• There will be an increase in the number of manual workarounds and manual processes required to support the CMS, as well as vendor support required, as more and more customers attempt to deal with us digitally. • Integration volume and complexity will complicate SA Power Networks' technology landscape. • Lack of resourcing and expertise to manage increased number of channels.	Medium
Performance and growth – Non-compliance with regulatory, legislative and/or other obligations	• Cyber security breach occurs due to the vulnerability of the CMS. • Non-conformance with ESCoSA obligation.	Low
Customers – Failure to deliver on customer expectations	• Non-conformance to modern accessibility standards. • Navigation to information through mobile platforms is often hard or even impossible. • Current IT and Digital Channels team resources lack expertise in the CMS software. • By opening up content authoring and publishing to a wider group of business users, we may lose control and governance over what is being published on the website.	Low
Overall risk level		**Medium**

5.6.4 Quantified benefits

This option includes all of the benefits as stated in Option 1, namely:

- With a cloud-based CMS, we are able to automatically scale up when demand increases and scale down in periods of low demand.
- We can reduce the level of vendor resources required to maintain the website with this option, as well as the effort our resources across IT and business dedicate to supporting customer engagement through the website.
- By consolidating all forms within a single form management system, it will improve ease of data collection and extraction.
- A modern CMS will significantly reduce the risk of security vulnerabilities and the growing threat of cyber-attack.

[27] The future level of risk once treatments proposed in this option have been implemented.

Table 13: Option 2 – Benefits by expenditure type ($m June 2022 real)

Cost type	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025 – 30	2030–31	2031–32	2032–33	2033–34	2034–35	Total 2025–35
Cost savings	–	–	–	0.2	0.2	**0.4**	0.2	0.2	0.2	0.2	0.2	**1.2**
Cost avoidance	0.0	0.1	0.1	0.4	0.5	**1.2**	0.7	0.8	1.0	1.1	1.1	**5.9**
Customer benefit[28]	–	–	–	0.0	0.1	**0.1**	0.1	0.2	0.2	0.3	0.3	**1.2**
Risk monetisation	–	–	–	–	–	**–**	–	–	–	–	–	**–**
Total	**0.0**	**0.1**	**0.1**	**0.6**	**0.8**	**1.7**	**1.0**	**1.2**	**1.4**	**1.5**	**1.6**	**8.4**

5.6.5 Unquantified benefits

This option delivers significant benefits to our customers. While this option includes all of the benefits as stated in Option 1, it has the addition of providing a greater degree of flexibility in the build and design of the CMS, with the ability to provide a complete omnichannel experience.

This allows us to provide a personalised experience and meet accessibility standards across desktop and mobile devices.

This CMS also allows trusted partners to publish approved content to the CMS without any delays.

[28] Distinguishing the business benefits from direct benefit to customers, calculated as Customer Value of Time, which is consistent with submissions by other DNSPs such as CitiPower, Ausgrid, and Endeavour Energy.

6. Deliverability of recommended option

6.1 Customer Technology program

This Website Replacement project forms part of the Customer Technology Program of work. The program is comprised of an integrated set of six initiatives designed to replace or upgrade a number of our core customer systems. This will enable us to deliver the expected long-term technology capabilities needed to maintain current service levels, meet the increases in customer demand as a result of the energy transition, as well as our overall increase in network activity, and to do so in a secure cost-effective manner. The key benefits are:

- **For our customers:** to easily and equitably access information, make requests and resolve enquiries with SA Power Networks.
- **For our employees:** to efficiently and quickly manage and respond to customer requirements.

This program is summarised in Figure 3. We expect this program will deliver significant avoidance and time-saving benefits to customers.

The program assumes a progressive build of capabilities over time. This website replacement provides foundational secure and easy-to-use capabilities through which customers will access other capabilities from the other services.

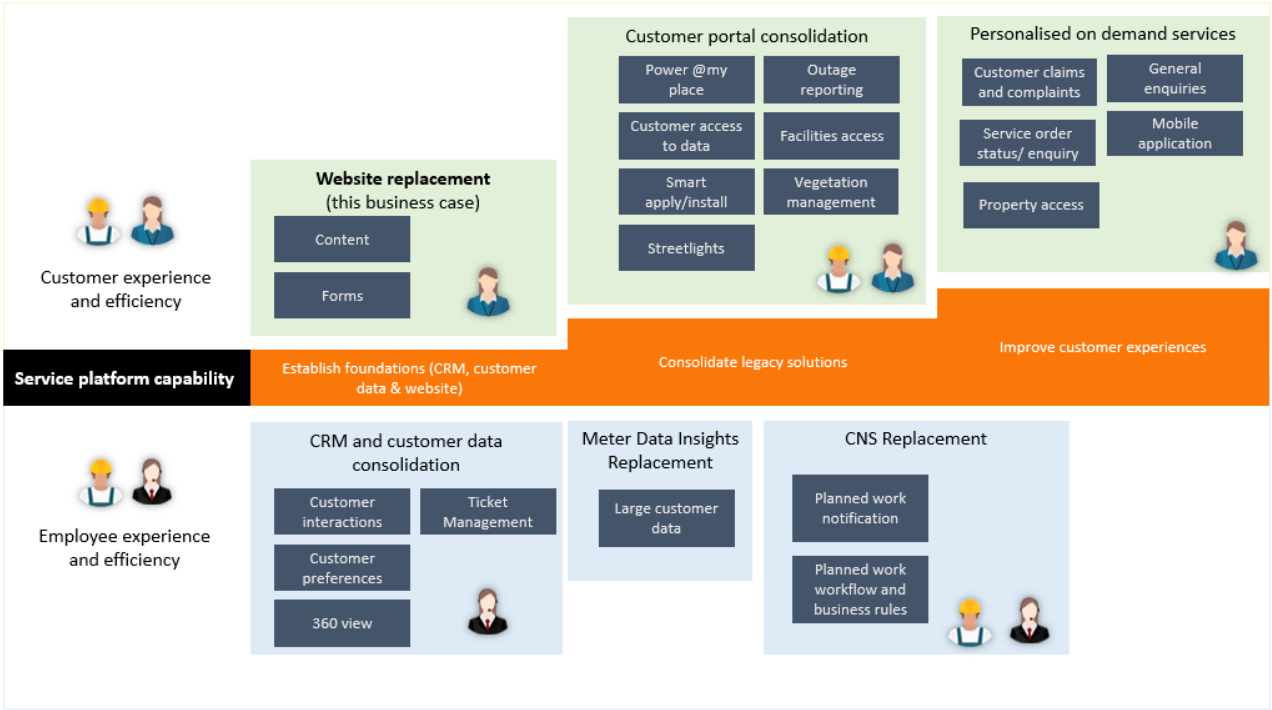


Figure 3: Proposed 2025–2030 Customer Technology program

The delivery approach assumes shared project resources across the Customer program (program manager and pool of skilled delivery FTE, including architects, business analysts, developers and testers). This approach avoids ramp-down/ramp-up costs and supports a lower cost/more efficiency delivery. This approach is consistent with the program delivery methodology used for similar projects at SA Power Networks. If a program approach is not adopted, the efficiency opportunity is missed, resulting in an estimated increase of 15-20% in costs for this replacement.

Technology solutions for websites are very mature and have been implemented in many thousands of sites worldwide, with mature conversion routines and processes, and skilled resources. Therefore, we do not expect any material delivery risk associated with this project.

7. How the recommended option aligns with our engagement

7.1 Alignment to customer expectations

7.1.1 Focused Conversations

The full Customer program was discussed during the customer experience and interaction Focused Conversation workshop in September 2022. Three scenarios were presented to six groups of customer representatives and advocates (18 people):

- **Scenario 1 basic self-service** – the base scenario and represented "as is" no change scenario.
- **Scenario 2 customer system replacement and consolidation** – this scenario was composed of all the projects within the Customer Technology Program involving replacements and upgrades (including the CRM and customer data replacement)– reflecting what needs to be done to maintain our existing levels of customer service in a rapidly transitioning energy environment.
- **Scenario 3 digital customer experience uplift** – this scenario added significant customer experience and digital channel improvements – reflecting 'new value' for customers.

The customer representatives were presented with details and the pricing impacts for each scenario (outlined above). Following detailed conversations, four of the six groups strongly supported Scenario 3, and two of the groups supported Scenario 2 as well as parts of Scenario 3. Hence Scenario 3 was supported by majority of the participants.

Specific comments and discussion items relevant to the website replacement were:

- *The website is a powerful way for customers to easily receive information from SA Power Networks, consideration should be applied to eliminating the need to login where this makes sense.*
- *A lot of the services are not only disjointed but they are also SA Power Networks-centric and do not consider the customer's experience.*
- *Accessibility is very important, especially at a time of significant change; you need to meet accessibility guidelines as a minimum.*
- *Some of the interfaces should be redesigned to be much more customer-centric.*
- *Ensure you have a customer-centric design and involve customers in the design to make it simple and easy.*[29]

7.1.2 People's Panel

Given the strong support from the Focused Conversation, Scenario 2 was presented as 'for information' to the People's Panel so they had an understanding of the costs and bill impacts. The People's Panel was asked to discuss and provide input to Scenario 3. This is discussed in the Personalised on Demand Services Customer Technology program business case.

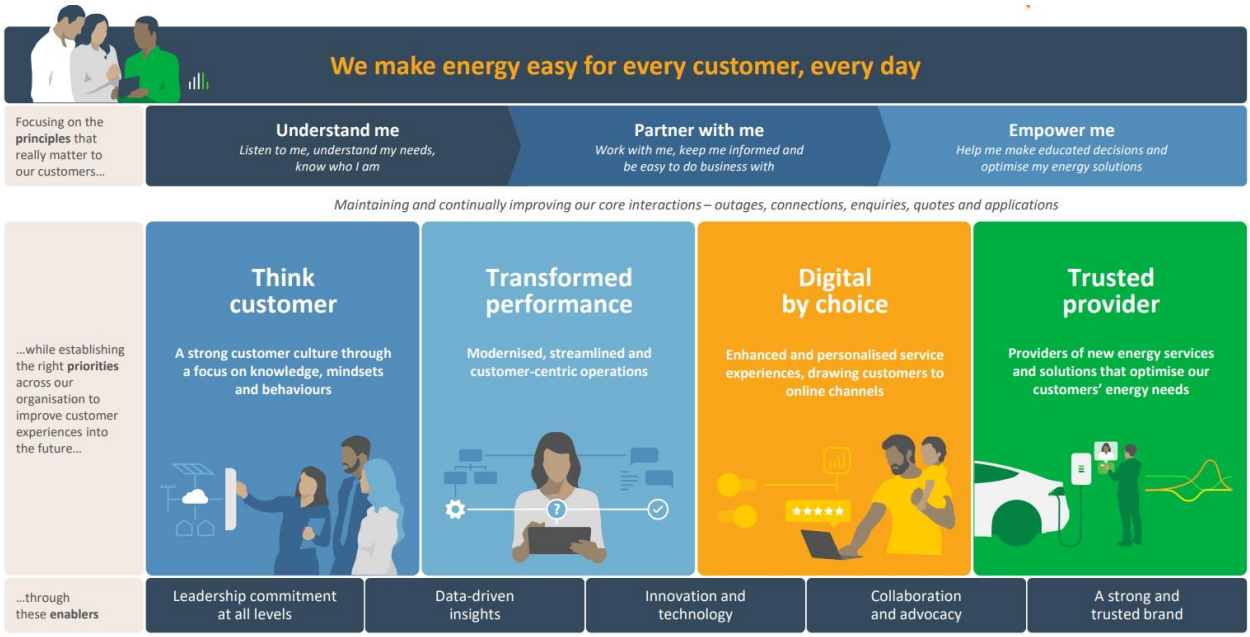
[29] Customer Experience and Interactions | Talking Power

8. Alignment with our vision and strategy

We provide services for 1.7 million South Australians, and this recommended website replacement supports our Customer Strategy 2022–2026. This initiative will support us to deliver our priorities to 'transform performance' by modernising and streamlining customer-centric operations and, being 'digital by choice', enhancing and personalising service experiences, drawing customers to online channels. This website replacement will specifically support providing consistent experiences across our contact channels so we can provide customers with choice in how they interact with us. We can ensure equity of access and experience for all our customers.

We understand the future of energy across Australia is progressing at an extraordinary rate. We are thinking and planning ahead for what this world of new technologies, changed community expectations and innovative energy services will hold, evidenced in our Customer Strategy[30], as summarised in Figure 4.

Figure 4: Customer Strategy 2022–2026 on a page



Through our Customer Charter[31], we have made the commitment to our customers that "*we will keep you informed and be easy to deal with*" and that '*we will make it easy for you to contact us when and how you want to…'*. These expectations of customers were more clearly articulated to SA Power Networks through extensive qualitative and quantitative research that occurred across the SA Power Networks customer base in late 2021.

[30] Customer Strategy 2022–2026

[31] https://www.sapowernetworks.com.au/public/download.jsp?id=10324#:~:text=At%20SA%20Power%20Networks%20we,supply%20point%20on%20your%20property.

9. Reasonableness of cost and benefit estimates

9.1 Cost estimates

The proposed costs for each option were estimated through a detailed project cost model that was structured according to SA Power Networks' standard IT project methodology. This approach structures an IT project into six phases that are further broken down into a total of 20 sub-phases, which are then used to plan and cost the project. (Refer Table 14)

Table 14: Structure of SA Power Networks IT project methodology

Phase	Sub-phase
Phase 1 – Planning, project management and coordination	Planning, project management and coordination
Phase 2 – Feasibility, innovation and POCs	Feasibility, innovation and POCs
Phase 3 – Develop and plan	Plan
	Requirements
	Business case
	Vendor selection
Phase 4 – Implement – design and architecture	Implement – Design and architecture
Phase 5 – Implement – build and test	Software licensing (12-month upfront purchase)
	Hardware infrastructure changes
	Client device purchases
	Development
	Configuration
	Integration
	Data conversion and migration
	Testing
Phase 6 – Implement – deploy	Training delivery
	Training materials and preparation
	Warranty
	Change management
	SME backfill

The nature of each project was flagged as to whether it was to be based on a software-as-a-service solution or was to be an on-premise implementation. This ensured that the modelling resulted in the appropriate accounting treatment of the expenditure – as operating or capital expense.

The effort required for the specific roles relevant to each phase of the project (eg, project manager, architect, developer, tester etc.) was estimated based on our staff and our external consultants' experience of similar past projects in SA Power Networks and at other organisations. This effort was split according to our standard internal staff/external services mix of 20% internal staff and 80% external services and costed using our standard IT cost estimation methodology and standard resource rate card.

Where possible, external expenses, such as licence fees, were based on actual quotes, published licence fees/rates etc. or market research[32]. In other cases, the experience of our staff and our external consultants of the costs incurred in similar projects, both at SA Power Networks and at other organisations, was used to provide a reasonable estimate of the costs. All costs were initially calculated bottom-up and then validated/refined with top-down analysis. Cost worksheets are included as an attachment.

[32] SAPN-DXP Market scan results (v2.0) – BDO 2021

9.2 Benefit estimates

An extensive and iterative process involving business and IT representatives was undertaken to define a set of reasonable benefits for this project. A summary of the process undertaken, and the key benefit types identified, is shown in 9.2.1.

This process aligns with our value framework and our ICT forecasting methodology. The use of factual historical data and future forecasts that were derived, where possible, from external sources, such as AEMO, ensures an industry-best-practice approach that meets AER and community expectations and results in a justifiable and reasonable estimate of the benefits. Where relevant, we have undertaken sensitivity analysis to understand the degree to which the benefits vary with changes in the key assumptions, to ensure the robustness of the calculations.

9.2.1 Benefit estimation process overview

Avoiding increases in costs incurred under Option 0 – BAU

- Estimates were made as to the projected increase in relevant costs under a BAU scenario (ie, without the proposed investment). These typically related to increases in Contact Centre call volumes and Short message service (**SMS**) communications resulting from the planned increase in network maintenance activity and the general increase in the complexity of the power environment being experienced by customers. The volume increases vary according to the call type/subject matter and therefore impact each technology/service area differently.
- These projected cost increases were initially used in costing Option 0, as they represent a cost of not undertaking any additional investment. Subsequently, when calculating and comparing the NPVs of the individual options, the part of these costs that was also being treated as a cost avoidance benefit was removed from the total benefits related to Options 1 and 2. This ensured that they weren't being double counted in the initial calculations.
- Following this, the NPV of Option 0 was set to NIL and instead treated as a cost avoidance benefit in the other options (refer 5.3.1). This ensures that these BAU cost increases were being properly reflected as an avoided cost increase from undertaking the proposed investment under Options 1 and 2.
- While the assessed options above would actually result in a number of the projected costs being reduced below their assumed FY25 baseline, to be conservative, we have capped any claimed benefits to the increase above that baseline. These benefits are therefore fully characterised as *avoidance of future cost increases*, rather than as a reduction in the existing cost base.
- The time saving from the reduced number of Contact Centre calls, including on-hold time etc, was also translated into a saving in time for the customer. This was costed using the average South Australian weekly earnings rate from the Australian Bureau of Statistics (ABS). (Note: this was NOT part of the Option 0 costs referred to above, as it does not represent a direct cost to the business).

Other cost savings and efficiency gains

- Several other cost savings and efficiency gains were identified through discussion with business representatives. Estimates of the impact of the investment on these cost areas were made based on actual current costs being incurred, the knowledge and experience of SA Power Networks business and IT staff, and advice from external consultants, as appropriate. In all cases, the benefits were assumed to start from the year following completion of the investment. The benefits were also 'phased in' such that the full calculated annual benefit took time to be realised, where appropriate to do so. For example, as take-up and use of the new website is projected to grow over time.
- A significant contributor to the benefits from this (and other) customer technology business cases is avoiding the future cost impact of 'Technical Debt'. Continuing to use and maintain old and out of date IT infrastructure and systems has significant implications for the future cost of not only that specific infrastructure, but of any maintenance and development activity in the IT environment. There is an increased cost overhead involved in the ongoing maintenance of compatibility and integration of these

old systems with any new developments, as well as with each other. This has been estimated, based on the level of dependency with key projects and systems in the IT portfolio. The benefit of avoiding this cost of technical debt has been phased in and apportioned between relevant projects, based on the estimated reusability of the capability delivered by each project.

Growth projections

- Wherever possible, when % growth projections were used in the modelling, these were derived from actual cost and volume trends, external data (eg, AEMO-projected EV take-up by customers) or future plans from the business (for example, increase in network asset maintenance). The advice of our external consultants and the experience of key business representatives were used to derive the likely future decreases in costs resulting from the investment. The growth factors used for this particular business case are summarised in Section 10.

Shared benefits

- Where an estimated cost avoidance/reduction was considered to result from the combination of more than one investment (eg, it required both the new website and consolidated portals), then the derived benefit was apportioned between the relevant projects according to their estimated contribution to achievement of those benefits.

10. Reasonableness of input assumptions

The following growth/trend assumptions have been used in developing the costs and benefits for this project:

Table 15: Key input assumptions and their impacts

Assumption	Source	Impact
Growth in Contact Centre calls related to unplanned outages.	Annualised compound growth of such calls from 2017 to 2022 based on actual call centre statistics and projected to continue.	Staff and customer time spent on calls to the Contact Centre.
Growth in Contact Centre calls related to general enquiries and 'other' matters.	Estimate by external consultants and business representatives.	Staff and customer time spent on calls to the Contact Centre.
Growth in website visitors (unique).	Annualised compound growth of such visits from 2017 to 2022 based on actual website statistics and projected to continue.	Increased traffic to various entry points via website and portals and expectations for customer experience to be consistent throughout.
Growth in written enquiries to the Contact Centre.	Calculated straight line trend of actual enquiries received from Q1 2021–22 to Q3 2022–23.	Staff and customer time spent on writing and responding to written enquiries to the Contact Centre.

These are considered the best available sources for each of the above assumptions and therefore represent a reasonable basis from which to calculate the cost increases that will be avoided under Option 1 and 2.

Other inputs to the benefit calculations are documented in Section 9, above, and in the benefit model.

11. Scenario and sensitivity analysis

The website replacement will benefit customers and staff by saving both parties time from calls, as customers can better navigate the website to find information needed and submit written enquiries and reports more efficiently online.

Table 16: Key sensitivity scenarios tested and the results

Scenario	Source	Test result
20% growth and decline in contact centre calls and website traffic volumes based on: • Increased work on the network and associated customer interaction rates • Unplanned outages based on severe weather events • Energy transition factors, including CER adoption demanding higher and more complex engagement with customers	Annualised compound growth of such calls from 2017 to 2022 based on actual Call Centre statistics and projected to continue. Annualised compound growth of such visits from 2017 to 2022 based on actual website statistics and projected to continue. Projected increase in customer uptake of energy resources based on AEMO's 2022 Forecasting Assumptions Update. SA Power Networks historic call data for customer energy resource related enquiries.	The adopted scenario resulted in $9.9 million in quantified benefits. Whereas the upper sensitivity scenario (+20%) showed $10.5 million in quantified benefits and the lower sensitivity (–20%) scenario yields $9.4 million in quantified benefits. The variation in benefits outcome is noticeable due to opex avoidance in the Contact Centre and customer time saved being substantial benefit categories, given the time and effort to manage call volumes. The testing demonstrated that there isn't a significant impact to the benefits. The benefits remain significantly higher than the cost to execute the program under the recommended option.

The impact of replacing ageing network assets was factored into calculations, projecting the unplanned outages that will cause an increased volume of calls to the Contact Centre. The increased workload in the Contact Centre and traffic to our website has also been modelled based on recent years with severe weather events exacerbating the dependence on the website for outage information. Therefore, the ease of updating and disseminating information via the website has been reflected by calculating the internal staff effort and savings in licensing and vendor resourcing to maintain the current platform.

Upper and lower sensitivity scenarios that added or deducted 20% of forecasted call volumes were tested across the main interactions that the Contact Centre currently receives, such as connections-related requests, meter reads, complaints, planned outages, unplanned outages, and Flexible Exports. The expected Contact Centre growth was modelled from the historic call volumes and lengths, with average handle times and hold times from the last five years (2017–2022) being reflected as a benefit in opex avoidance and customer time saved.

The scenario adopted also considers the energy transition, as CER adoption will demand a higher and more complex level of engagement with customers, which the website replacement will address, given the educational resources that would be available on the website.

Electric vehicle (**EV**) adoption numbers used in benefits modelling are based on the AEMO's 2022 Forecasting Assumptions Update[33], where the Step Change scenario was adopted with 45% average yearly growth of the number of EVs between 2025 and 2035. The Slow Change scenario from AEMO was tested and yielded a slightly lower benefits outcome, with 41% average yearly growth of the number of EVs between 2025 and 2035. Consequently, in a Slow Change scenario, there would be a lesser volume of Contact Centre calls and subsequent customer time saved with service-order enquiries relating to the installation of chargers and the connections process around EV ownership.

[33] 2022 Forecasting Assumptions Update

Appendix A – Cost models

Option 0:

Customer Technology Program estimate - No change.xlsm

Option 1:

Customer Technology Program estimate – Preferred.xlsm

Option 2:

Customer Technology Program estimate – Non-Preferred.xlsm

Appendix B - Base-year opex adjustment (preferred option)

The following provides a summary of the requested opex changes for the base year adjustment.

Category	Project/Business Case	2025–26	2026–27	2027–28	2028–29	2029–30	Total 2025 – 30
Base-year adjustment: Accounting treatment change	**Website Replacement (this business case)**	**-**	**-**	**1.2**	**0.9**	**-**	**2.1**
	Portal Consolidation	-	-	3.4	3.2	3.1	9.7
	MDI Replacement	1.7	-	-	-	-	1.7
	CRM Replacement and Customer Data Consolidation	3.7	5.1	0.5	-	-	9.4
	Personalised on Demand Services	-	-	-	1.4	6.0	7.4
	Total base-year opex adjustment	**5.5**	**5.1**	**5.1**	**5.5**	**9.1**	**30.3**

Accounting treatment change

Topic	Detail
Background	Accounting rule clarification in early 2021 confirmed that the costs of configuring and customising application software in a cloud-computing or SaaS arrangement should not be capitalised, with the business no longer having control over the asset. The impact for the website replacement project is switching from capex to opex as these products are more readily offered as SaaS solutions.
Request	A base-year opex adjustment of $2.1 million as a component of the overall Customer Technology Program adjustment of $30.3 million.

Appendix C – Risk assessment

				Current risk (Option 0)			Residual risk (Option 1)			Residual risk (Option 2)		
ID	**Risk scenario**	**Consequence description**	**Consequence category**	**Consequence**	**Likelihood**	**Risk level**	**Consequence**	**Likelihood**	**Risk level**	**Consequence**	**Likelihood**	**Risk level**
1	Information changes cannot be pushed quickly enough to the website in times of emergency.	• Customers impacted by flood or fire make decisions not in their best interest because information on the website is not available in time.	**Safety** – Harm to a worker, contractor or member of the public	3	3	Medium	3	1	Low	3	1	Low
2	There will be an increase in the number of manual workarounds and manual processes required to support the CMS, as well as vendor support required, as more and more customers attempt to deal with us digitally.	• Additional cost of in-house (rather than vendor) cyber vulnerability identification and rectification, with increased risk of unauthorised access. • We incur significant additional cost in vendor charges and internal staff resources to make often relatively simple changes.	**Performance and growth** – Financial impact	2	5	High	2	1	Negligible	2	1	Negligible
3	The CMS cannot scale down when required.	• Data centre costs will continue to rise.	**Performance and growth** – Financial impact	2	5	High	2	1	Negligible	2	1	Negligible
	Integration volume and complexity complicate the SA Power Networks technology landscape.	• Costs and time to deploy increase with the sophistication of integration required.	**Performance and growth** – Financial impact on margin or budget of project	2	1	Negligible	2	2	Low	2	3	Low

	Lack of resourcing and expertise to manage the whole omnichannel experience, for example app management and campaign management.	• Will increase cost and effort to deploy. • Appropriately skilled resources difficult to source, adding to delay and cost.	**Performance and growth** – Financial impact on margin or budget of project	3	1	**Low**	3	1	**Low**	3	3	**Medium**
4	Cyber security breach occurs due to the vulnerability of the CMS.	• Data breach of our CMS, giving cyber vectors opportunity to steal customer or business information. • Fines and penalties associated with the breach.	**Performance and growth** – Non-compliance with regulatory, legislative and/or other obligations	3	3	**Medium**	3	1	**Low**	3	1	**Low**
	Non-conformance to modern accessibility standards.	• Prevents a material percentage of our customers from accessing the information and facilities available on the website due to non-compliance with accessibility standards.	**Customers** – Failure to deliver on customer expectations	2	5	**High**	2	1	**Negligible**	2	1	**Negligible**
	Non-conformance with ESCOSA obligations.	• Breach of ESCOSA obligations and GSL penalties incurred.	**Performance and growth** – Non-compliance with regulatory, legislative and/or other obligations	2	5	**High**	2	1	**Negligible**	2	1	**Negligible**
	Current IT and Digital Channels team resources lack expertise in the CMS software.	• Website does not deliver on customer expectations.	**Customers –** Failure to deliver on customer expectations	2	5	**High**	2	2	**Low**	2	3	**Low**
	By opening up content authoring and publishing to a wider group of business users, we may lose control and	• Inconsistent messaging, creating confusion for our customers and inconsistent with the SA Power Networks brand.	**Customers –** Failure to deliver on customer expectations	3		**Negligible**	3	1	**Low**	3	2	**Low**

governance over what is being published on the website.													
Navigation to information through mobile platforms is often hard or even impossible.	•	The overall customer experience is negatively impacted.	**Customers** – Failure to deliver on customer expectations	2	5	**High**	2	1	**Low**	2	1	**Low**
			Overall risk level[34]			**High**			**Low**			**Medium**

[34] For each option, the overall risk level is the highest of the individual risk levels.