



Supporting
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Ann Shaw Rungie Capex Deep Dive Workshops report

2020-2025
Regulatory Proposal
July 2018



Capex Deep Dive Workshops

6 and 12 April 2018

Summary Report



July 2018

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1. Executive summary

As part of the comprehensive customer engagement program that is informing the development of its 2020-25 Regulatory Proposal, SA Power Networks (SAPN) held a series of workshops to explore some of the key components of its draft Regulatory Proposal (Draft Plan).

The purpose of the workshops was to share detailed information and discuss SAPN's preliminary plans with its consumer representatives and customers. The workshops were designed to enable SAPN to consider the feedback and views of consumer representatives while continuing to develop its Draft Plan, refining components and responding accordingly.

The following workshops were facilitated by independent facilitator Ann Shaw Rungie:

- Levels of Service – 21 November 2017
- Tariff Structure Statement – 19 March 2018
- Capital expenditure (capex) Part 1 – 6 April 2018
- Capital expenditure (capex) Part 2 – 12 April 2018
- Operating expenditure (opex) – 3 May 2018

All members of SAPN's Customer Consultative Panel (CCP) and Reference Groups (RG) were invited to attend all deep dive workshops, along with Australian Energy Regulator (AER) representatives and Consumer Challenge Panel (CCP14) members.

Following feedback from CCP14 members, the capex deep dives were spread over two days and modified to cover fewer topics to allow more time for discussion. Participants also wanted more open question times to assist with developing their understanding of complex topics and these were included.

This report summarises the presentations and discussions that took place at the capital expenditure (capex) deep dive workshops held on 6 and 12 April 2018. The objectives for these two workshops were to:

- Build understanding of SAPN's:
 - obligations
 - expenditure forecasting methodologies
 - environment and challenges
- Explore what customers and stakeholders value
- Seek feedback on preliminary capex plans to inform the Draft Plan
- Explore areas of stakeholder acceptance and areas that require further discussion.

Capex deep dive workshops

The capex discussions over the two days of the deep dives included the categories augmentation expenditure (augex), replacement expenditure (repex), customer connections and non-network.

Introduction to capex discussed four topics: customer connections and the non-network subcategories of fleet, property and information technology.

1. In the **customer connections** discussions, people wanted more detail about the cost to the customer, how costs are shared and they needed more explanation of SAPN's Connection Policy.
2. In the **fleet** discussions, a key question was why the forecast in this subcategory was up 20%. People felt they needed to understand the numbers to justify them.

3. In the **property** discussions, people wanted more information about the significant increase suggested and felt some independent feedback on industry benchmarks was required.
4. **Information technology** discussions and questions focussed on wanting to understand the big picture and the breakdown of the customer benefits. Costs were considered high compared to other utilities.

The asset replacement (repex) category discussed two topics: repex asset management and risk and proposed replacement expenditure.

1. In the **repex asset management and risk** discussions most people felt more explanation was needed. Two main issues were raised: that from a vulnerable customer point of view deferring expenditure to keep costs down was desirable, but also concern that the age of assets is continuing to be pushed out.
2. More explanation was also needed of the methodology of the **proposed repex expenditure** approach. The question was asked, how does life extension change the 'effective' age profile of a safe reliable network?

The network reliability presentation (part of augex) covered three topics: SAPN's approach to meeting reliability service standards, hardening the network against storms and investing in reliability for poorly-served customers.

1. Discussion about how SAPN's meets **reliability service standards** indicated concern about the use of the Australian Energy Market Operator's (AEMO) value of customer reliability (VCR) data, which they considered outdated. People also wanted to understand what synergies between capex programs could assist in maintaining reliability. This was a very high priority for customers.
2. In discussions about **hardening the network against storms**, over half of workshop participants supported investment, recognising that increased frequency of severe weather events is likely in future. They also questioned whether these costs could be covered in other capex programs.
3. In discussion about the investing in improving **reliability for poorly-served customers**, there was strong support for investment in this program. It was suggested, however, that more data on poorly-served customers should be collected to better inform decisions.

The bushfire mitigation program falls under the augex subcategory of safety and two main topics were discussed: managing bushfire start risk and SAPN's proposed investment to mitigate bushfire start risk.

1. While there was support for SAPN's approach **to managing bushfire start risk**, 46% of participants were uncertain and felt more detail needs to be provided. There was still some uncertainty about how the bushfire program fits in with other reliability spending.
2. In discussions about SAPN's proposal to **mitigate bushfire start risk**, about a third of participants supported the investment to mitigate bushfire start risk, including analysis modelling, but 45% were unsure and felt more work is needed. Some queried if this was different from regular maintenance.

Capex workshops category discussions – summary

Stakeholders were pleased to be involved in capex discussions but wanted more detail in many cases. SAPN will schedule further technical workshops, provide feedback to CCP and RGs, and provide follow up with factsheets and information as requested by participants.

2. Background

SA Power Networks (SAPN) operates a distribution network that stretches across South Australia, comprising thousands of kilometres of powerline and hundreds of substations.

Every five years SA Power Networks submits plans which outline its expenditure to the Australia Energy Regulator (AER) for assessment. The AER determines SAPN's revenue allowance under the National Electricity Rules.

As part of the comprehensive customer engagement program that is informing the development of its 2020-25 Regulatory Proposal, SAPN held a series of 'deep dive' workshops to explore some of the key components making up the Regulatory Proposal. The deep dive workshops are in the third phase of the 2020-25 Regulatory Proposal Customer Engagement Program.

In November 2017 Ann Shaw Rungie was appointed by SAPN as an independent facilitator to assist with the design and development of the agendas for the deep dive workshops, to facilitate the workshops and to provide an independent report of proceedings.

The workshop topics and dates are listed below:

- | | |
|------------------------------|------------------|
| • Levels of Service | 21 November 2017 |
| • Tariff Structure Statement | 19 March 2018 |
| • Capex Part 1 | 6 April 2018 |
| • Capex Part 2 | 12 April 2018 |
| • Opex | 3 May 2018 |

The deep dive workshops shared detailed information and discussed SAPN's preliminary plans with consumer representatives and customers. The workshops were designed to enable SAPN to consider the feedback and views of consumer representatives while continuing to develop its plans, refine them and respond accordingly.

All members of SAPN's CCP and RG were invited to attend all deep dive workshops, along with AER representatives and CCP14 members.

This report summarises the presentations and discussions that took place at the capex workshops held on 6 and 12 April 2018. A list of acronyms used in this report is included in Appendix 1.

2.1 Objectives for these workshops

The objectives for the two workshops were to:

- Build understanding of SA Power Networks'
 - obligations
 - expenditure forecasting methodologies
 - environment and challenges
- Explore what customers and stakeholders value
- Seek feedback on preliminary capex plans to inform the 2020-2025 Draft Plan
- Explore areas of stakeholder acceptance and areas that require further discussion.

3. Engagement process

These capex workshops were part of SAPN's 2020-25 Regulatory Reset Customer Engagement Program shown in Figure 1 below.

2020-25 Regulatory Reset Proposal Customer Engagement Program

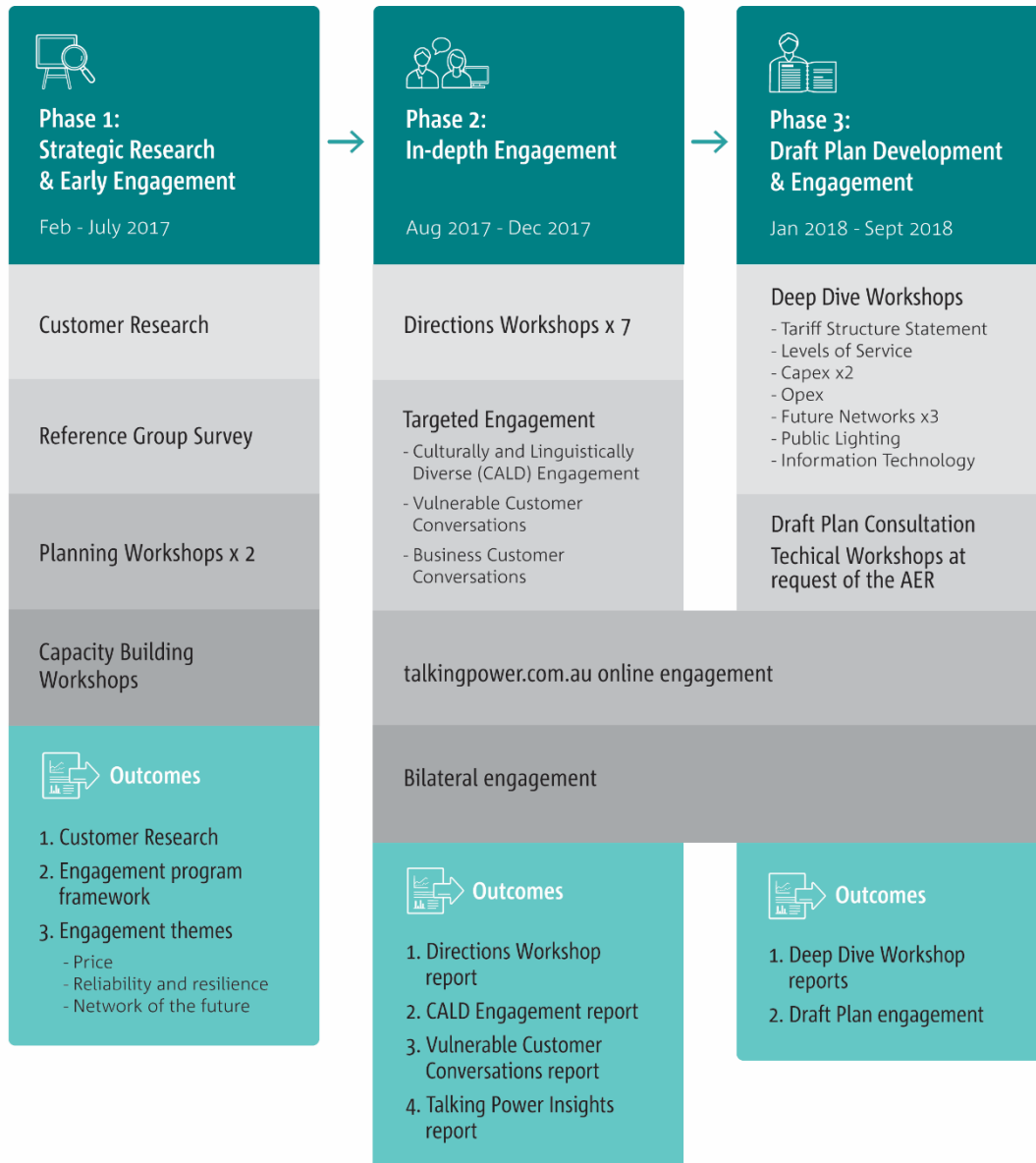


Figure 1: 2020-25 Regulatory Reset Proposal Customer Engagement Program

3.1 Developing the capital expenditure build-up

SAPN has used an iterative process for developing the 2020-25 capex forecast, including early planning and customer engagement during 2017. An initial forecast completed in November 2017, informed by the outcomes of early engagement, was used for these Deep Dive workshops. The forecast will be refined and updated based on feedback from these workshops.

It is anticipated that further refinement and planning, including consultation on the Draft Plan, will inform the final expenditure forecasts to be included in SAPN's Regulatory Proposal to be lodged with the AER in January 2019.

3.1.1 Approach to capital expenditure workshops

This section outlines the approach taken to prepare for the capex workshops and workshop facilitation.

The facilitator worked with the SAPN's Stakeholder Engagement Team and was involved with the development of the agendas for each of the deep dive workshops, facilitated each workshop; and subsequently provided an independent report of proceedings of each workshop.

The design of the capex workshops was influenced by learnings from previous Deep Dive workshops. In particular, SAPN received significant feedback after Capex Part 1 about too much detail being presented, with too many topics and not enough time for discussion. Participants also suggested that more open question times would assist with developing their understanding of complex topics.

The design for the capex workshops focussed on responding to these issues by reducing the number of technical presentations and increasing number of question and answer sessions, particularly between Capex 1 and Capex 2.

In terms of prior learning, RG members had the opportunity to participate in a range of capex discussions at RG meetings, as part of the reset engagement process, over the course of the previous year.

Before the workshops participants received supporting material, including pre-reading documentation, and at the workshops were provided with worksheets which included guiding questions for discussion. SAPN table facilitators recorded discussion and each table reported back to the room after discussion on each topic. Worksheets were completed by participants during the session or returned later to SAPN.

Summary data from both the recorded discussions and from the completed worksheets is included in each section of this report. Complete data sets are held by SAPN for more detailed review, as required.

3.2 Customer Consultative Panel and Reference Groups

SAPN has a consultative framework which consists of a CCP and four RGs. All CCP and RG members were invited to attend the deep dive workshops.

The CCP and RG framework include the following:

- Customer Consultative Panel (comprising a representative from each of the reference groups below, plus other consumer representatives)

- Renewables Reference Group
- Community Reference Group
- Business Reference Group
- Arborist Reference Group

Appendix 2 details the organisations which make up the membership of each of the RGs.

3.3 Who was in the room?

A total of 23 people attended the first capex workshop from SAPN's RGs, the AER, CCP14 members and invited guests. Sixteen SAPN staff also attended, as speakers and subject matter experts, including five table facilitators. The second workshop was attended by 22 stakeholders and 16 SAPN staff. The majority of the participants attended both workshops.

Attendance at the workshops is listed in Appendix 3.

Expectations

Before the technical presentations, participants were asked to consider their preliminary expectations for this workshop on a scale of 7 to 1, where 7 is a high expectation and 1 is low. The reason for discussing expectations is that expectations tend to influence behaviours and inputs, which in turn influence outcomes.

In these two workshops 77% of people rated their expectations between 5 and 7 (higher) on the first day, and 87% of people rated them higher on the second day.

The conversation about expectations at the start of the workshop then enabled a discussion at the end about whether expectations had been met or exceeded (see page 24).

4. Capital expenditure

As part of the regulatory process, every five years the AER approves a total capex allowance for SAPN in accordance with the expenditure areas detailed in Section 4.2. Not all categories were discussed; since this was a deep dive workshop, a smaller number of topics were explored more thoroughly.

4.1 Capital expenditure overview

Workshop participants were introduced to the regulatory building blocks to provide context for how capex impacts on revenue and prices.

If SAPN invests in new assets the costs are recovered through tariffs over the life of the assets, until the investment costs are fully recovered, as shown in Figure 2 below. Capex adds to the Regulatory Asset Base (RAB). RAB multiplied by the Weighted Average Cost of Capital (WACC) = Return on Capital. SAPN also receives an allowance for depreciation which reduces RAB over the life of the asset. Figure 2 also shows the opportunities for customer engagement as part of this process.

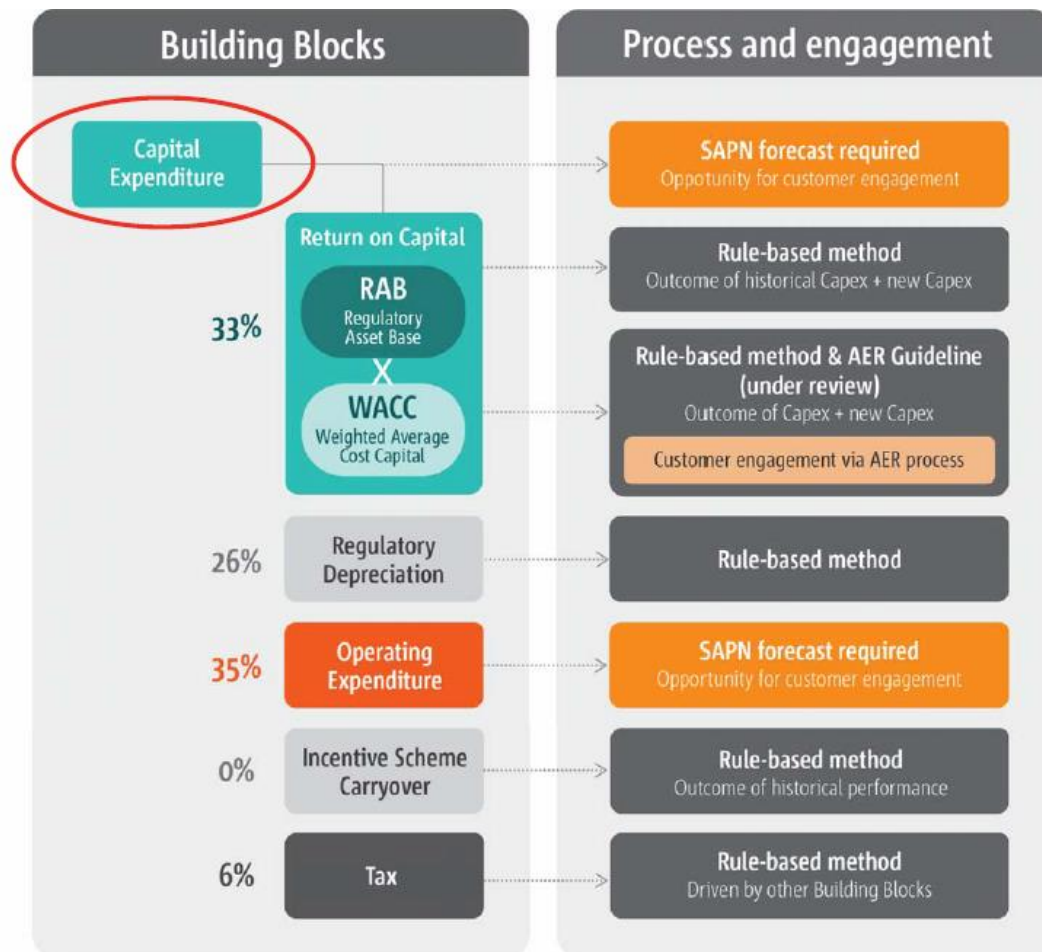


Figure 2: How capex impacts revenue and prices

4.2 Capital expenditure categories

Capex is made up of the following expenditure areas which are shown in the preliminary build up slide Figure 3:

- Asset Replacement (repex)
- Augmentation (augex)
- Customer Connection
- Non-Network
 - Information Technology (IT)
 - Fleet

Property

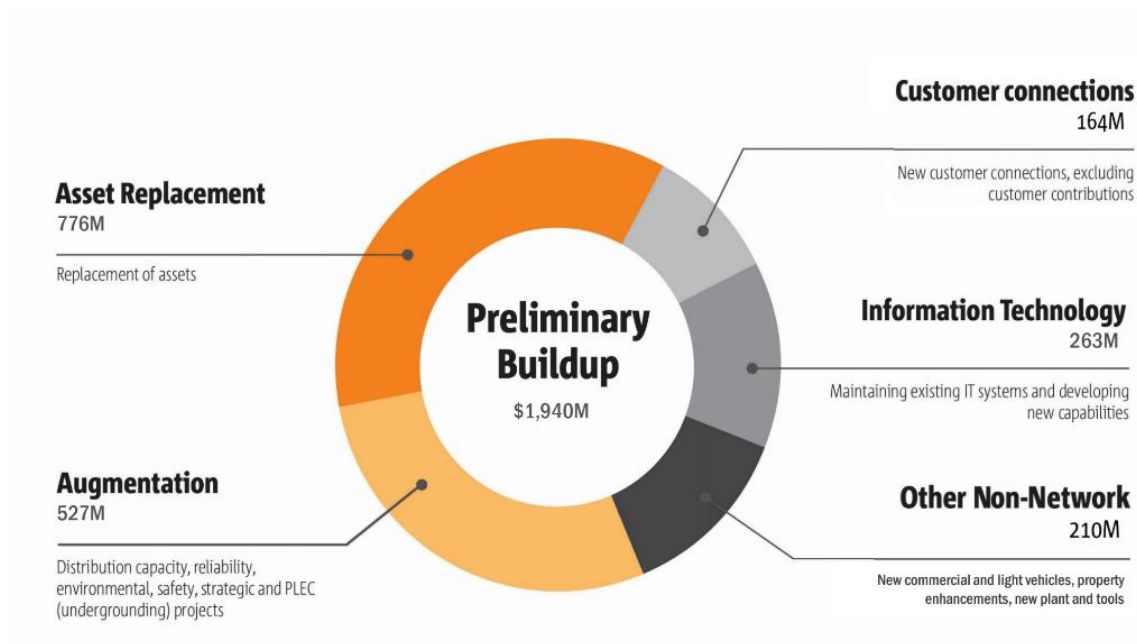


Figure 3: 2020 -2025 Preliminary capex build-up (\$2020)

4.2.1 Capex discussions

The capex discussions over the two days of the workshops included four capex topics, as indicated below:

- Introduction to capital expenditure (capex) - Capex Part 1 on 6 April 2018
- Asset replacement (repex) - Capex Part 1 on 6 April 2018
- Augmentation expenditure (augex) – network reliability - Capex Part 2 on 12 April 2018
- Bushfire mitigation program - Capex Part 2 on 12 April 2018.

Summary data from both the table discussions and completed worksheets is included in each section of this report.

4.2.2 Questions and discussion

Following presentations introducing capex and providing a capex overview, workshop participants spent time considering questions they would like answered by a panel session of SAPN's staff. There was significant discussion about underspent allowances in the past.

Key questions and issues included the following:

- Why was there less spend than you were allowed on repex and augex than currently? The underspend factors were not addressed clearly enough.
- The narrative of the “why” is important. Tell the community the story.
- How is capex influenced by this engagement vs asset management planning?
- The 1% increase above CPI looks like it is mainly due to capex as other building blocks aren't changing much...can't see why? How can you justify 1% above CPI, albeit a small increase?

4.3 Introduction to capital expenditure

Participants were provided a brief overview of capital expenditure categories:

Customer connection covers the net expenditure associated with additions, upgrades or alteration of the network to facilitate customer connection. It comprises gross expenditure less customer contributions, in accordance with AER approved Connection Policy.

Non-network expenditure supports building, maintaining and operating the distribution network and delivering services to customers. It covers fleet, property and Information Technology (IT).

4.3.1 Customer connections discussions

- Clarification is needed around the cost to the customer – is the connection policy a cost-effective way to manage this?
- Existing customers are subsidizing new connections.
- Need to better understand charges to a new customer connecting vs existing sharing of costs (explanations of policy are needed in forecast breakdown).

4.3.2 Fleet discussions

SAPN's fleet includes heavy and commercial fleet, such as elevated work platforms, cranes and light and passenger vehicles. Discussion after the presentation included the following.

- There is a significant underspend in fleet, is the capital cost of assets going down?
- If cars are getting cheaper why is forecast up 20%?
- Need the story behind the numbers to justify them.
- Where are we going in the future? Is solar linked to fleet procurement or electric vehicles or is it hydrogen fleets, in order to be seen as a leader?

4.3.3 Property discussions

- More information is needed on \$76m vs. \$49m – why is this needed?
- Spend on property – what is the value of the asset? What are you proposing to spend as a % of value of the asset?
- Needs narrative surrounding property. Need independent feedback on industry benchmarks on capex and opex vs. total property value.

4.3.4 Information Technology discussions

Information Technology (IT) discussion and questions focussed on efficiency and innovation, and how SA Power Networks compares to other utilities. Participants thought it was very important to identify customer benefits.

- Predicting IT innovation is really difficult. Regulatory reset period is 5 years but IT innovation lasts 2 years if lucky – so it is very challenging.
- What efficiencies are coming out of IT? eg field getting to outages more quickly. Show the numbers around IT efficiencies.

- What are the benefits to consumers in next period (eg customer systems – more information available; response issues in network; better management of assets – is that information available and where?).
- Need to know cost benefits and risks of moving to cloud – project specific. Spent \$308m, still spending – what's the big picture? Spent half a billion over 3 regulatory periods, for what?
- Capex vs. opex payoff? – “Can’t be \$300m to maintain the status quo. Explain the breakdown of benefits – where and how.
- There would be an advantage in seeing what other utilities are doing as well, that number (\$308m 2015-20) forecast is big compared to others at \$90m - what makes SA Power Networks different?
- From memory there was a significant increase in 2015 why isn't it reducing now? Would like to see the long-term trends.

4.4 Asset replacement

Network asset replacement (repex) includes replacement or refurbishment of network distribution assets to maintain an acceptable level of network safety and reliability. Repex investment is driven by risk assessment of the asset condition.

This session included presentations and discussions about repex asset management and proposed replacement expenditure.

4.4.1 Repex – asset management and risk

Following a presentation of overview material, workshop participants discussed their views at their tables and filled out worksheets which asked them to consider their views about SAPN's approach to asset management and risk on a sliding scale using: *1 needs more work, 3 uncertain, or 5 feels about right*.

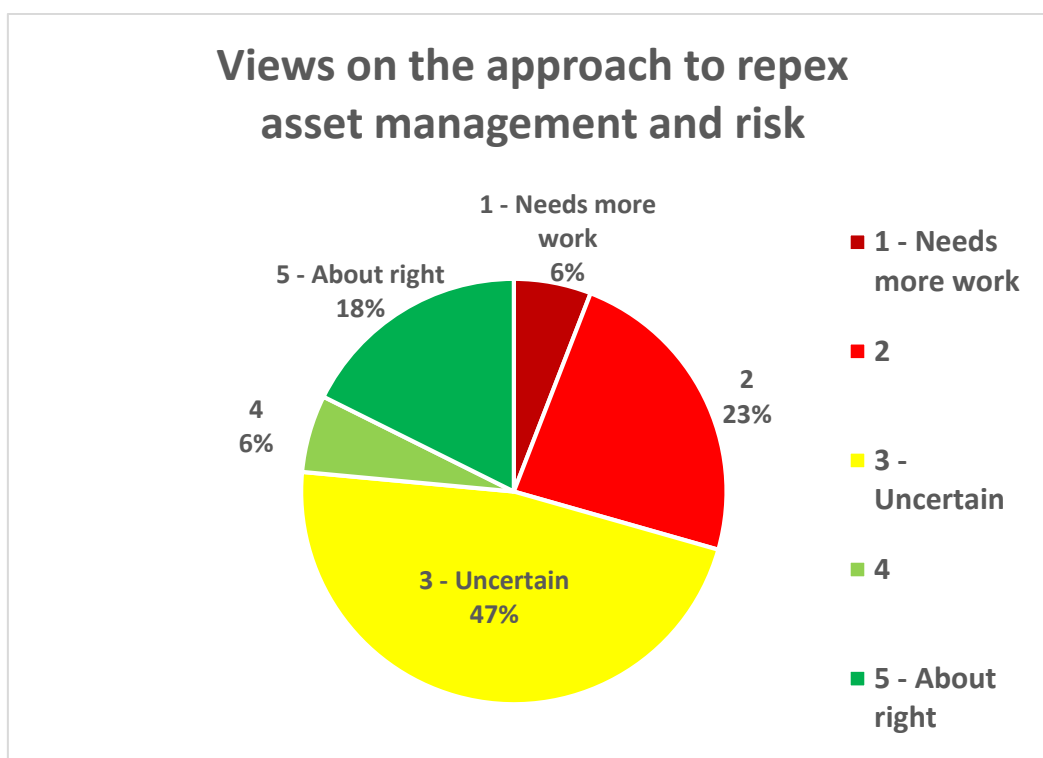


Figure 4: Repex asset management and risk

Most participants were unsure or felt the approach needed more work. Over 20% considered the approach to be about right. Two main issues were raised: that from a vulnerable customer point of view deferring expenditure to keep costs down was desirable, but also concern that the age of assets is continuing to be pushed out.

Defer expenditure to keep costs down

- From a vulnerable customer point of view, the approach should be to keep repex down now, with the view that it may not have to be spent ever, is good.
- Need to know how this will affect network costs to consumer principal. Good to replace as needed. Strong support for deferral of expenditure where practical.

Need more information

- Some work on communication to wider stakeholders is needed as part of 'needs more work'.
- At a high level, seems to be reasonable approach but need a lot more information to satisfy ourselves that it is necessarily the right approach, particularly in relation to Maintenance Replacement Value modelling.
- There is logic behind the proposal; however the explanation needs some work. The impacts need to be more clearly communicated, regarding the risk/return trade-off.
- This is a hard process for consumers; there is an inherent incentive to inflate expenditure to make your incentives.

Concern about ageing assets

- I don't understand how assets are still so old considering the increasing repex spend over the past periods.
- Too simplistic to say pushing it out to future – intergenerational risk/theft vs. investment are now competing. This 5 years is a critical transition, no one knows where or how it will affect the network – it is extremely challenging.
- Every time we have regulatory proposal, ageing assets and lowering assets – still pushing average age out. Concerned about possible price shock later on.

After further discussion at their tables, people participated in a 'stand up scale', where they rated their views according to numbers placed on the floor.



In this photo, rating 1 is on the left and rating 5 (a greater degree of confidence) is on the right.

4.4.2 Repex – proposed expenditure

Following a presentation of overview material, workshop participants discussed their views at their tables and filled out worksheets which asked them to consider their views about SAPN's proposed repex forecast and expenditure using *1 needs more work, 3 uncertain or 5 feels about right*.

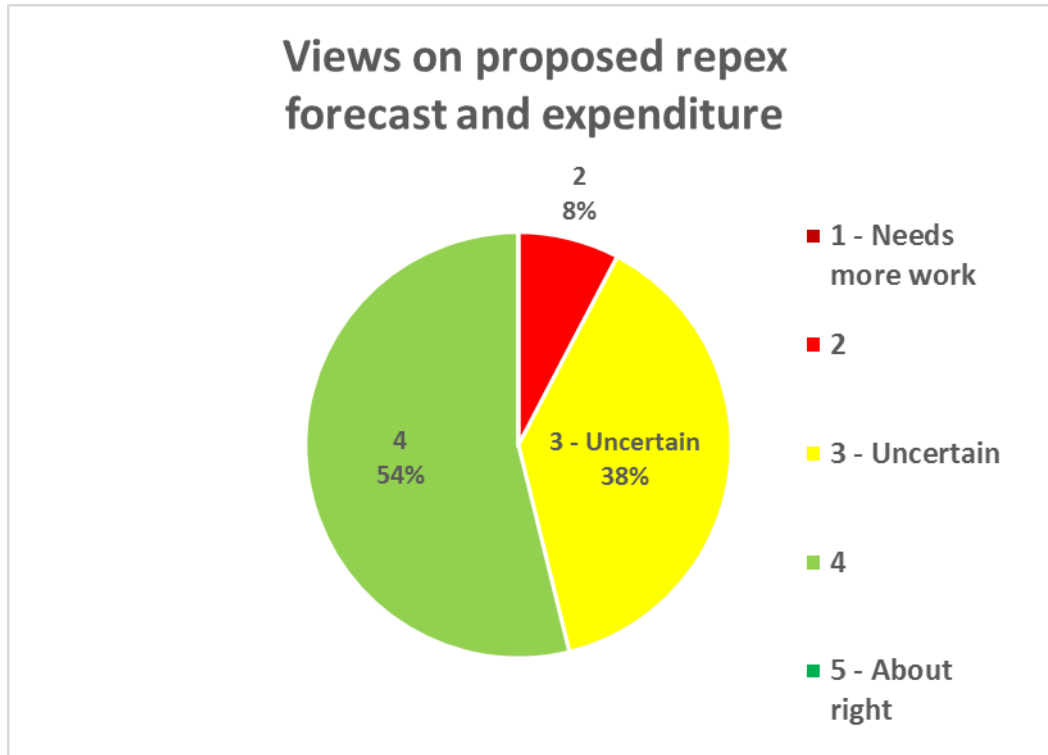


Figure 5: Repex forecast and expenditure

A majority of participants, over half, thought SAPN's approach was on the right track. However, 38% were unsure. Key issues raised were: how life extension changes the 'effective' age profile of the network and queries about modelling methodology.

Impact of life extension

- Life extension - how does that change 'effective' age profile of a safe reliable network?
- It would be interesting to see 'age' comparisons with similar DNSP for poles and circuit breakers. Concern about 'approaching hazardous'.
- Methodology is defined and plausible. Unit costs are not explained and can be difficult to predict. Costs are an important component of total costs and more explanation is required.

Modelling methodology

- Not feeling like things are hidden, but no adequate explanation of the methodology

- More information is required on risk assessments / % re major assets classes.
Some confusion in understanding re impact of change in modelling methodologies.
- Modelling needs further explanation. Need to be clear how SAPN will avoid the stop/start of previous period. 'Do nothing' is not explained well and is not an appropriate reference point for comparison - better to use or at least include life extension activities including those identified in previous session.

After further discussion at their tables, people participated in a 'stand up scale', where they rated their views according to numbers placed on the floor.



In this photo, rating 1 is on the left and rating 5 (a greater degree of confidence) is on the right (numbers partly obscured).

4.5 Capex Part 2 - Responding to questions

The final session of Capex Part 1 was a question and answer (Q&A) session with a panel of the key SAPN presenters from earlier in the day. This session, along with evaluation of the Capex Part 1, helped shape the agenda for Capex Part 2. In particular, the agenda was planned to cover fewer topics and have more Q&A sessions.

At the beginning of Capex Part 2, a quick recap of Capex Part 1 was presented, along with

- A summary of issues raised in Capex Part 1
- How SAPN proposed to respond, both during Capex Part 2 and in the future
- How the Capex Part 2 session was adapted, based on feedback.

4.5.1 Summary of issues raised in Capex Part 1

SAPN's Manager Stakeholder Engagement presented a summary of issues raised and comments on the Capex 1 workshop process.

- Why did SAPN underspend allowances in the past, yet is asking for more money in some categories in 2020-2025?
- Want to understand why your performance is good, but you are asking for an increase in repex?
- More detail is needed on fleet, property, information technology (IT) and customer connections.
- Unsure about SAPN's approach to managing risk and want to understand it better, however generally agree with deferring investment where practical.
- Feel reasonably comfortable with SAPN's approach to repex forecasting, but want to understand it better and see all the category forecasts within repex.

Workshop process issues

- People want to spend more time on fewer issues
- More detail, narrative and supporting detail is required
- Some people require deeper engagement on some topics
- Question and answer (Q&A) forums work well

4.5.2 SA Power Networks' responses

- The underspend issue was addressed in Q&A session in Capex Part 2
 - More information was provided to show trends
 - More time discussing the narrative
- If performance is good, why asking for an increase in repex?
 - Addressed in Q&A session in Capex Part 2
 - Follow up technical repex workshop to be scheduled
- More detail on fleet, property, IT and customer connections

- Dedicated IT workshop was scheduled (covering capex and opex)
 - Fleet and property information was provided to workshop participants
 - Customer connections was addressed in Q&A session in Capex Part 2
- Unsure about SAPN's approach to managing risk
 - Follow up technical repex workshop to be scheduled
 - Draft Plan engagement
- Repex forecasting, want to understand better and see all category forecasts within repex
 - Repex category forecasts to be provided to all workshop participants
 - Follow-up technical repex workshop/s to be scheduled with key stakeholders
 - Draft Plan engagement

Workshop process issues

- Capex Part 2 agenda was refined to provide greater detail about topics and more time for discussion
- Additional workshops to be scheduled in response to requests for further information
- Question and answer forums will be part of future workshop agendas

4.5.3 Questions answered Capex Part 2

The following five questions were answered by a panel of SAPN's subject matter experts at the beginning of Capex Part 2.

1. Given your 2015-2020 proposal, how can we have confidence in this current build-up?
Can you explain the underspend and how it trends over time?
2. Please explain why network performance is good, but SAPN is asking for an increase in repex?
3. Can you please explain how refurbished poles are treated in the RAB?
4. Can you please clarify your customer connections policy and any subsidies for customers?
5. What is the potential impact of the Essential Services Commission of SA (ESCOSA) Service Standard Framework (SSF) review on augmentation expenditure?

4.6 Network Reliability

Asset augmentation (augex) covers expenditure generally required to extend or upgrade the network to address changes in demand or to maintain the quality, reliability and security of the network.

Augex subcategories are shown below in Figure 6. The subcategories that were discussed at Capex Part 2 are:

- Reliability
- Safety - Bushfire program.

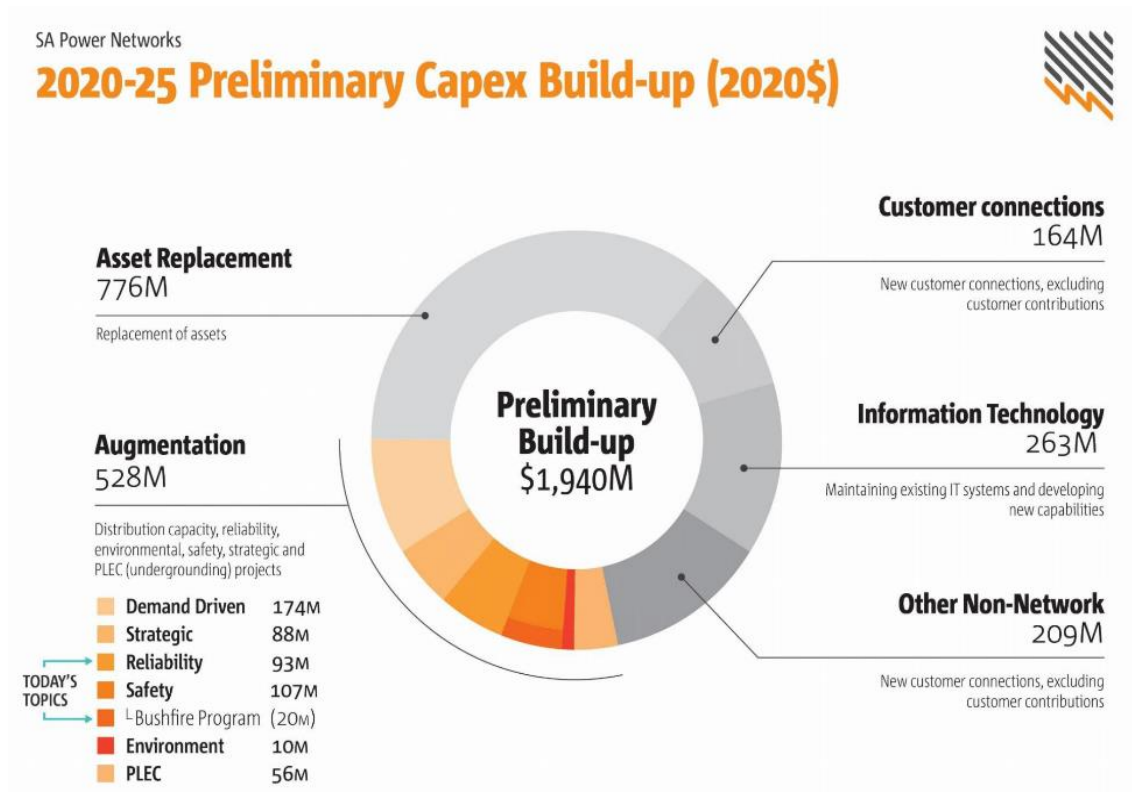


Figure 6: Augex subcategories

A background presentation outlined SAPN's capex approach to:

- maintaining performance to meet ESCOSA standards for reliability;
- hardening the network to minimise outages customers experience on major weather event days; and
- improving performance for the poorly-served customers who experience poor reliability performance.

Each of these three topics was then discussed by workshop participants at their tables using a worksheet to guide discussion. Key points from these discussions are outlined in the following sections.

4.6.1 Meeting reliability service standards

In 2017 reliability was the number one priority at Directions workshops across South Australia, and there was a widespread view that reliability standards should not be lowered. It was also paramount for many industry and business groups, particularly in regional areas.

After a presentation on meeting reliability standards, workshop participants discussed their views at their tables. A worksheet asked them to consider how comfortable they were with SAPN's approach to meeting reliability service standards, rating them *1 needs more work*, *3 uncertain* or *5 feels about right*. Key points from this discussion are detailed below.

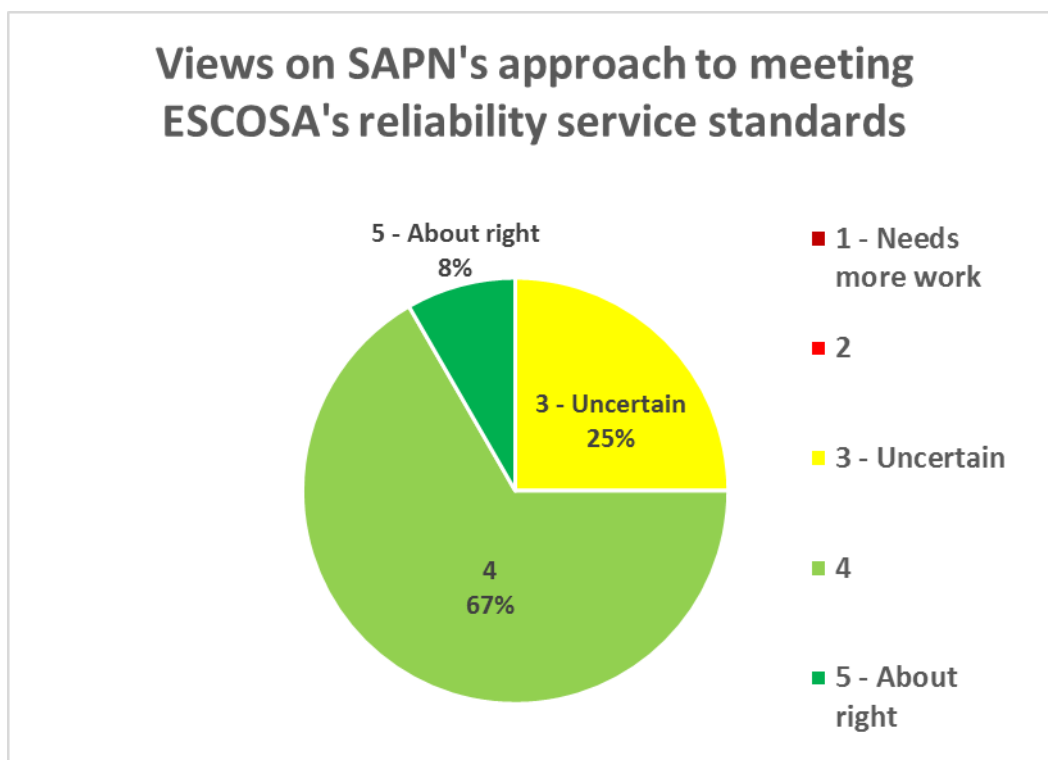


Figure 7: Meeting reliability service standards

Over 70% of participants were comfortable with SAPN's approach, but 25% were uncertain reflecting concerns about the fact that reliability standards are based on dated data. Please note that the data referred to here is the value of customer reliability (VCR), which is set by Australian Energy Market Operator (AEMO); and SAPN was using the latest value AEMO published in 2014. The VCR represents, in dollars per kilowatt hour (kWh), the willingness of customers to pay for the reliable supply of electricity.

Use of dated data

- Concern that data isn't current and isn't used correctly. Need more comfort and understanding of how it's been used in context of 2020-25.
- Concern about the underlying old data. If updated, how this might change the standards or approach? Value of customer reliability data is 2013/14.
- What are synergies between capex programs in assisting in maintaining reliability?

Impact of new Essential Services Commission of SA standards

- Can you highlight where you intend to improve reliability over and above reliability service standards of ESCOSA.
- Hard to comment when new standards from ESCOSA study not known.
- Need to get back to 'where is the best bang for the buck' and fix those things.

4.6.2 Hardening the network against storms

Some parts of the network are experiencing a large number of extended interruptions as a result of SAPN's assets repeatedly being damaged by storms.

After a presentation on hardening the network, workshop participants discussed their views at their tables. A worksheet asked them to consider to what extent they supported investment in hardening the network, using a rating scale of *1 do not support*, *3 uncertain*, or *5 strongly support*. Key points from this discussion are detailed below.

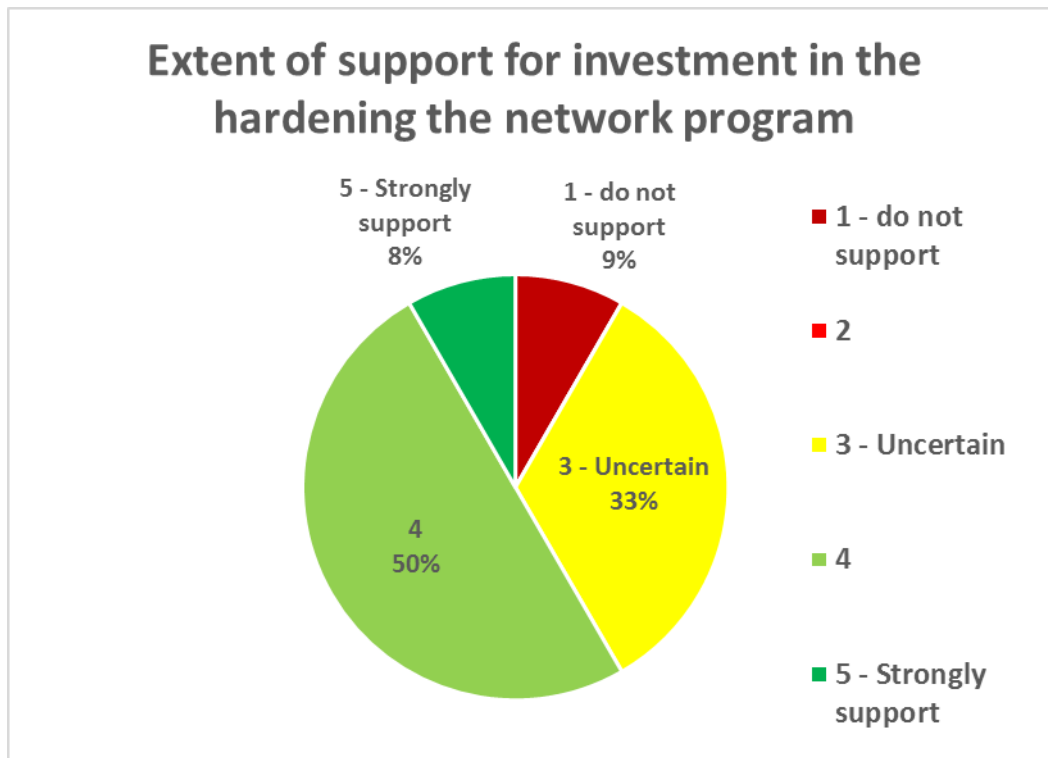


Figure 8: Hardening the network program

Over half of all participants support or strongly support investment, but 33% are uncertain and 9% do not support investment in the hardening the network program. They also questioned whether this could be covered in other capex programs.

Synergy between capex programs

- In conjunction with other capex programs is this really needed? Will not other areas such as repex or bushfire management potentially serve this also?
- With respect to category hardening the network and across all capex proposals, would be good to get understanding of synergies between them, goes to reliability and getting an understanding how it all fits together.

Other comments

- Again, need to get the narrative correct on why continue the need for hardening.
- \$18m – feel like you’ve presented outliers re difference between ‘worst performing’ and the ‘hardening area’.
- Have we considered climate change e.g. weather, vegetation, animals? The ‘new normal’ re weather will potentially continue to worsen.

4.6.3 Investing in underlying reliability for poorly-served customers

This program specifically targets customers who repeatedly experience extremely poor reliability performance, significantly worse than ESCOSA’s targets.

After a presentation on the poorly-served customer program, workshop participants discussed their views at their tables. A worksheet asked them to consider to what extent they supported investment in improving reliability to poorly-served customers, using a rating scale of *1 do not support*, *3 uncertain*, or *5 strongly support*. Key points from this discussion are detailed below.

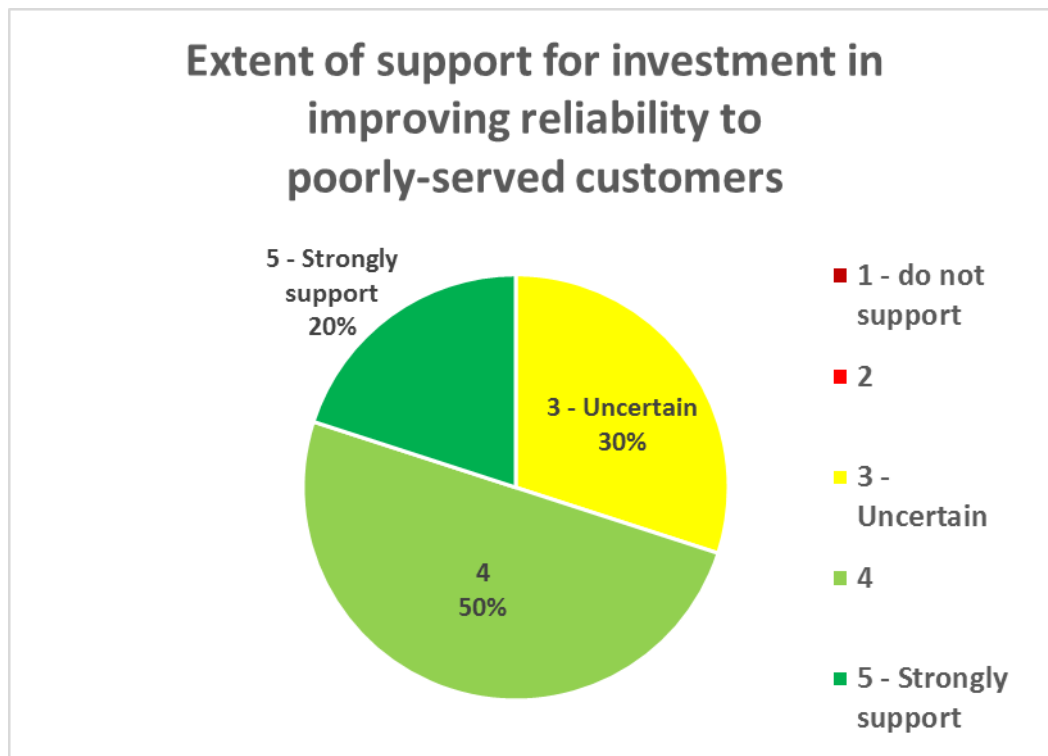


Figure 9: Poorly-served customers program

Seventy percent of participants support or strongly support investment in improving reliability for the poorly-served customers, but 30% were uncertain.

More data needed to inform decisions

- Will need to see ESCOSA reports and consider impact of recent outages.
- Would like a bit more information about exact projects, but I can see that the balancing exercise is difficult and is being well considered by SAPN.
- What has changed with worst-served proposals this period? Need more data on worst-served customers to better inform decision.

Other comments

- SA Power Networks has to 'look after' needs poorly-served customers; as part of best electricity industry practice. ESCOSA could change standard re worst-served.
- Guaranteed Service Level payments of \$20m - could that investment of \$20m go to better reliability for worst-served customers?

4.7 Safety and bushfire management

This session included presentations and discussions about SAPN's approach to bushfire mitigation programs. These included managing bushfire start risk, and also discussion about investment in mitigating bushfire start risk.

4.7.1 Managing bushfire start risk

Following these presentations, workshop participants discussed their views and filled out a worksheet which asked them to consider how comfortable they were with SAPN's approach to managing bushfire start risk. They rated their views on a sliding scale: *1 needs more work, 3 uncertain, or 5 feels about right*. Key points from this discussion are detailed below.

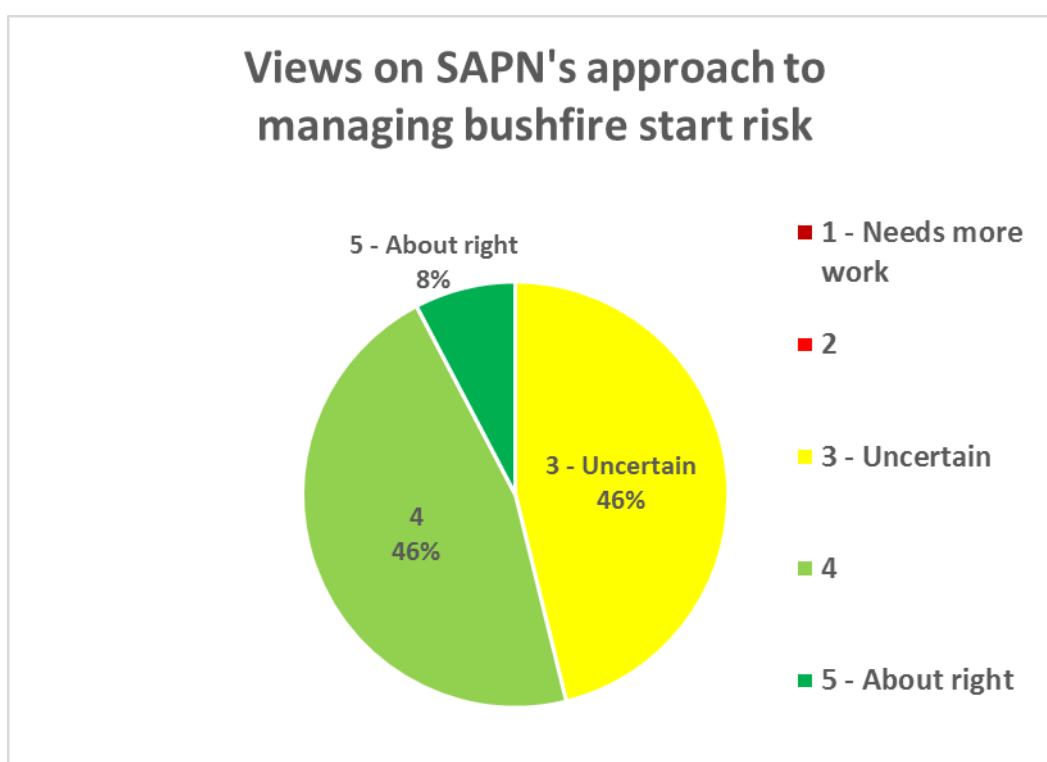


Figure 10: Views on approach to managing bushfire start risk

While there is majority support for SAPN's approach, there is also a rating of 46% uncertain which indicates more work needs to be done and more detail needs to be provided.

Uncertainty about how this fits with other reliability programs

- Still some uncertainty though as to how much the bushfire program fits in with other reliability spending. Also it is hard to measure.
- Progress on the probability of major/catastrophic bushfire and a far different initial proposal. Need to avoid any perception of double dipping with reliability.
- Sophisticated and great modelling. Good work by SAPN in bushfire mitigation and putting forward plan to AER - through "cost to community" approach.

More information about data needed

- Support approach to mitigate consequence of fire starts. Data assumptions are critical. Seeking more information on the basis of SAPN's approach. Important for regional areas.
- A clear understanding about how SAPN reached its conclusion as to its approach and the \$ involved will be essential to support a customer response.

The second discussion was seeking input and views on SAPN's proposed investment in mitigating bushfire start risk. The presentation included an overview of the new model for calculating bushfire risk and the approach to cost benefit analysis modelling being undertaken in partnership with the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

4.7.2 Mitigating bushfire start risk

Workshop participants discussed their views at their tables and filled out a worksheet which asked them to consider the extent to which they supported SAPN's proposed investment in mitigating bushfire start risk. They rated their views on a sliding scale: *1 needs more work*, *3 uncertain*, or *5 feels about right*. Key points from this discussion are detailed below.

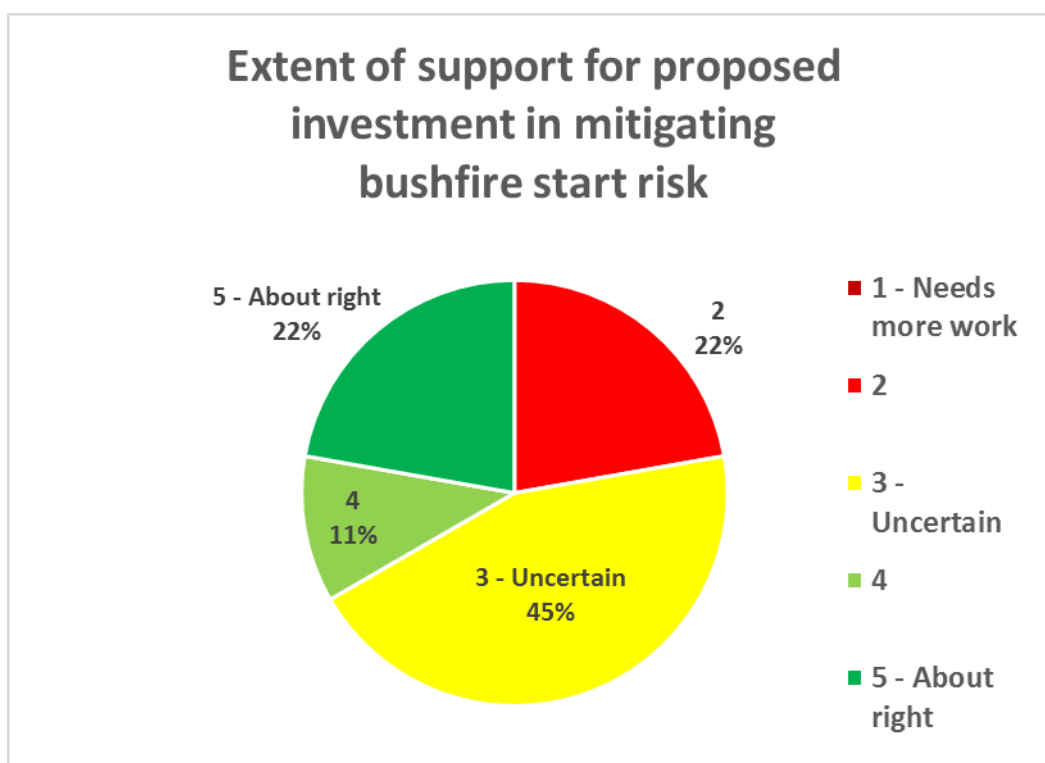


Figure 11: Views on proposed investment in mitigating bushfire start risk

Thirty-three percent supported the investment in mitigating bushfire start risk, but 45% were unsure and another 22% feel more work or information is needed. Some queried if this was different from regular maintenance.

More information needed

- Need more information on the basis for assessing risk and the eventual proposed investment before a response can be provided.
- I might support it if the estimates were strong, but the variance makes me wonder if there is any value at all. Why is this separate from regular maintenance (why hasn't this been done already, if it is actually needed)?

Good work

- Excellent work. Ground breaking and admirable. SAPN are leading the way for other states that are having really major fires on an annual basis, while we are not.
- This is a good attempt to quantify a risk when no standard exists.

5. Evaluation

SAPN routinely asks workshop participants to evaluate their experience, including the clarity of information provided, the time allowed for effective participation, the range of topics discussed and the level of satisfaction with how their views were considered.

People appreciated the reduced number of topics in Capex Part 2 and noted that they were satisfied that the questions raised in Capex Part 1 were well addressed by SAPN in Capex Part 2. The continued goodwill in the room was noted, as was the willingness to contribute to a good proposal and to be involved in the future.

In their evaluation of the capex workshops, participants noted that that Capex Part 1 tried to cover too many topics, but that there was an improvement in the quality of explanation provided over the two workshops.

The overall satisfaction rating for both workshops is shown in Figure 12 below, where 82% of participants were satisfied or highly satisfied.

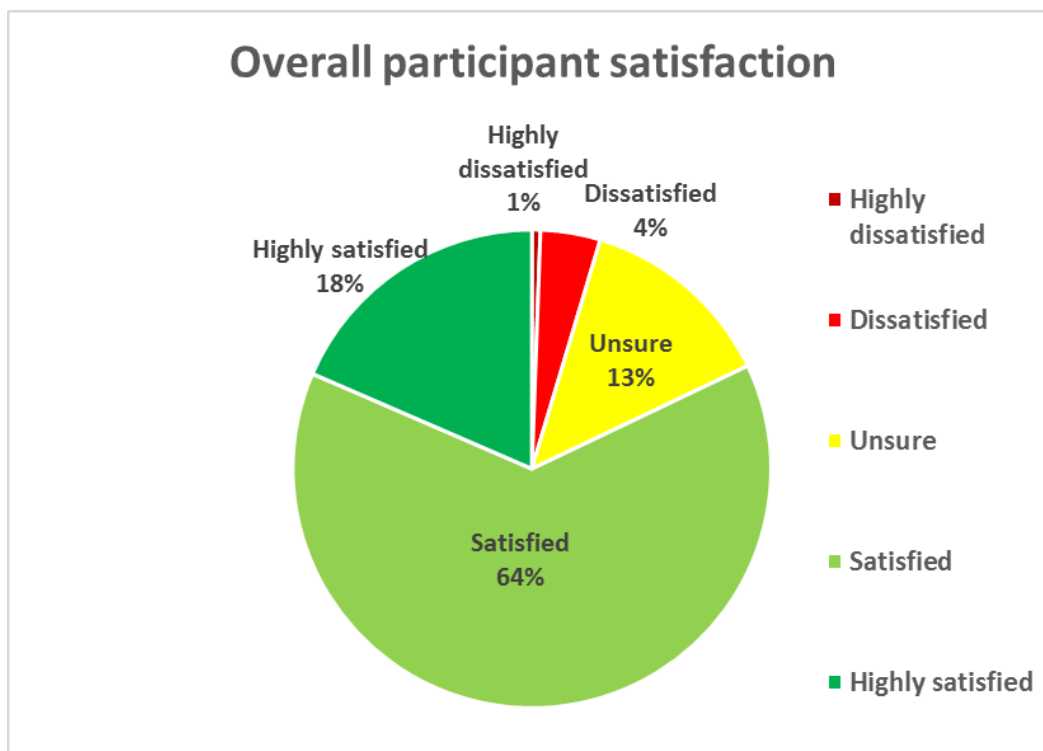


Figure 12: Overall satisfaction rating capex deep dive workshops

Expectations

In a discussion on expectations at the beginning of each workshop (see page 6) participants were asked to consider their preliminary expectations for each workshop on a scale of 7 to 1, where 7 is a high expectation and 1 is low.

Over 77% of people rated their expectations between 5 and 7 (higher) on the first day, and 87% of people rated them higher on the second day. Several people made comments which indicated that their expectations were now much higher than they were at the beginning of the deep dive workshops. Participants considered that their expectations had been exceeded.

6. Reflections

Deep Dive workshops by their nature need to present range of complex and detailed material to workshop participants. To enable effective participation, people need to have the opportunity to develop their 'energy literacy', and they need to feel that they are being heard.

SAPN has made a significant investment in building the knowledge base of its RG members so that they can participate in a reasonably intense engagement process as part of the 2020-25 Regulatory Reset Proposal. Nevertheless, because of the complex nature of the material and the detail to be discussed, it was still difficult for many participants to absorb, form a view on and discuss the information in the time available in the capex workshops.

By the time of the capex workshops both the SAPN Stakeholder Engagement Team and the Reference Groups members had more than a year's experience of working together and building up trust in an ongoing working relationship. This contributed significantly to both confidence in design of the workshop processes and to the willingness of the workshop participants to come together with a real sense of trust.

The value of the workshop experience was also enhanced by the fact that most of the invited workshop participants were able to attend both of the capex workshops.

In seeking input on complex technical material a ratio of one-third presentation time and two-thirds discussion time can be considered ideal. This is often not easy to achieve. The SAPN's Stakeholder Engagement Team adopted this as a principle and consciously and effectively worked at improving the ratio by reducing time for presentations and increasing discussion times over the course of the deep dive workshops.

At the workshops, each session was outlined by the independent facilitator who introduced the SAPN subject matter experts to provide the expert technical background on each topic as the basis for discussion. This was followed by facilitated table discussion at five tables. SAPN table facilitators uniformly managed complex recording tasks well and were acknowledged by participants as having done so.

Capex Part 1 tried to cover too many topics; it was considered better practice to be more strategic about priority topics for SAPN. There was a need for more information to be provided early and for better justification of some of the step changes in spending. More Q&A panel discussions were suggested and delivered as part of Capex Part 2. Because more time was allowed for discussion in Capex Part 2 participants felt that SAPN demonstrated a clear willingness to listen.

It was also suggested that providing more narrative in the background to some topics would provide a better rationale for decisions. People felt that it was valuable hearing the discussion that arose around questions from participants.

Even when they had concerns about the material being presented, and felt they needed a lot more information, participants showed confidence in the SAPN team. This is evidenced both by observation and to some degree by the fact that although feedback strongly suggested the need for more information and discussion time, they still gave relatively high overall evaluation scores at the end of the workshops.

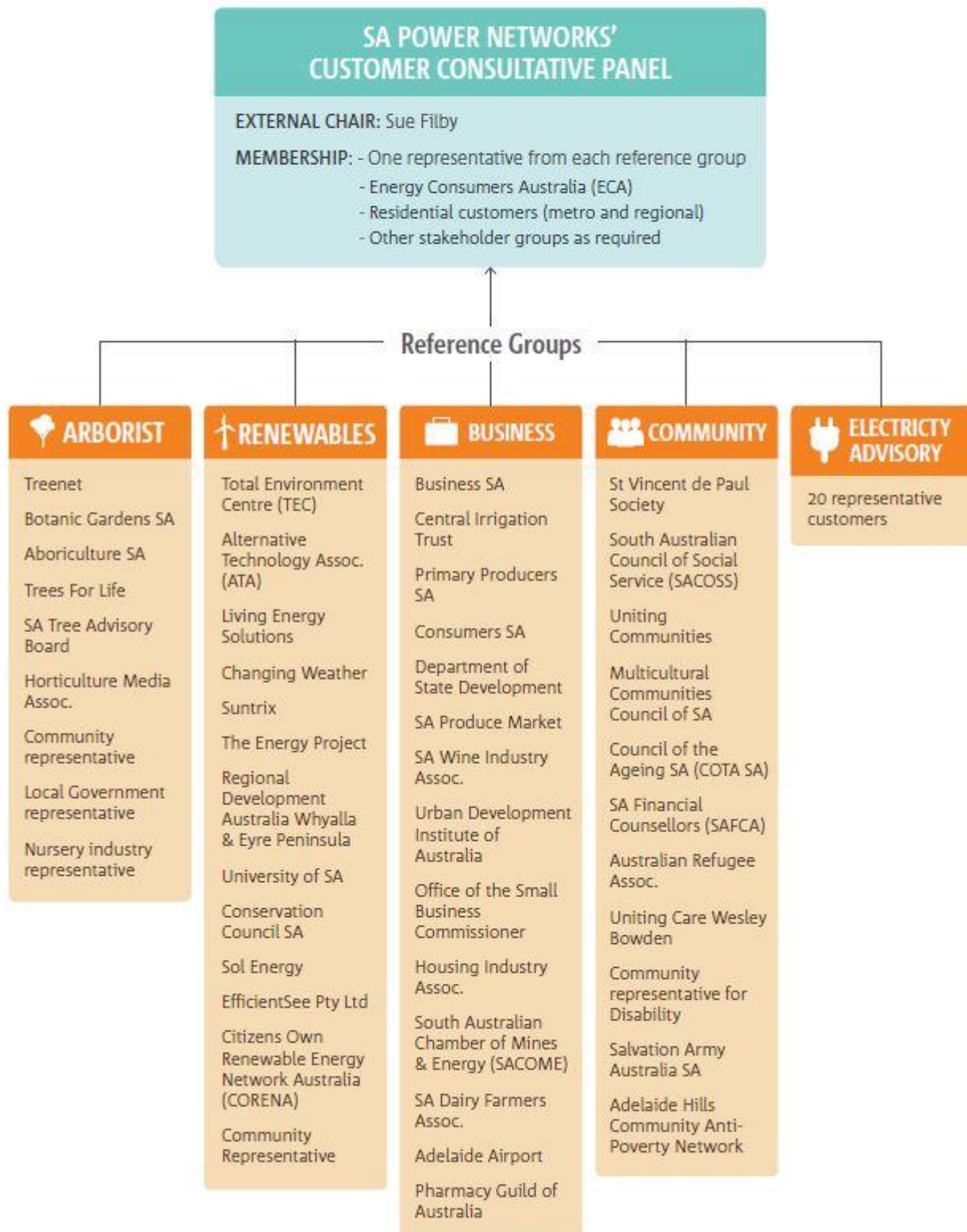
Appendix 1: Acronyms

Capex acronyms

SAPN	SA Power Networks
AER	Australian Energy Regulator
AUGEX	Augmentation Expenditure
CAPEX	Capital Expenditure
CCP	SAPN's Customer Consultative Panel
CCP14	AER's Consumer Challenge Panel
CPI	Consumer Price Index
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DNSP	Distribution Network Service Providers
ESCOSA	Essential Services Commission of South Australia
GSL	Guaranteed Service Levels
IT	Information Technology
kWh	kilowatt hour
OPEX	Operating Expenditure
Poorly-served customers	Customers who experience significantly worse reliability service levels than others in the same service region, also known as worst-served customers
RAB	Regulated Asset Base
REPEX	Replacement Expenditure
RG	Reference Group
SSF	Service Standard Framework
WACC	Weighted Average Cost of Capital

Appendix 2: Customer Consultative Panel and Reference Groups

Customer Consultative Panel and Reference Groups



Appendix 3: Attendance Capex Part 1 and Part 2

Attendance

Capex Deep Dive Workshops 6 and 12 April 2018

Attendance Capex 1 and Capex 2				
		Capex Part 1	Capex Part 2	
Andrew McKenna	Business SA	Y	Y	Business Reference Group
Brian Attwood	Consumers SA	Y	Y	Business Reference Group
Debbie Wielgosz	Energy Division, Dept of Premier & Cabinet	Y	Y	Business Reference Group
Mark Gishen	SA Wine Industry Association Inc	Y	Y	Business Reference Group
Heather Merran	Uniting Care Wesley Bowden	Y	Y	Community Reference Group
Kym Mercer	Anti-Poverty Network SA	Y	N	Community Reference Group
Jo De Silva	SACOSS	Y	N	Community Reference Group
Georgina Morris	SACOSS	Y	Y	
Bev Hughson	SACOSS	Y	Y	
Wendy Shirley	SA Financial Counsellors Association	Y	Y	Community Reference Group Customer Consultative Panel
Mark Henley	Uniting Communities	Y	Y	Customer Consultative Panel
Jenny Marwood	Customer representative	Y	Y	Customer Consultative Panel
Sue Filby	Chair CCP	Y	Y	Customer Consultative Panel
John Herbst	Solar advocate	Y	Y	Renewables Reference Group
Chris Marsden	Department of Premier and Cabinet	Y	Y	Special invite
Kelvin Trimper	Customer Representative	Y	Y	Arborist Reference Group Customer Consultative Panel
Peter Wotton	Trees For Life	N	Y	Arborist Reference Group
Sonja Lekovic	CitiPower/Powercor	Y	Y	Special invite
Louise Benjamin	CCP14	Y	Y	
Mike Swanston	CCP14	Y	Y	
James Brown	AER	Y	N	
John Thompson	AER	Y	Y	
Juris Kuznecovs	AER	Y	Y	
Mark Wilson	AER	Y	Y	
David Monk	AER	N	Y	
Richard Sibly	Head of Regulation	Y	Y	SA Power Networks
Rob Stobbe	CEO	Y	N	SA Power Networks
Brett Miller	Manager Reset Program	Y	Y	SA Power Networks
Danni Kurbatfinski	Reset Capital Expenditure Stream Leader	Y	Y	SA Power Networks
Doug Schmidt	General Manager, Regulation	Y	Y	SA Power Networks
Mark Vincent	General Manager, Network	Y	Y	SA Power Networks
Jess Vonhethoff	Manager Stakeholder Engagement	Y	Y	SA Power Networks
Valli Morphett	Reset Engagement contractor	Y	Y	SA Power Networks
Sara Camarinha	Project Manager	N	Y	SA Power Networks
Tessa King	Reset Engagement contractor	Y	N	SA Power Networks
Tonya Stevens	Stakeholder Engagement Lead	Y	Y	SA Power Networks

Attendance Capex 1 and Capex 2				
Lisa Ibro	Future Networks Project Coordinator	Y	Y	SA Power Networks
Tina Gillespie	Reset Stakeholder Engagement	Y	Y	SA Power Networks
Rachel Walker	Communications Consultant	Y	N	SA Power Networks
David Pritchard	Manager Network Planning	Y	N	SA Power Networks
Alida Jansen Van Vuuren	Network Asset Management	Y	N	SA Power Networks
Steve Wachtel	Manager Network Asset Management	Y	N	SA Power Networks
Frank Crisci	Manager, Emergency Management	N	Y	SA Power Networks
Grant Cox	Regulatory Affairs Manager	N	Y	SA Power Networks
Jehad Ali	Manager Network Standards & Performance	N	Y	SA Power Networks
Kym Williams	Reliability Operations Manager	N	Y	SA Power Networks
Peter Le	Network Reset Project Manager	N	Y	SA Power Networks
Rocco Logo	Network Performance and Regulatory Manager	N	Y	SA Power Networks