



Warrnambool Stakeholder Roundtable

Report

Report prepared for Powercor
April 2019

Contents

Tables of Figures and Tables	3
1.0 Executive Summary	4
1.1 Increased pole inspections and replacements	4
1.2 Upgrading SWER lines to three phase power	5
1.3 Undergrounding or insulating SWER lines in bushfire construction areas.....	7
2.0 Introduction.....	9
3.0 Methodology	11
3.0 Increased Pole Inspections and Replacements	14
5.1 Questions, comments and responses – Pole replacements.....	14
5.2 Table Discussion – Pole replacements.....	17
4.0 Upgrading of SWER lines to three-phase.....	20
4.1 Questions, comments and responses – SWER Infrastructure.....	20
4.2 Table Discussion – Upgrade to 3 Phase power	22
5.0 Undergrounding or insulating of SWER lines in bushfire construction areas	24
3.1 Questions, comments and responses - SWER lines in bushfire construction areas	24
6.0 Participant Evaluation Results	27
Appendix 1: Agenda	30
Appendix 2: Materials	34

Tables of Figures and Tables

Figures

Figure 1: Components of the research program for the regulatory reset..... 10

Figure 2: Attendees at the Warrnambool roundtable 11

Tables

Table 1: Overall rating of Powercor Forum in Warrnambool 27

Table 2: Expectations of the Powercor Forum in Warrnambool 27

Table 3: Powercor Forum in Warrnambool Agreement with Statements..... 28

1.0 Executive Summary

The Stakeholder Roundtable in Warrnambool explored Powercor's proposal on a number of key issues and community priorities in Victoria's south-west. It gave participating stakeholders (15 in total) an opportunity to ask questions, learn about and provide feedback on Powercor's proposals for: increasing network-wide pole replacements; undergrounding Single Wire Earth Return (SWER) lines in electric line construction areas (ELCAs); and upgrading SWER lines to three phased power to increase network capacity for dairy farmers and other regional businesses. Powercor presented its current approach and proposed options for the 2021–2025 regulatory period before inviting stakeholder input and questions.

1.1 Increased pole replacements

While Powercor's current pole failure rate—currently 0.04 failures per 1,000 poles—is lower than the average failure rate of 0.13 failures per 1,000 poles in the National Electricity Market, Powercor recognised the safety concerns felt and expressed by the Warrnambool community around some aged poles. To address the safety concerns expressed by the community and after consultation with other key stakeholders, in its Draft Proposal Powercor included expenditure to replace an additional 1,000 poles per annum (on top of 1,300 annual 'condition-based' replacements) at a cost of \$10 million per annum.

To establish the necessary increase in replacements, Powercor indicated that it is changing the safety factor threshold for unserviceable poles from 1.25 to 1.40, increasing the amount of sound wood required by 5mm (15% increase) and increasing the inspection frequency from every 2.5 years to every year (before the fire season) for poles with a safety factor between 1.4 and 1.875.

Powercor asked participants to consider whether they would prefer to increase pole replacements by more than 1,000 poles per year. Options presented to the stakeholders included increasing pole replacements (over and above condition-based replacements) by:

- (1) 2,000 poles per annum at around \$20 million or \$1.10 per customer per annum
- (2) 3,000 poles per annum at around \$30 million or \$1.60 per customer per annum
- (3) 4,000 poles per annum at around \$40 million or \$2.10 per customer per annum.

In the Q&A session, stakeholders were interested to know more about: the regulatory requirements for pole inspections (Powercor obligations as well as Energy Safety Victoria (ESV) and its audits of network service delivery); the inspection process, evidence collected and ability of the sub-contractor (Electrix) to re-inspect as needed; and, how Powercor evaluates and selects its pole testing technologies (Woodscan and others).

On regulatory requirements, Powercor noted that they are required to provide a bushfire mitigation plan to ESV for approval, including asset management practices. ESV does not set Powercor's practices, and practices vary from distributor to distributor, but Powercor is required to implement projects in accordance with the bushfire mitigation plan. ESV audits the network's inspection regime and if there is any change in that regime, it must be reflected in the bushfire mitigation plan.

In response to stakeholder questions, Powercor stated that its typical service response time to customers enquiring about pole condition or inspections is around 24 to 48 hours at which time Electrix will be notified to investigate or reinspect. ESV noted that any concerns about network response can be directed to them, but Powercor is the community's first contact to resolve issues. Powercor explained that the community can provide photos or additional information and contractors are asked to provide any additional information that is relevant to the replacement decision on their inspection report.

Powercor's choice of timber scanning technology was discussed in some detail. In 2016, when Powercor opted to manage poles using advanced technology, it chose Woodscan (now owned by Electrix) and stakeholders were advised that several technologies were now being tested 'head to head'. Some stakeholders were interested in why Powercor was not already testing the technologies on poles across diverse geographies. Here, it was explained that the same processes used to test Woodscan were being applied by Swinburne University to look at the comparative test results of Ausnet Services that is also undertaking this process. Powercor indicated that testing of poles across different geographies is likely once it has narrowed down its choice set to two scanning technologies. If the technology fails in one area, then it won't be tested in another location.

After the Q&A session, forum table discussions were used to initially seek feedback on Powercor's proposal to increase pole replacements by 1,000 per year at a cost of \$10 million per year. Here, most stakeholders were supportive of Powercor's plans but found it hard to assess whether the actions were 'enough'. When asked for feedback on whether they preferred to see an additional 2,000, 3,000 or 4,000 pole replacements per year, the majority favoured 4,000 replacements as the bill impact was seen as minimal in the context of delivering a higher level of safety (potentially saving lives). Some were concerned that 4,000 may not be enough and that deciding on a number was less important than understanding pole safety and replacing more if the number of unsafe poles exceeds 4,000.

1.2 Upgrading SWER lines to three phase power

At the forum, Powercor presented information on its SWER infrastructure capacity which it acknowledged as being not always sufficient to meet the current electricity needs of rural businesses or support their expansion plans.

Powercor presented three solutions to this issue, these being:

- (1) a *customer response* (dairy farmers using diesel generators or batteries to supplement SWER lines),
- (2) a *connection project* that would require a sizeable customer contribution; and
- (3) an *augmentation project* to enhance the network's capacity with the 'customer contribution' replaced by cost spreading across all customers.

Powercor also presented a possible future option 3a where it installs a Stand Alone Power Systems (SAPS).

During the Q&A session on these options, Warrnambool stakeholders were interested to understand: the relative costs of the options outlined; any alternate sources of funding for the project including grants; and the state government's role in leading the way and/or providing funding support for the project or participating dairy farmers. In responding to questions on the cost of options, Powercor noted that its current engagement is on *the preferred approach* and the cost will vary across the options (and for different dairy farmers, pending which of the options is chosen). However, the network explained that a sliding scale of costs for participants could be produced if an option is deemed to be viable after a thorough cost-benefit analysis.

Powercor noted that in discussions so far, Option 1 has not been favoured by United Dairy Farmers of Victoria (UDV) and Option 2 would require a significant customer contribution. While Option 3 (augmentation) does not rely on individual customer funding, it must deliver on the Australian Energy Regulator's (AER's) cost-benefit requirements and so far, it has not passed that test. As a result, Powercor is seeking to identify with stakeholders the fuller suite of market benefits and wider economic benefits that could accrue from this approach. If other benefits can be quantified, then Powercor may be able to build a cost-benefit scenario that justifies taking Option 3 to the AER for consideration. The network emphasised to stakeholders that the AER is asking for more community engagement and support for any proposed change.

On the question of alternate sources of funding, stakeholders at the forum queried the funding pools available from the Victorian government and the role of Regional Development Victoria (RDV) alongside Powercor in delivering change. At the forum, the RDV advocated for the government and industry to work together and noted past initiatives to improve SWER lines and get three phase power into factories. The RDV referred to past funds (e.g. a \$250m bucket of funding - possibly a bushfire fund) that was untapped by farmers. At the time, the RDV noted that it worked with the UDV to identify an est. \$55m in upgrades but if one farmer wants the upgrade and others don't, the user pays system does not work. To guide forum participants in thinking about the new SAPS augmentation option, Powercor explained this would be a SAPS augmentation or off grid supply

rather than an upgrade to SWER. It is not based on a shared funding arrangement between individual farmers and the network, but rather the costs would be spread across all customers.

Stakeholders at the forum queried the movement off-grid that Option 3a (the SAPS augmentation) implied and what this would mean in terms of maintaining the integrity of network infrastructure. Powercor explained that this is a separate issue but the network will continue to have a regulatory obligation to connect and maintain a reliable supply to all parties.

After the Q&A session, forum table discussions explored the benefits of three phase power to the industry and whether there were any other options or approaches to address this issue. For forum participants, the main benefits of three phase power were: increased industry confidence, increased milk industry productivity, the ability to keep dairy farming alive and retain industry participants, a lower cost of production and in turn, a positive flow-on effect to farm suppliers and the regional economy.

In this context, Warrnambool stakeholders favoured further investigation and development of Option 3 (augmentation) and/or 3a (the SAPS augmentation proposal). However, many felt that the SAPS option may be too early to implement given the cost of batteries and some felt the government should fund the augmentation. This view was based on the role of farmers in providing an essential service to the Victorian community and the role of government in helping to sustain rural communities.

1.3 Undergrounding SWER lines in ELCAs

Powercor outlined that one of the Victorian Bushfire Royal Commission recommendations is to underground SWER lines in high-risk ELCAs. As part of its funding related to bushfire safety, the Victorian Government funded undergrounding of around 400km of Powercor's SWER lines in high-risk ELCAs to date. This leaves 450km of overhead bare wire SWER in the ELCAs that are still overground. Powercor is considering the timing of the undergrounding of the remainder of the SWER lines in ELCAs. Three options were explained for future undergrounding SWER:

- (1) do not replace the overhead lines;
- (2) underground the remaining SWER lines by 2030 at an extra cost of \$2.60 per customer per annum; or
- (3) underground the remaining lines by 2025 at an extra cost of \$5.10 per customer per annum.

Stakeholders queried whether the Rapid Earth Fault Current Limiter (REFCL) investment, mandated by the Victorian Government, was the best use of funds alongside this future need to underground SWER and whether three phase power and undergrounding could be considered together. Powercor

explained REFCLs are only installed on three phase lines and that therefore at present there is no overlap between SWER and REFCL use.

Many stakeholders at the forum saw undergrounding of SWER lines to be the optimal window to achieve a change to three phase power. However, some noted that three phase power was not necessary in all areas so this approach may not be suitable network-wide. Energy Safety Victoria emphasised that there is no real difference in bushfire risk between SWER and three phase, and that stakeholders needed to stay focused on the cause of most fire starts and the need to ensure the 'conductor' is protected from vegetation or fires being started by a falling tree or pole. Powercor confirmed this and indicated that installing three phase power underground would involve a substantially higher cost compared to undergrounding SWER lines.

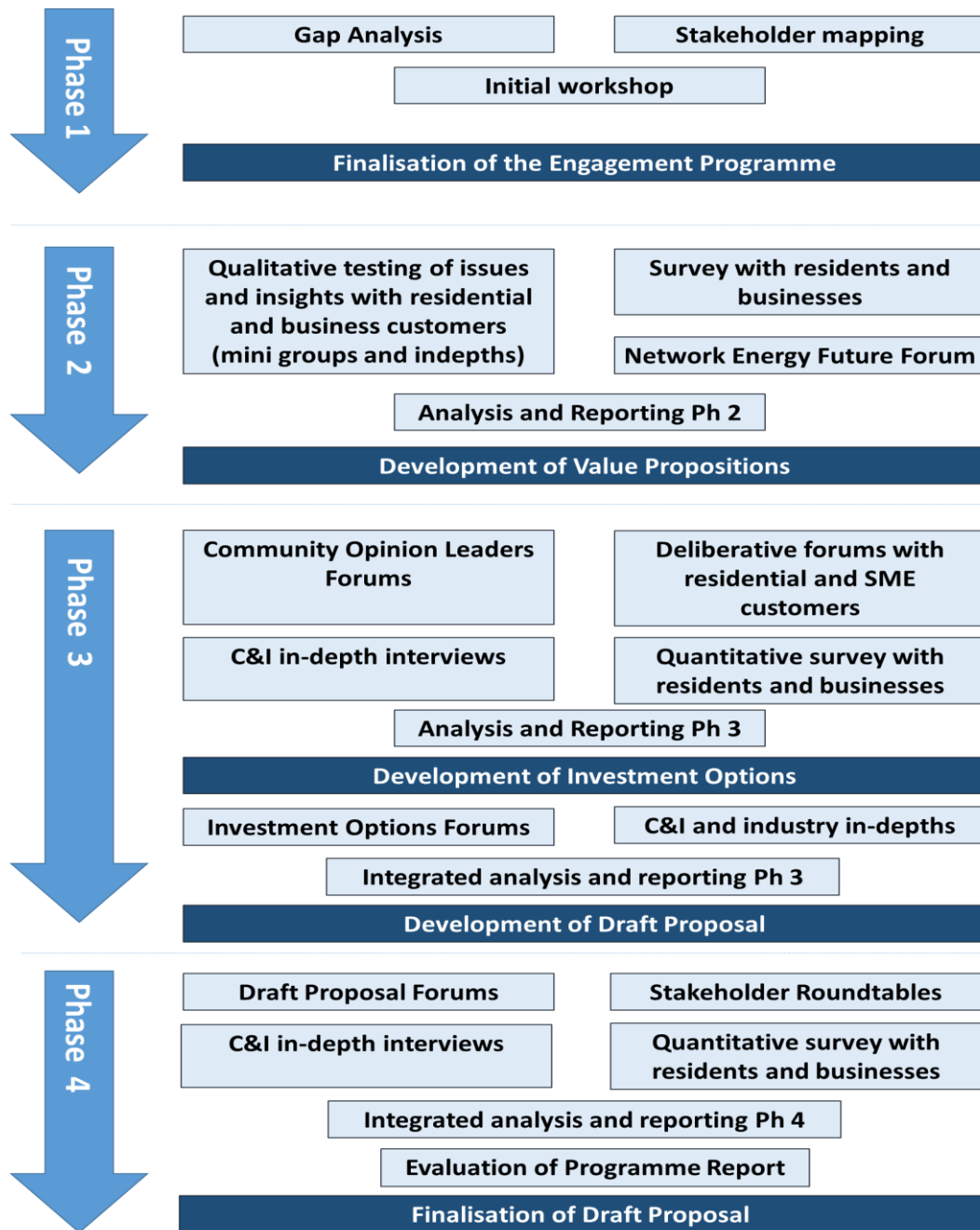
Overall, most stakeholders were in favour of Option 3 (undergrounding of SWER lines by 2025 at an extra cost of \$5.10 per customer per annum). This was seen to be a minimal cost in the context of benefits delivered, but only if retailers did not simply leverage that increase and charge customers more.

2.0 Introduction

CitiPower, Powercor and United Energy are required to provide Regulatory Proposals to the Australian Energy Regulator (AER) every five years, detailing their predicted expenditure and revenue requirements over the regulatory period. The businesses are currently developing their Proposals for the 2021-2025 regulatory period.

Woolcott Research and Engagement is contracted to conduct customer and stakeholder research to support the preparation of the Regulatory Proposals as part of the Energised 2021-2025 program. This program involves four key Phases for engagement from January 2017 to 2019. Figure 2 presents the overview of the research program that supports engagement as part of Energised 2021-2025. We are currently in Phase 4 of the program. This report outlines the discussion at the Stakeholder Roundtable held in Warrnambool on issues impacting customers in south-west Victoria.

Figure 1: Components of the research program for the regulatory reset



3.0 Methodology

The Special Topic Roundtable hosted by Powercor in Warrnambool was held on Wednesday 14th March from 11.00am-2.00pm.

This report summarises the outcomes of this roundtable designed to give key stakeholders in Victoria's south-west an opportunity to hear about, evaluate and provide feedback on Powercor's plans for:

- Increasing pole replacements
- Upgrading SWER lines to three phased power in regional areas
- Undergrounding SWER lines in ELCA's

A total of 15 stakeholders attended the Warrnambool roundtable (as listed below):

Figure 2: Attendees at the Warrnambool roundtable

First name	Surname	Position
Jim	Doukas	Councillor of Moyne
Jill	Parker	Councillor of Moyne
Robert	Anderson	Councillor of Warrnambool
Pru	Neale	Electorate Officer for Member of Wannon
Brett	Fox	Energy Safe (VIC GOV)
Ian	Burgwin	Energy Safe (VIC GOV)
Tony	Herbert	Mayor of Warrnambool
Michelle	Grainger	Moyne Shire Council
Jeff	Mutsaers	Regional Development Victoria (RDV)
Leigh	Clemow	Regional Development Victoria (RDV)
Jill	Porter	Resident - Dairy Farmer
Oonagh	Kilpatrick	United Dairyfarmers of Victoria
Bruce	Knowles	Victorian Farmers Federation
Ben	Storey	Warrnambool Shire Council
Vikki	King	Warrnambool Shire Council

The forum included presentations, open discussion and table deliberations on the key topics in focus. Woolcott Research provided a Lead Facilitator who chaired the roundtable, while two expert facilitators from Woolcott guided the table discussions and recorded the issues and viewpoints raised.

The roundtable was opened by Renate Vogt (General Manager of Regulation) who welcomed stakeholders and summarised Powercor's consultation with 5,000 customers so far to prepare the Draft Proposal for 2021-2025. She advised stakeholders that Powercor had shared the Draft Proposal with Warrnambool customers at a forum the previous day where customers had emphasised the importance of a 'safe and dependable network that is flexible to customer choice and also affordable'. She acknowledged the high level of importance of engaging more directly with the Warrnambool community and the south-west on the condition, capacity and future management of Powercor's assets. The network's desire to engage stakeholders in a genuine and productive discussion about these issues and its proposed approach to address them was explained.

Participating stakeholders were briefed on the AER's role in determining Powercor's revenue cap. In the presentations that followed, Head of Network Asset Management John Mifsud, Regulatory Projects Manager Frans Jungerth and Senior Engineer Neil Watt provided further details on Powercor's proposed approach to:

- Increasing pole replacements
- Upgrading SWER lines to three phased power
- Undergrounding SWER lines in ELCAs

Participants were encouraged to ask questions during these presentations and all major queries and responses were recorded for inclusion in this report. Powercor noted that a summary of roundtable outcomes would be distributed to participants and formal answers to key questions raised by stakeholders would be made available on Powercor's Talking Electricity website.

After the presentations, the stakeholders engaged in table level discussions and deliberations on the three key issues and Powercor's proposed approach.

Detailed roundtable findings

3.0 Increased Pole Inspections and Replacements

In the first roundtable session, John Mifsud (Head of Network Asset Management) presented information regarding Powercor's pole inspection regime. While Powercor's current pole failure rate—currently at 0.04 failures per 1,000 poles—is lower than the average failure rate of 0.13 failures per 1,000 poles in the National Electricity Market, Powercor recognised the safety concerns felt and expressed by the Warrnambool community around some aged poles.

To address the safety concerns expressed by the community and after consultation with other key stakeholders, in its Draft Proposal Powercor included expenditure to replace an additional 1,000 poles per annum (on top of 1,300 annual 'condition-based' replacements) at a cost of \$10 million per annum. To establish the necessary increase in replacements, Powercor indicated that it is changing the safety factor threshold for unserviceable poles from 1.25 to 1.40, increasing amount of sound wood required by 5mm (15% increase) and increasing the inspection frequency from every 2.5 years to every year (before the fire season) for poles with a safety factor between 1.4 and 1.875.

Powercor asked participants to consider whether they would prefer to increase pole replacements by more than 1,000 poles per year. Options presented to the stakeholders included increasing pole replacements (over and above condition-based replacements) by:

- (1) 2,000 poles per annum at around \$20 million or \$1.10 per customer per annum
- (2) 3,000 poles per annum at around \$30 million or \$1.60 per customer per annum
- (3) 4,000 poles per annum at around \$40 million or \$2.10 per customer per annum.

5.1 Q&A during the Powercor presentation – Pole replacements

During the presentation there were numerous questions from the floor. These related to: Victoria's regulatory requirements for pole inspection; who undertakes the inspections; the nature of processes involved (including data inputs and imagery used in decision-making); Powercor's related service standards and, steps taken to audit the network's inspection regime.

Powercor personnel explained that the ESV regulates the overall pole inspection regime in the context of the Bushfire Mitigation Plan. Powercor's use of its metering network to detect any unusual events such as overheating on poles or faults in the line to the house was also explained. These internal checks and procedures (not specified in the Bushfire Mitigation Plan) complement traditional pole inspections.

Local council representatives asked Powercor to clarify who carried out the inspections and how a pole 'failure' was determined. Here, the role of sub-contractors (i.e. Electrix) was explained along

with the critical region of the pole that is used to assess the pole's residual strength i.e. 300mm below the ground and 2 metres above. Powercor emphasised that the pole's residual strength can be impacted by termites, the number of splits or holes previously drilled in the pole.

Some stakeholders wanted to know how issues related to the pole's condition that don't fit the standard inspection criteria are reported i.e. "How do they report issues that don't fit the criteria or classifications....things outside their photos and diaries?" Here, stakeholders referred to recent inspections and "photos on mobile that show all sorts of things" and they asked whether they could send photos to Powercor and ask for the electricians to be sent back to reinspect.

Powercor personnel explained that sub-contractors undertaking inspections are asked to record any additional information that is relevant to the replacement decision. Powercor noted that a pole's visual appearance is not a sound indicator of its condition. Some stakeholders challenged this further: "if you put your hand in a pole and it crumbles, it is a pretty good indication that it is bad!", to which Powercor insisted these alone are not appropriate indicators of condition.

A discussion then ensued on which entities (i.e. the Council, the ESV or the distributor) should be consulted if stakeholders were dissatisfied with pole inspections by Electrix or Powercor's response. A Council representative asked whether he should direct customers to the Powercor website or whether "constituents are better off bringing their concerns to the regulator instead". Here, the ESV indicated that any concerns brought to their attention would be raised with the network. Powercor personnel asked that all concerns be directed to them so they could respond directly to them. The ESV confirmed that initial contact should be made with Powercor, but customers should approach the regulator if they are not satisfied with the response.

Some stakeholders questioned ESV's power in this context i.e. their ability to act on customers' concerns and audit Powercor's pole inspections and replacements. In response, the ESV representative explained: "Ultimately, if we think it [the pole] is unsafe, we'll tell Powercor and if they don't do it, they'll be directed to do so or it will be 'enforced', but generally correspondence will get things done." The ESV noted that communication with Powercor would always be their first step to try to resolve an issue rather than legal action – "We go to Powercor first and they have to convince us that things are being done."

Stakeholders were assured that the network's fulfilment of its obligations within the Bushfire Mitigation Plan is audited by the ESV. The use of a 'Service AC' (a 'new term') in lieu of an audit was mentioned, but the ESV assured stakeholders that any changes in the inspection regime were reflected in the Bushfire Mitigation Plan. One stakeholder asked what the time lag would be between any change to inspection procedures in the Plan and a subsequent audit by the ESV. In response, the ESV said "the lag should be a couple of months at the most. It is done ASAP pending when the regime is recorded in the Bushfire Mitigation Plan."

In the course of this discussion, Powercor was asked whether it had particular corporate service standards related to pole inspections and stakeholders were advised that action would usually be taken within a 24 to 48 hour timeframe, i.e. a request would be sent to Electrix to go out to the site to investigate. Another stakeholder asked whether Electrix also employed sub-contractors and Powercor acknowledged that this could be the case.

Stakeholders then turned their attention to the inspection of staked poles. A related question was: “When you stake a pole, you can’t do a dig and drill test, so what do you do?” Here, Powercor explained that the critical zone for testing changes on a staked pole: “Our objective during the pole’s life is to monitor its resilience to ensure it is replaced before it no longer meets its resilient strength requirements. Not every pole can be staked...about 54% are replaced. We also replace poles when we’re augmenting the network or for other business reasons.” In response to a more specific question about the testing region once the pole was replaced and staked, Powercor explained that the new region for testing was “300mm above and below the top of the stake”.

Powercor explained that its asset management processes and related improvements have been ongoing since 2016 when it resolved to manage poles using the latest technology. In response to specific questions about its Woodscan technology and testing of alternate technologies, Powercor explained Woodscan was owned by Electrix, but other technologies are being tested at Swinburne University for their performance alongside Woodscan.

One stakeholder noted that there are some weaknesses in this testing process. Powercor acknowledged that “there is no silver bullet” and poles will soon be taken to Grafton for further testing. It was explained that “this is just a first step and then we’re going to further test” and the network could “end up using a combination of tools and techniques”.

Some felt that Powercor should be testing poles from various areas to “show how [each of them] operate under different technologies rather than taking them all from one area?” In response, Powercor said “once we’ve narrowed down to two technologies, then we will use various geographic areas”.

A community representative asked, “Why don’t you do that now...take them from various areas? See how the technologies compare on poles in various areas?” The Regional Development Victoria representative said he had the same conversation recently with Ausnet who are doing tests simultaneously. He noted that: “They will both start to whittle down the technologies (there are five in total). If they fail in one area, they won’t be tested in the other areas.”

Powercor explained that there was little value in taking the technologies further if they fail the first test and it is also “very interested in steel poles, but have no real means of doing tests on those. In parallel, we’ve found two other technologies with Swinburne University. The loss of material we

detect in tests will tell us the residual strength. By September this year we will have the technology chosen.”

5.2 Table Discussion – Pole replacements

During the facilitated table discussion, stakeholders were asked to express their views on Powercor’s proposed change in pole inspections and replacements for 2021 to 2025 which include:

- Changing the safety factor threshold for unserviceable poles from 1.25 to 1.40
 - Increasing amount of sound wood required by 5mm (15% increase)
 - Increased pole replacement spend ~\$50m (2021–2025)
 - Increased pole replacements by 1,000 a year (5,000 over 2021–2025)
- Increasing the inspection frequency from every 2.5 years to every year for serviceable (AC) poles with a safety factor between 1.40 and 1.875

Most stakeholders were supportive of these actions but found it hard to assess whether they were ‘enough’.

“It is a move in the right direction. It has got to be a good thing. But we could be going from really bad to just bad.”

“Instead of 30mm it is going to 35mm, but is that enough? I don’t think that sounds like much of a change at all.”

One or two stakeholders said that the replacement program should be flexible to allow some poles that customers deem to be hazardous (even if they are not) to be replaced. There was a feeling that this would at least show in a public relations sense that Powercor is responsive to customers, particularly coming into bushfire season when residents start becoming nervous and sending in photos of poles they feel need replacing.

“The safety factor takes into account the bare minimum...it needs to go beyond that.”

“They need to step out of the regular inspection programmes and look at specific poles, if attention is brought to them.”

“It is very unnerving with the bushfire season approaching when we see poles that we believe need a response.”

“Why doesn’t Powercor for the sake of community confidence replace poles that look bad in people’s photos? They ‘live the land’...they know which trees are ready to fall over.”

When asked for feedback on the option of increasing the number of pole replacements by an additional 2,000, 3,000 or 4,000 a year, the majority of participants were in favour of increasing to 4,000 more pole replacements a year. The bill impact was seen to be minimal in the interests of potentially saving lives.

“Whatever cost it, it is the cost of human life that is important.”

“It is a no brainer. People need to feel that it is safe.”

However, some questioned if an additional 4,000 pole replacements per year was adequate. Others queried the geographical spread of replacements. While 4,000 replacements annually was seen to be a substantial increase, some were worried that it isn’t enough. Concern was expressed that poles being replaced may not be in the right areas given the physical size of the network and the expanse of hazardous bush fire areas.

“We need to do everything we can do minimise the probability of any problem occurring.”

“We are dealing with the impact of past mistakes so people need to get their confidence back.”

Participants were quick to stress that the plans should not be about the number of poles to be replaced but about how safe the poles actually are i.e. they should be replaced if they are not safe, even if the overall number exceeds 4,000. Alongside this discussion, Powercor explained that many poles were put in at the same time so will probably need replacing at the same time. In due course, this could take the number of poles needing replacement beyond the approved level each year. .

“They have got to be able to be replaced when needed – there might be more than 4,000 additional a year and then they will all need to be replaced at once because they were put in over a short time.”

“It should be about safety not economics.”

“What we really want is confidence in the infrastructure. People need to feel that it is safe. It is all about perceptions not numbers.”

“It should be about more than just the economic value of replacing poles.”

The conversation often moved to the question of undergrounding and the reasons why poles were being replaced with another pole instead of being put underground (with the latter viewed as a more progressive approach).

“I would be interested to know the cost of burying the lines versus replacing the poles.”

Stakeholders also expressed concerns about the processes used by the auditors, Energy Safe Victoria. Some queried whether ESV was doing enough to audit the work carried out by Powercor. It was believed that network auditing by ESV should be more transparent than it is currently.

“I have a real concern – who is auditing the auditors?”

As the discussion about pole replacements progressed, some stakeholders also raised questions about links between the network, Energy Safe Victoria and the AER. Related comments were:

“Even if Powercor want to increase replacements, the AER probably won’t give them the money. It is an economic regulator...they are not interested in whether customer expectations have changed. There needs to be a stronger relationship between ESV and the AER so that the cost-benefits are properly understood.”

4.0 Upgrading of SWER lines to three-phase

In the second roundtable discussion, Frans Jungerth presented information on Powercor's SWER infrastructure capacity which is not always sufficient to meet rural businesses' current electricity needs or their expansion plans. Here, it was acknowledged that the United Dairy Farmers of Victoria had been advocating for some time for comprehensive upgrades to Victoria's rural SWER infrastructure to three phase supply.

Powercor presented three possible solutions to this issue:

1. *Customer Side* – this was a solution that would see the dairy farmers supplementing the existing SWER system by installing diesel generators or batteries.
2. *A Connection Project* – this solution is both a connection and augmentation project to provide three phase power capacity requiring a sizeable customer contribution.
3. *An Augmentation Project* – this would enhance the capacity of the network but there would be no 'customer contribution' but rather the cost would be spread across all customers. This would require a demonstration of a cost-benefit analysis to the AER.
- 3a. *SAPS augmentation project* – this would be to use Stand Alone Power Systems in place of replacing or upgrading existing parts of the network.

4.1 Q&A during the Powercor presentation - SWER upgrade option

The presentation on the SWER infrastructure issue and related options generated numerous questions from the floor. A question was raised immediately about the cost of the solutions. Powercor explained it would like stakeholders to consider the proposals more generally, explaining it is seeking views on the concept rather than the cost, and that the costs will be different for different dairy farmers.

One stakeholder queried whether the \$4m quoted [for Option 2] applied to all customers. Powercor explained that under this option, the capital contribution from the dairy farmers would be large and the share paid by all other customers would be low. Alternatively, under Option 3, there would be no contribution from the dairy farmers with the cost spread across all consumers; but in that case the project must pass a cost-benefit analysis. Powercor explained that it had done a cost-benefit analysis in the past which did not pass the test based on established metrics for consumer benefits. An RDV representative at the roundtable noted that Powercor was referring to considerations taken in the past as part of the AER requirements, but it is "now proposing a new option".

Powercor was asked whether it had "factored in attracting new dairy farmers to the region" in shaping the options. Here, it was explained that this factor was not included as it does not fit within the AER's methodology.

One or two stakeholders highlighted the preference for ‘underspending on augmentation’ and asked whether Powercor could use its current underspend “for a small \$4m line rather than pocketing it?”. Powercor explained that the AER requires them to undertake a cost-benefit analysis for all expenditure before spending on augmentation, and if the project does not pass the cost-benefit analysis the AER expects the distributor will not go ahead with the project. If this leads to underspend, then 30 cents in the dollar goes to Powercor and 70 cents to customers.

Powercor personnel explained to Warrnambool stakeholders that there may be other economic benefits that can be quantified. If this is the case, Powercor could develop a case to present to the AER to look beyond existing benefits – “We work under an economic regulator who will only fund for ‘user pays’ and established benefits.” The participating representative from United Dairy Farmers Victoria (UDV) highlighted the wider economic benefits had already been provided to Powercor and suggested that Powercor advocates on behalf of dairy farmers and advises the AER “that dairy farmers have a wider economic benefit to society.”

The discussion then turned to who should pay. The UDV representative acknowledged that there are different points of view as to what people can and cannot afford and said “We’ve got to have government and private enterprise working together. So tell us RDV, what are you doing about it?” The RDV representative responded that there have been projects in the past to improve SWER lines and get 3 phase power into factories. He reminded other stakeholders that the RDV is “looking from everyone’s perspective...the whole of Victoria. We’re advocating at departmental level but advocacy should also be from the public and from dairy farmers.”

At this point, the UDV and RDV stakeholders engaged in a discussion about a sum of \$250 million that was previously available from government but not used. The discussion was around a grant program that was offered to dairy farmers to support upgrades, however there was disagreement between UDV and RDV as to the value of the program offered and whether the dairy farmers has taken up offered funding. The RDV also highlighted there needs to be alignment between any investment in various aspects of the Victorian economy” ...there is no point in upgrading farms if you don’t upgrade manufacturers.”

One stakeholder asked whether this fund could be used to upgrade from SWER to 3 phase power. The RDV indicated the fund is mainly for ‘on farm’ initiatives and does not qualify it for SWER upgrades. The UDV representative asked whether RDV could contribute half the cost of the \$4m upgrade, to which Powercor indicated a reduction in the cost that is spread across consumers is more likely to pass the cost-benefit analysis but no conclusion can be drawn without the necessary analysis. The UDV representative concluded the focus should be less on ‘ad hoc’ projects but on developing a new approach that benefits the community. Powercor agreed that this was the current opportunity given that the regulator is asking for more community input.

Continuing to present the options, Powercor explained Option 3a was not necessarily an upgrade of SWER, rather off grid supply which would take a few years to get this in place. It was explained this option does not suit farmers who want to export spare electricity onto the grid – it is more suitable for on-site energy use.

At this point the UDV representative expressed some concern about the integrity of the rest of the asset or infrastructure for the community if farmers go offline: “Who is going to carry the cost of the grid if everyone is off grid?” Powercor explained this is an upcoming issue that will need further consideration, with the expected surge in exports by 2025 with 35% of Victorians projected to have solar based on government incentives.

4.2 Table Discussion – SWER upgrades

Following their ‘whole of room’ discussion about SWER upgrades with Powercor personnel, the stakeholders then engaged at table level. Topics in focus were the benefits that three phase would bring, the options put forward by Powercor, and whether stakeholders thought there were any further options that deserved consideration.

The benefits of three phase power were seen to be substantial and included:

- An increase in milk productivity for the region, the state and the country
- An increase in dairy industry confidence
- The ability to keep dairy farming going /enable people to stay in business
Achievement of a lower cost of production
- A positive flow on effect for those who are suppliers to dairy farms e.g. the businesses that service the plant and equipment suffer if the farmers suffer

Across the roundtable discussions, there was general support for Options 3 and 3a. Option 1 was not seen to solve the industry’s current problem as it did not involve upgrading to three phase power, and many felt that the farmers shouldn’t have to fund SWER upgrades themselves. Option 1 was also seen as an approach that could discourage overall growth in the south-west region.

“This is what is preventing growth here.”

“Option 1 doesn’t solve the problem. It doesn’t allow the region to grow.”

Option 2 was not seen to be viable, as again it was viewed as putting the cost back on to the farmers. It was also presented by Powercor as an unworkable option.

For many stakeholders, Option 3 felt like it was the most appropriate solution of the four options presented. Many argued that everyone should have an equal entitlement to power whether they live in the city or the country. They also agreed that the area was a food bowl for the whole of

Victoria. Most felt that everyone in Victoria benefitted from the region and its dairy farmers, so the cost of augmentation should be shared across the entire customer base.

"It [the dairy industry] is providing the staple ingredients for the whole of Victoria. If we want to be competitive from a trade point of view then it is needed. 35% of milk comes from this region."

"People don't know how much farmers contribute to society."

Stakeholders also liked the Option (3a) of having SAPS as a way of solving the problem, however many agreed that this was too early to implement given the cost of batteries.

Whilst Option 3 was preferred overall, some stakeholders put forward the view that the government should fund the augmentation. This assertion was based on the role of farmers in providing an essential service to the whole of Victoria, not just to Powercor customers, and that government should be helping out rural communities.

"There has been a significant drop in milk production because it is too expensive to produce. Government needs to help out."

"If the government pays then they wouldn't have to spread it across all customers. The government should pay."

"Given the wealth of Australia, the Government should be spending. There is a lack of vision and that is so frustrating."

5.0 Undergrounding SWER lines in ELCAs

Neil Watt presented the Victorian Government's requirement for Powercor to progressively replace overhead SWER lines in ELCAs with underground lines. He stated that some Government funding has been provided but that is scheduled to finish in 2020. This will leave 450km of overhead bare wire SWER in the higher risk ELCAs.

The presentation outlined the network's response to the Victorian Bushfire Royal Commission's recommendation, including the installation of REFCLs (a \$750 million investment to install and manage technology that acts like a giant safety switch to prevent fire starts) and over 1,000 bolt protectors across the network which will be completed next year. SWER undergrounding in ELCAs is also a recommendation from the Victorian Bushfire Royal Commission. Powercor presented three options going forward:

1. Do not underground - although this was deemed to not be a realistic or safe option
2. Underground the remaining SWER lines by 2030 at an additional cost of \$2.60 per customer per annum
3. Underground the remaining SWER lines by 2025 at an additional cost of \$5.10 per customer per annum

3.1 Stakeholder interaction with Powercor personnel – SWER undergrounding

During and after Powercor's presentation, a number of questions were raised by participating stakeholders. Questions to Powercor focused on: the number of lines that are not yet underground; how the business case for REFCL investment is impacted (if at all) by undergrounding of SWER lines; and, whether there is an option to upgrade to 3 Phase power in select areas when lines go underground.

Powercor explained that a business case was currently being prepared for the AER to show the need and benefits of undergrounding these lines. Powercor advised the audience that there will be 1,260 lines still to go underground when works are concluded this year.

Some stakeholders expressed genuine concerns that recently installed costly REFCLs do not work on SWER lines, that they would not have stopped the St Patrick Day Fires, and that codified areas have been watered down by reputation. Powercor confirmed that the Country Fire Authority (CFA) controls how the codified areas are defined, and that there will be more REFCLs installed as part of tranche 3 of the planned implementation. Failure to comply with the necessary installations would otherwise lead to significant fines.

Several stakeholders at the roundtable had an enthusiastic discussion about merging the SWER upgrades with undergrounding of 3 phase power. In this context, the RDV representative also wondered if this might be “a new Option 4” for the SWER upgrade if it reduced bushfire risks. Powercor explained that the network’s proposal is just focused on SWER and that it would be a considerable additional cost to convert to 3 phase power. Stakeholders were reminded that there is not a significant difference in fire danger between SWER and 3 phase power, and that other factors have a greater impact on fire starts.

Table Discussion – SWER undergrounding

During the facilitated table discussions, the majority of stakeholders were in favour of bringing the undergrounding of SWER lines forward, as the bill impact was seen to be minimal. The overarching feeling was that this option would see a faster reduction in network risk levels and a corresponding increase in network safety. .

“If bringing it forward means it is safer, it is a no brainer.”

“If it will improve bushfire safety then the sooner it goes underground the better.”

Most stakeholders were in favour of Option 3 which would involve undergrounding the SWER lines by 2025 for an increase of \$5.10 per annum per customer. However, there was some concern that the retailers would leverage that increase and actually charge a bit more. Nonetheless an increase of \$5.10 per annum was considered to be minimal.

“The \$5.10 is nothing. But it all adds up because the retailers will make that it into more.”

“\$5.10 is not much to pay. It is the cost of a cappuccino.”

Whilst Option 3 was the preferred approach across the roundtable, many still saw undergrounding of SWER lines as an opportunity to simultaneously change to 3 phase power. There was a suggestion that some of this investment should be funded by Government on the basis that bushfires were costly for the whole of Victoria.

“I think we should be looking to government to change them to 3 phase and underground.”

“There is a whole of community cost for bushfires. The VIC government should have some responsibility towards paying for this cost.”

“Why spend all this money to have the same product underground. There is an opportunity to put 3 phase in.”

“Don’t want the risk of burying SWER and then having to dig them up again to change to 3 phase. They are only looking at the one issue at a time.”

There were however, one or two who suggested that 3 phase power may not be necessary in some areas and there was no benefit in upgrading the line if that level of power wasn’t required.

“Doesn’t that depend on area? This is all about the high risk areas. If there is no load in these areas then there is no point in putting in 3 phase.”

In the course of this discussion, the ESV representative said he did not think the fire risk was that different between single phase and 3 phase power. He put the focus back on the origin of most fire starts, underlining the importance of protecting the ‘conductor’ from vegetation blowing into a fire or alternatively, bushfires being started by either a tree or pole fall. Powercor confirmed this position and also indicated that an upgrade to enable 3 Phase power to go underground would involve a substantial cost (potentially beyond the means of some residents).

Many stakeholders attending this Warrnambool roundtable focused heavily on which agencies should have or could do more. In particular, several attendees suggested that the RDV should be doing more.

6.0 Participant Evaluation Results

At the end of the forum, participants were given an evaluation sheet which enabled them to give feedback on the engagement session. Overall, the forum was well rated (see Table 1) with most of the stakeholders rating the forum as 'good'.

Table 1: Overall rating of Powercor Forum in Warrnambool

Overall Rating	N=12 #
Excellent	2
Good	7
Fair	3

Overall, how would you rate the forum?

Base: Powercor Warrnambool stakeholders (n=12)

The majority of stakeholders had no expectations for the forum. The results show that most of the stakeholders had their expectations met 'quite a bit' (n=19) or 'a fair amount' (n=11).

"I came with no expectations, but really enjoyed the discussions" (PC Warrnambool stakeholder)

Table 2: Expectations of the Powercor Forum in Warrnambool

Expectations	N=12 #
Fully	6
Quite a bit	19
A fair amount	11
A little	2
N/A	2

How much did the forum live up to your expectations?

Base: Powercor Warrnambool stakeholders (n=12)

Participants were also asked to show their agreement with a number of statements regarding the forum outcomes, the running of the forum and their overall participation.

Table 3 shows that all stakeholders (n=12) 'felt heard and had a voice in the discussion' and the majority (n=10) agreed that 'the forum was well organised and content presented was relevant to

the discussion'. Most of the stakeholders (n=7) agreed that the outcomes from the forum would be considered by the distributor.

Table 3: Powercor Forum in Warrnambool Agreement with Statements

I felt like I was heard and I had a voice in the discussion	N=12 #
Strongly Agree	2
Agree	10
Neutral	-
Disagree	-
Strongly Disagree	-
N/A	-
The forum was well organised and content presented was relevant to the discussion	N=12 #
Strongly Agree	2
Agree	8
Neutral	1
Disagree	-
Strongly Disagree	-
N/A	-
The venue and catering were satisfactory	N=12 #
Strongly Agree	3
Agree	9
Neutral	-
Disagree	-
Strongly Disagree	-
N/A	-
There was enough time to discuss the topic at hand	N=12 #
Strongly Agree	2
Agree	4
Neutral	1

Disagree	5
Strongly Disagree	-
N/A	-
I have confidence that the outcomes of the forum will be considered	N=12 #
Strongly Agree	1
Agree	6
Neutral	3
Disagree	1
Strongly Disagree	1
N/A	-

Please read the statements below about the forum and select the response with which you most agree, from 1 = strongly disagree to 5 = strongly agree

Base: Powercor Warrnambool stakeholders (n=12)

Appendix 1: Agenda

Project:	CPPCUE – Regulatory Reset Phase 4		
Event:	Warrnambool Stakeholders Forum		
Details:			
Dates/ locations/ times:	14/03/2019	Powercor	Venue: Warrnambool City Memorial Bowls Club Time 11.00-2.00pm
Forum objectives :	<ul style="list-style-type: none"> To communicate key themes, messages and key projects in relevant to the south-west region To obtain specific feedback regarding three important issues for this region: <ul style="list-style-type: none"> Upgrades of single-wire earth return (SWER) lines to three-phase for dairy farmers Increased pole inspections and replacement Undergrounding or insulating of SWER lines in bushfire construction areas 		
Time	Session details	Responsibility	Materials
11.00- 11.15am	Presentation: Welcome and Introduction <ul style="list-style-type: none"> Renate to welcome and thank for coming Purpose of forum: Explain we recently published our Draft Proposal for 2021-2025 and that we have consulted extensively with customers to develop the Draft Proposal Summarise our customers have told us they want a 'safe and dependable network, that is flexible to customer choice but also affordable' Explain we acknowledge that the Warrnambool community and the south-west is an important area and the company and we have heard their concern about capacity on the network and the condition of our assets Emphasise we are here today to get further feedback from the community on key issues for the region and beyond, which will help us shape our Regulatory Proposal to the Australian Energy Regulator (AER) in July 2019. The issues are: <ul style="list-style-type: none"> Upgrading SWER lines Increased pole replacement Undergrounding SWER lines 	Renate Vogt OR Timothy Rourke (CEO)	PP Slides
11.15- 11.20am	Housekeeping <ul style="list-style-type: none"> Brief outline of the session agenda Introduce other Powercor representatives in the room 	Ian Woolcott	PP Slides

	<ul style="list-style-type: none"> Guidelines recap Housekeeping (mobiles off, toilets, fire evacuation) Introduce opening speaker 		
11.20-11.50am	Presentation 1: Increased pole inspections and replacement Q&A	John Mifsud	PP Slides
11.50-12.10pm	Discussion on Topic 1 – Increased pole inspections and replacement <i>Participants to introduce themselves and give their role in relation to energy</i> <ul style="list-style-type: none"> What are your thoughts regarding the actions that PC has taken so far to improve pole inspection methods? <ul style="list-style-type: none"> Use of woodscan technology? Increasing inspection frequency from 2.5 years to every year Changing the safety factor threshold for unserviceable poles (trigger for replacement?) 1.25 to 1.4 (amount of sound wood will increase by 5mm) Do you support all these actions? They will result in 1000 more replacements a year. Are there any other actions you think they should be doing at this stage? Give out Topic 2: Increased pole replacements sheet on options <ul style="list-style-type: none"> Which of the options put forward do you support the most? Why? Is there anything else you would like to see happen? In your view, are there any additional insights or understandings that PC should have in shaping their proposal for the AER on this topic? 	WR Table Facilitators	Information sheet: Summary of options
12.10-12.30pm	LUNCH BREAK		
12.30-1.00pm	Presentation 2: Upgrade single-wire earth return (SWER) lines to three-phase for dairy farmers Q&A	Frans Jungarth	PP Slides

1.00-1.15pm	<p>Discussion on Topic 2 – Upgrade single-wire earth return (SWER) lines to three-phase for dairy farmers</p> <p>Give out Topic 1: SWER line upgrade sheet on options</p> <ul style="list-style-type: none"> • What are the pros and cons of each option? <i>Facilitator to go through each option individually</i> • Which if any of the options do you support? • Do you support the approach in this region and on a wide scale? • What should the role of each party be? • Thinking about all aspects of your electricity supply, is this your priority? • What are the main benefits of upgrading to three-phase for this region? i.e. If a cost benefit analysis is undertaken, what are the benefits to dairy farmers that should be included? <ul style="list-style-type: none"> ○ Then prompt with: Could it encourage further industry growth and regional employment? ○ Tell us what changes or outcomes you'd expect to see and the extent of change that could occur? • Are there any other options in your view or any variation on the options that is preferred? • In your view, are there any additional insights or understandings that PC should have in shaping their proposal for the AER on this issue? 	WR Facilitators	Information sheet: Summary of options
1.15-1.25pm	DESSERT BREAK		
1.25-1.40pm	<p>Presentation 3: Undergrounding or insulating of SWER lines in bushfire construction areas</p> <p>Q&A</p>	Neil Watt	PP Slides
1.40-1.55pm	<p>Discussion on Topic 3: Undergrounding or insulating of SWER lines in bushfire construction areas</p> <p>Give out Topic 3: SWER undergrounding sheet on options</p> <p><i>As you heard, the Victorian Government Powerline Relocation Fund is scheduled to finish in 2020, which will result in 400km of Powercor SWER lines in the highest risk areas (ELCA) being replaced with underground or insulated overhead conductors. This leaves 450km of overhead bare wire SWER in the high risk areas.</i></p>	WR Facilitators	Summary of topic

	<ul style="list-style-type: none"> • Which is your preferred option for these remaining SWER lines? What are the key factors for you in making that decision? • Are there other options or variations on these that could be considered - is there anything else you would like to see happen? • In your view, are there any additional insights or understandings that PC should have in shaping their proposal for the AER? 		
1.55-2.00pm	<p>Summing up, thank you</p> <ul style="list-style-type: none"> • Renate to thank attendees and acknowledge the value of discussions and feedback provided. • Restate Powercor's desire to work together to further understand issues and implement sensible strategies for the region to move forward. • Outline what next steps will be. 	Renate Vogt	

Appendix 2: Materials

Topic 1: Increased pole replacements



Option 1:
Proceed with
1,000 more pole
replacements

- No change to current plan — an **increase of 1,000 pole replacements per annum**
- Cost would be approximately \$10m per annum
- Included in the Draft Proposal and estimated bill reduction (average cost = 50 cents per customer per annum)



Option 2: Increase pole replacements by more than 1,000 per annum

- A proactive replacement program (that brings forward replacements from future years) will be required in addition to condition based replacement
- **Increase of an additional 2,000 poles** totaling ~\$20m per annum, or \$1.10 per customer per annum
- **Increase of an additional 3,000 poles** totaling ~\$30m per annum, or \$1.60 per customer per annum
- **Increase of an additional 4,000 poles** totaling ~\$40m per annum, or \$2.10 per customer per annum

Topic 2: SWER line upgrade



Option 1: Customer side solutions

- Supplement existing SWER lines with customer side solutions such as generators or batteries
- Paid for by individual customers
- This option would help to reduce peak demand and ensure consistently reliable access to energy
- However, the 'New Energy Report' considers battery option too costly and diesel generators as unable to underpin substantial expansion



Option 2: Connection project

- This option would provide 3-phase powerline capacity
- Connection project does not require a 'cost-benefit' analysis
- Requires a customer contribution
- Due to size of the customer contribution it is unlikely to be feasible



Option 3: Augmentation project

- This option would provide 3-phase powerline capacity
- No customer contribution—rather the cost would be spread across all customers' electricity bills
- To get this approved by the Australian Energy Regulator (AER) we need to demonstrate benefits > cost
- Potential to use modelling to prove broader economic benefit of SWER line upgrade



Option 3b: SAPs Augmentation project

- Same as Option 3— need to demonstrate benefits > costs
- Customer supplied by stand-alone power system (SAP) rather than 3 phase network connections
- SAP supply may offer a lower cost alternative to network supply and be more likely to provide net benefits
- Relies on Australian Energy Market Commission (AEMC) changing distribution network planning arrangements

Topic 3: SWER undergrounding



Option 1: Do not replace

- SWER lines remain above ground
- No changes to bushfire risk
- No capital expenditure and no cost to customer



Option 2:
Underground remaining SWER lines by 2030

- Continue to underground remaining SWER lines in highest risk areas at current rate, ending in 2030
- Improves bushfire risk
- Approximate cost of \$49m in 2021-2025 and \$49m in 2026-2030
- Not included in the Draft Proposal—additional \$2.60 per customer per annum



Option 3:
Underground remaining SWER lines by 2025

- Continue to underground all remaining SWER lines in highest risk areas at double the current rate, ending in 2025
- Improves bushfire risk
- Approximate cost of \$98m in 2021-2025
- Not included in the Draft Proposal—additional \$5.10 per customer per annum