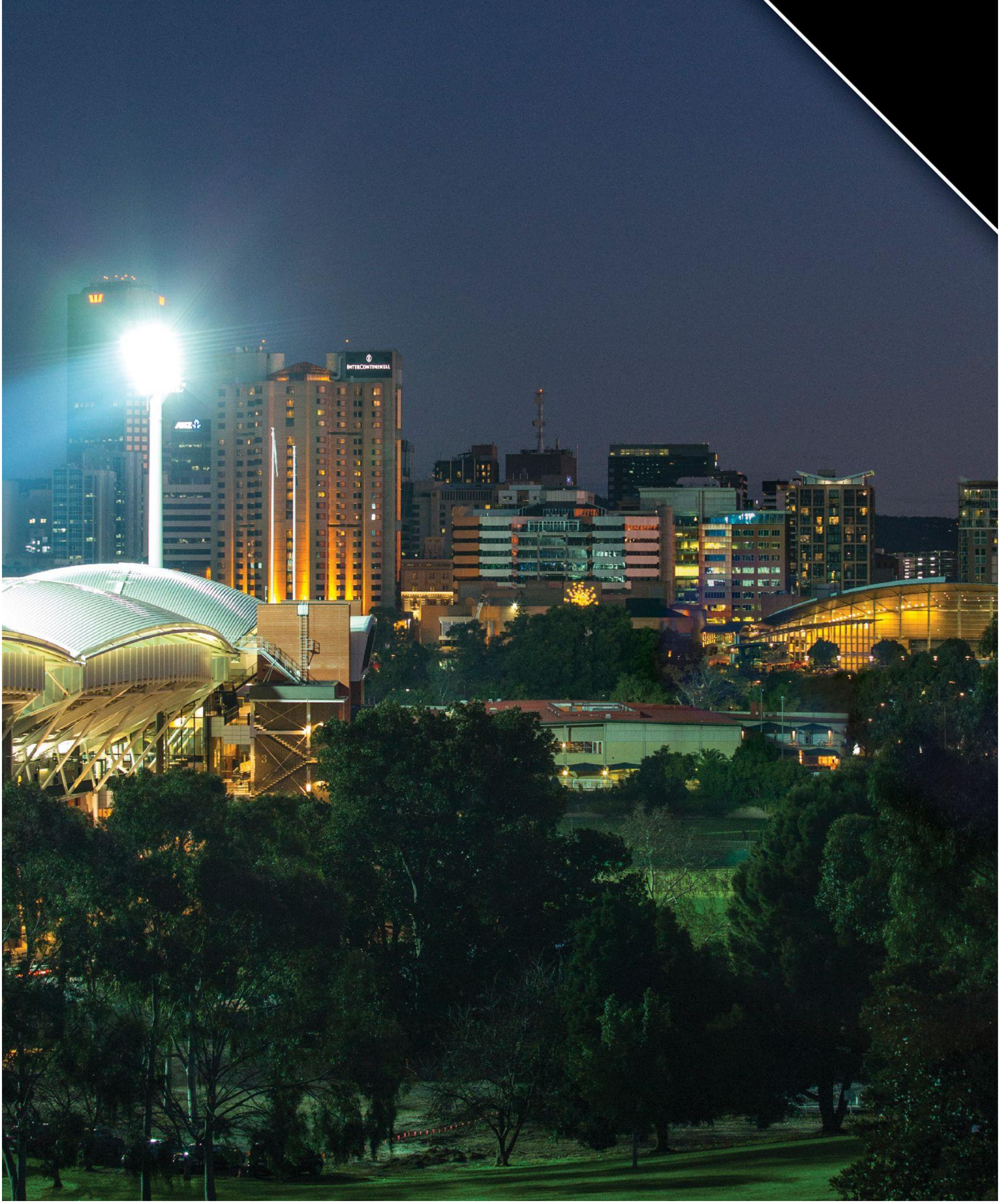
Attachment 20.50

SA Power Networks:
Bushfire Mitigation Summary



Contents

1. Overview

In Chapters 11 and 20 of the Proposal, SA Power Networks details the bushfire mitigation strategies in which it proposes to invest for the 2015-2020 regulatory period. SA Power Networks considers that this investment is needed to maintain pace with the industry which is setting new standards in the mitigation of the risk of bushfire from electricity distribution assets.

Chapter 20 includes:

- a summary of the relevant Rule requirements;
- an overview of the bushfire risk faced in South Australia;
- a description of certain of the SA Power Networks assets relevant to the proposed bushfire mitigation strategies;
- an overview of bushfire mitigation trends in the industry;
- a description of the process of investigation that SA Power Networks has undertaken to determine what bushfire mitigation practices it should adopt;
- a description of the bushfire mitigation strategies that SA Power Networks considers a prudent distribution network service provider would undertake in order to maintain pace with industry practice; and
- the forecast capital expense and operating expense of implementing the proposed bushfire mitigation strategies.

2. Rule requirements

Sections 6.5.7(a) and 6.5.6(a) of the Rules require that SA Power Networks submit a forecast of capital expenditure and operating expenditure, to meet the capital expenditure objectives and operating expenditure objectives respectively, over the relevant regulatory period.

Relevant to this chapter, those objectives include maintaining the quality, reliability and security of SA Power Networks standard control services (sections 6.5.7(a)(3) and 6.5.6(a)(3) of the Rules).

As this chapter will highlight, investment undertaken to reduce the incidence of bushfire is an important part of maintaining the quality, reliability and security of SA Power Networks distribution services. It is also a key component of SA Power Networks' commitment to continuous improvement in connection with the mitigation of bushfire start risk from its network.

Sections 6.5.7(c) and 6.5.6(c) of the Rules require the AER to accept SA Power Networks' proposed capital expenditure and operating expenditure respectively, if it reasonably reflects:

1. the efficient costs of achieving the capital/operating expenditure objectives;
2. the costs that a prudent operator in SA Power Networks' circumstances would require to achieve the capital/operating expenditure objectives; and
3. a realistic expectation of the demand forecast and cost inputs required to achieve the capital/operating expenditure objectives.

In deciding whether the AER must accept SA Power Networks' proposed capital and operating expenditure, the AER must have regard to, among other things, the extent to which the capital or operating expenditure (as appropriate) includes expenditure to address the concerns of electricity consumers as identified through engagement with electricity consumers (sections 6.5.7(e)(5A) and 6.5.6(e)(5A) of the Rules).

In Chapter 20 SA Power Networks demonstrates that:

1. bushfire mitigation is critical to maintaining the quality, reliability and security of SA Power Networks' standard control services;
2. the proposed bushfire mitigation strategies are a cost efficient way of achieving that objective;
3. a prudent operator in SA Power Networks' circumstances would implement the proposed strategies; and

4 the forecast capital and operating costs associated with the proposed strategies is a realistic expectation of those costs.

3. Bushfire risk in South Australia

3.1 Electricity assets start bushfires

Risk mitigation, not risk elimination

As an above ground network, the SA Power Network assets are exposed to the environment. Accordingly if an asset fails, or vegetation contacts these assets, the consequential escape of electricity can lead to a fire ignition.

Complete elimination of the risk of fire ignition is cost prohibitive. Instead SA Power Networks' approach to the management of this risk is to reduce that risk as far as practicable, using a prudent allocation of funds.

SA Power Networks seeks to achieve this objective by:

1 analysing the causes of fire ignitions on its network;

2 understanding the environmental changes that will impact the risk of fire ignition in South Australia into the future; and

3 monitoring research and investigations into fire ignition from electricity assets conducted in Australia.

Incidence

SA Power Networks' analysis indicates that on average approximately 67 fires start from its assets per annum. Of those, 53 are in high bushfire risk areas (**HBFRA**) or medium bushfire risk areas (**MBFRA**).

SA Power Networks' analysis indicates that per 1,000kms, almost half (45%) of these fires, in MBFRA and HBFRA, are from 33kV assets. The second highest proportion of electricity-caused fire starts (23%) are associated with 7.6kV and 11kV assets.

Of the 15 Black Saturday 2009 fires investigated by the VBRC, 5 were associated with electricity assets,[1] either as a result of the failure of an asset or as a result of external contact with live conductors.

While the number of electricity-caused fires in South Australia is lower than that in Victoria, SA Power Networks is committed to further reducing the incidence of fire ignition because of the catastrophic type consequences from events like Black Saturday 2009.

Extreme fire danger days

On days of extreme fire danger the proportion of fire starts linked with electricity asset failures increases dramatically.[2] The implications of this are significant given that Australia and South Australia in particular, is likely to face more extreme fire danger days in the future as air temperatures continue to rise.

Since the 1970s there has been an increase in the incidence of extreme fire weather and longer fire seasons across large parts of Australia; the largest increases occur in the south east and inland.[3] According to the BOM, continued increases in extreme temperatures are likely, because over a period of about 55 years, the number of record hot days across Australia has doubled.[4]

The noticeable trend in global warming applies specifically to South Australia. The BOM estimates that over the past few decades, average day and night time temperatures have increased by approximately 1 degree Celsius.[5] Further, the number of days when the average daily temperature exceeded 32.5 degrees Celsius, have continued to increase and since 2000

[1] 2009 Victorian Bushfires Royal Commission, *Final Report Summary,* July 2010, page 12.
[2] 2009 Victorian Bushfires Royal Commission, *Volume II Fire Preparation, Response and Recovery*, July 2010, page 148.
[3] Bureau of Meteorology, *State of the Climate 2014*, 2014, page 9.
[4] Climate Commission, *The Critical Decade: Extreme Weather*, April 2013, page 19.
[5] Bureau of Meteorology, *Climate extremes analysis for South Australian Power Network operations*, 2014, page 4.

have doubled in frequency.[6] The BOM estimates that this pattern of extreme weather is likely to continue over the next five to 10 years.[7]

Since electricity-caused fires are more likely to occur on extreme fire danger days, and with forecasts of more frequent and extreme high fire danger days, the number of electricity-caused fires will likely increase and become more intense and potentially create more damage, unless there is prudent investment to reduce the likelihood of electricity assets starting fires.

3.2 Major bushfires in South Australia

The second most catastrophic bushfire in Australia's history was Ash Wednesday, which in 1983 resulted in the death of 28 people in South Australia and 47 people in Victoria.[8] In South Australia, the fires burnt more than 159,000 hectares of land and caused damage to several hundreds of homes.[9] The total estimated cost of damage caused by the fires is in excess of $300 million.[10]

In 2005 on a day of extreme fire danger, fires that burnt on the Eyre Peninsula caused an estimated $41 million in damage,[11] burning more than 78,000 hectares of land and causing the death of 9 people.[12]

[6] Bureau of Meteorology, *Climate extremes analysis for South Australian Power Network operations*, 2014, pp 4, 12-13.
[7] Bureau of Meteorology, *Climate extremes analysis for South Australian Power Network operations*, 2014, page 13.
[8] The most devastating fire was Black Saturday in Victoria in 2009.
[9] Country Fire Authority, *Ash Wednesday Factsheet,* accessed 30 May 2014 at http://www.cfa.vic.gov.au/fm_files/attachments/kids_and_schools/fact-sheets/fs_ash-wednesday.pdf.
[10] Figure quoted in today's terms. Insurance Council of Australia, *Historical Disaster Statistics*, accessed 30 May 2014 <http://www.insurancecouncil.com.au/industry-statistics-data/disaster-statistics/historical-disaster-statistics>.
[11] Figure quoted in today's terms. Insurance Council of Australia, *Historical Disaster Statistics*, accessed 30 May 2014 <http://www.insurancecouncil.com.au/industry-statistics-data/disaster-statistics/historical-disaster-statistics>.
[12] South Australia Country Fire Service, *Bushfire History*, accessed 30 May 2014 <http://www.cfs.sa.gov.au/site/about/history/bushfire_history.jsp.

In addition to the immediate threats to life, the displacement of people and the damage to infrastructure, livestock and the environment, the effects of bushfire can include longer-term and widespread economic damage (eg. reduced business activity, diverted resource allocation, and reduced tourism).

3.3 Concerns of electricity consumers

Independent consumer consultations conducted by Deloitte indicate that bushfire mitigation activities and maintaining electricity infrastructure are South Australian electricity consumers' top two electricity safety and reliability priorities.[13]

Of possible bushfire management initiatives, consumers' most preferred building powerlines that are less prone to starting fires.[14]

Support for increased standards is also high with 72% of electricity consumers strongly supporting SA Power Networks increasing its inspection, maintenance and construction standards in bushfire risk areas to reduce the risk of fire starts from powerlines.[15]

The Deloitte consumer survey report is provided as Attachment 6.5 to this Proposal.

4. SA Power Networks network assets

4.1 General

In developing a tailored set of strategies for reducing the risk of electricity-caused fire starts, it is first necessary to understand how SA Power Networks' assets can cause fires to start, and how this can be avoided.

SA Power Networks' infrastructure differs from that interstate as follows:

- SA Power Networks' poles are made of concrete and steel (**stobie poles**), whereas wooden poles are often used

[13] Deloitte, *Online Consumer Survey*, July 2013, page 7.
[14] Deloitte, *Online Consumer Survey*, July 2013, page 47.
[15] Deloitte, *Online Consumer Survey*, July 2013, page 48.

interstate. Stobie poles have a longer life than wooden poles, are less likely to collapse in high winds and unlike wooden poles are non-combustible.
- Cross-arms on stobie poles are made of steel, whereas crossarms interstate are commonly wooden.
- SA Power Networks grounding system, in many locations, uses a common multiple earthed neutral arrangement that, together with steel poles and cross-arms, provides a low impedance path for fault current. This leads to faster protection operation and minimises the risk that a spark will ignite nearby material.

The bushfire mitigation strategies proposed in this chapter take into account the differences between SA Power Networks' assets and those interstate.

4.2 Exposure to the environment over time

Most of SA Power Networks' electricity network was built between 40 and 60 years ago. Much of the network has therefore been exposed to environmental conditions such as wind, heat and lightning, for a significant period of time. Whilst these assets are long life assets, after 40 to 60 years they are more likely to have deteriorated, and therefore present a greater risk of failure. This risk is best managed through regular asset inspections.

4.3 Network protection devices

Reclosers operate to clear a fault on the Network by shutting off power on detecting the fault and then restoring power if the fault is transient, or permanently shutting off power if the fault is permanent.

SA Power Networks uses automatic circuit reclosers for its 33kV, 11kV and 19kV networks. Automatic reclosers can be set to re-close a circuit a number of times at specified time intervals, thereby improving the reliability of electricity for transient faults. However, on extreme fire risk days, just one or two reclose attempts can cause a fire under certain conditions.[16] Parts of SA Power Networks' electricity grid have no reclosers and the only protection is high-side fuses. Often high-side fuses do not operate fast enough to materially reduce the risk of fire ignition following the detection of a high current fault.

Also many of SA Power Networks' reclosers are ageing. In particular the failure rate of hydraulic reclosers is increasing as these units approach end of operating life.

Finally, older reclosers have technical limitations. Specifically, settings cannot be adjusted remotely as required on extreme fire risk days, and in particular suppressing the reclose function requires an on-site visit. This means that when the bushfire risk is high, SA Power Networks must either switch off upstream devices, thereby disrupting more supply than necessary, or require staff to manually disable and then reset the devices.

4.4 High voltage distribution lines

SA Power Networks' distribution network comprises bare overhead 66kV and 33kV transmission lines, three phase and single phase 11kV distribution lines, 19kV SWER lines, and low voltage lines.

The most common distribution voltage used in South Australia is 11kV. SA Power Networks also has significant lengths of 33kV lines (over 2,500 km) which run through MBFRA's.

The highest risk lines in terms of bushfire starts per 1,000kms are:

1. 33kV networks, which over the past five years have been associated with 45% of fire starts in HBFRA and MBFRA;
2. 7.6 &11kV networks, which over the past five years have been associated with 23% of fire starts in HBFRA and MBFRA; and

[16] Powerline Bushfire Safety Taskforce, *Final Report*, September 2011, page 3.

3. low voltage networks, which over the past five years have been associated with 16% of fire starts in HBFRA and MBFRA.

While the 33kV assets are the riskiest on a per 1,000km basis, the 11kV and 7.6kV assets start the largest number of fires. From 2008 to 2012 these lines were associated with over 50% of SA Power Networks fire starts.

4.5 Overvoltage protection

Electric power systems employ devices to protect them from the effects of excessive voltage due to causes such as lightning strikes.

For many years SA Power Networks installed Rod Air Gaps (RAG) or Current Limiting Arcing Horns (**CLAH**) on its high voltage powerlines. These are low cost devices but they have been superseded by surge arrestors, which are a more expensive but more reliable form of overvoltage protection.

RAGs and CLAHs can fail and start fires when discharging arcs of electricity, or, if the devices fail to clear the surge, they overheat.

4.6 Metered mains

In South Australia there are approximately 5,000 metered mains installations in HBFRA and MBFRA.[17]

Metered mains are a potential fire risk because uncertainty over ownership has meant these lines are not inspected or maintained.

5. Recent industry trends in bushfire mitigation

5.1 The 2009 Victorian Bushfires Royal Commission (VBRC)

After the catastrophic bushfires of Black Saturday in February 2009, the VBRC was established to investigate and report on the causes, operational response, preparations for and impacts of the fires.

The VBRC found that electricity asset failures lead to fire starts and called for “major changes” to the operation and management of ageing electricity infrastructure.[18] It determined that it was “time to start replacing the ageing infrastructure” and called on both the State of Victoria and the distribution businesses to invest in infrastructure improvements in order to “substantially remove one of the primary causes” of catastrophic fires in Victoria.[19]

A number of the VBRC’s recommendations have been adopted through amendments to Victoria’s electricity safety legislation and regulations. This effectively mandates a new Victorian standard of practice, which is funded by reference to a new funding mechanism based on providing financial incentives for fire mitigation based investment.

5.2 The Powerline Bushfire Safety Taskforce (PBST)

The PBST was commissioned by the Victorian Government to advise it on strategies that would maximise value from the implementation of the VBRC’s recommendations relating to: (a) the replacement of powerlines and reclosers, and (b) undergrounding or insulating powerlines.

The PBST adopted a “precautionary-based approach” to determine what should be done to reduce bushfire risk from powerlines. Under that approach, it adopted “all reasonable practicable precautions” having regard to balance between the

[17] Metered mains are the electrical infrastructure, typically found on SWER lines between the revenue meter and the customer’s switchboard. They are used to aid the efficient reading of meters by being located near the road.

[18] 2009 Victorian Bushfires Royal Commission, *Final Report Summary,* July 2010, page 12.

[19] 2009 Victorian Bushfires Royal Commission, *Final Report Summary,* July 2010, page 12.

magnitude of the risk and the effort required to reduce the risk."[20]

SA Power Networks considers that the PBST's recommendations are likely to now inform good industry practice in Australia.

Even allowing for the differences between Victoria and South Australia's electricity infrastructure, some recommendations of the PBST still apply to the distribution network in South Australia. Those recommendations have been carefully analysed in assessing which mitigation strategies should be selected for inclusion in SA Power Networks package of bushfire mitigation strategies.

5.3 Community expectations

The VBRC heard that the community expects that the risk of bushfires should be reduced by network owners. That expectation is consistent with operator initiated investment in bushfire mitigation in order to reduce preventable electricity asset related fires.

6. Investigation and consultation undertaken by SA Power Networks

In 2012 SA Power Networks engaged independent consultants Sinclair Knight Merz, now Jacobs Engineering Group, to report on SA Power Networks bushfire mitigation management practice vis-à-vis other Australian Distribution Network Service Providers (**DNSPs**), and to advise what, if any, strategies it should adopt in order to maintain consistency with the industry.

Jacobs reviewed and reported on:

- SA Power Networks' current practices and procedures for bushfire risk management;
- SA Power Networks' fire start history in order to establish root cause of bushfire starts;
- current industry bushfire risk management practices and initiatives of DNSPs in Australia; and
- the findings of investigations into bushfires conducted by the VBRC and the PBST.

Jacobs adopted the following methodology in formulating its strategies:

1 review SA Power Networks' current bushfire risk management strategies to reveal the effectiveness of current practices and determine the cause of fire starts in SA Power Networks' distribution area;
2 identify potential gaps in SA Power Networks' practices, having regard to recent trends in, and current good industry practice relating to, bushfire mitigation;
3 determine which strategies would close those potential gaps, considering each strategy's benefits, limitations and effectiveness in reducing fire starts;

The set of strategies excluded:

4 strategies adopted by other industry participants that did not apply to SA Power Networks (e.g. because of the nature of its assets);
5 low benefit strategies that could only affect a maximum of 10% of annual fire starts; and

The Jacobs report is provided as Attachment 11.8 to this Proposal.

7. Strategies to re-align with industry practice

7.1 Investment in assets

Replacement of 30 non-SCADA reclosers per annum with SCADA reclosers on 33kV, 19kV and 11kV lines

SA Power Networks understands that most Australian DNSPs are moving toward the replacement of older style reclosers with modern SCADA reclosers.

In accordance with good industry practice, SA Power Network has historically disabled the reclose function on its reclosers in high

[20] Powerline Bushfire Safety Taskforce, *Final Report*, September 2011, page 4.

bushfire risk areas on high bushfire danger days. Many of the reclosers can only be operated manually and hence crews need to attend on-site. This process involves significant expense due to the associated labour costs.[21] Those costs can be avoided through investment in remote controlled SCADA reclosers.

Also evidence in Attachment 11.8 demonstrates that the risk of a fire start from a powerline fault is significantly reduced when protection is changed to single shot fast acting clearing mode.
To avoid placing crews in high bushfire risk situations and re-align with the rest of the industry, SA Power Networks proposes to replace its existing manual reclosers with SCADA reclosers. SA Power Networks proposes to target replacing these devices on its most at-risk powerlines in HBFRA's.

Installation of SCADA reclosers where back-up protection is deficient

DNSPs have a legislative requirement to operate a safe electricity grid. Therefore utilities install back-up protection to operate if the main protection fails. Investigations of recent fault events has highlighted that there are locations on the Network where back-up protection is inadequate.

Also there is an increase in the failure rate of SA Power Networks' hydraulic reclosers. Hence an investment is required by SA Power Networks in its back-up protection systems to avoid a fire start risk and safety risk.

SA Power Networks proposes to install electronic SCADA reclosers to provide an economical and effective way of achieving adequate back-up protection.

Undergrounding LV, 11kV and 33kV lines

Fire start risk from bare high voltage distribution lines, can be mitigated using one or more of the following strategies:

- undergrounding to Bushfire Safer Precincts
- where there is financial benefit or contribution toward the cost of undergrounding; and
- installing insulated conductors in HBFRA's.

Both the VBRC and PBST recommended either undergrounding or some form of insulated overhead cable.[22]

Due to the high cost of wholesale undergrounding, SA Power Networks proposes to limit the replacement of bare conductor with underground cable to supply Bushfire Safer Precincts, and where customers have indicated that they would be willing to pay for targeted installation of underground cable because of joint visual amenity and bushfire risk reduction benefits.

Replacement of RAGs (Rod Air Gaps) and CLAH (Current Limiting Arcing Horns) with surge arrestors

RAGs and CLAHs are a legacy technology used by SA Power Networks to protect electricity distribution equipment from the effects of overvoltages. Like most Australian DNSPs, SA Power Networks now uses surge arrestors to protect their equipment.

SA Power Networks considers that a targeted and phased replacement of RAGs and CLAHs with surge arrestors will reduce the risk of fire starts from its network.

Testing and trialling of Ground Fault Neutralising Technology

Ground Fault Neutralising Technology (**GFN**) is a relatively new earth fault protection technology to Australia but trial installations by Victorian DNSPs continue.

[21] Because many SA Power Networks reclosers require manual disabling.

[22] Recommendation 27 of the VBRC; Powerline Bushfire Safety Taskforce, *Final Report*, September 2011, page 1.

Independent estimates indicate that GFN technology is likely to have a significant impact on reducing fire starts. The PBST estimates that this technology may reduce bushfire risk start by approximately 70%.[23]

GFN operates to rapidly detect and reduce earth fault currents from events such as a bare conductor on the ground. This has the effect of:

- improving supply reliability; and
- avoiding high energy flows into the fault, which creates a fire start risk.

While SA Power Networks has received some information on the effectiveness of this technology in mitigating bushfire start risk, it considers further testing should be undertaken prior to a rollout, both to obtain more information about GFN performance effectiveness and to test the suitability of GFN for SA Power Networks infrastructure.

Accordingly, SA Power Networks proposed a cautionary approach by installing a GFN test-rig in 2016/2017, followed by a trial installation at two substations in the HBFRA, to assess compatibility with SA Power Networks infrastructure, and enable SA Power Networks to gain operational experience.

Scoping and re-construction of metered mains

'Metered mains' refers to the electricity infrastructure between the revenue meter and the customer's switchboard, where the switchboard is remote from the meter. Metered mains are typically found on SWER lines, usually where multiple buildings or bore pumps owned by a single customer are supplied from a single meter, or multiple meters if there are multiple tariffs.

Uncertainty over ownership of these assets has resulted in a lack of maintenance and consequently their condition presents public safety and bushfire start risk. To address this, SA Power Networks proposes a structured implementation plan that will:

- ascertain, for its approximately 5,000 metered mains in HBFRA and MBFRA, their location and condition;
- evaluate the safety and bushfire risks posed by those assets and the priority for their remediation; and
- scope each job to either upgrade or relocate the metered mains installations.

SA Power Networks has already started inspecting and recording installation condition in preparation for the broader repair task. It expects to have completed gathering the conditions information by the end of 2014.

7.2 Inspections

Increasing the frequency of periodic inspections

Regular asset inspections is an important part of mitigating bushfire risk by ensuring a DNSP tracks the condition of its assets and prioritises them for repair or replacement before they fail.[24]

Following a recommendation from VBRC, the frequency of asset inspections in Victoria was recently reduced to a maximum three yearly cycle.[25]

SA Power Networks proposes to reduce the cycle of asset inspections in HBFRA and MBFRA from ten years to five years, which is in line with most DNSPs, but not to the level of the Victorian DNSPs.

Extending and increasing the frequency of thermographic inspections for 11kV lines

Thermographic imaging devices can improve the effectiveness of inspections by helping to identify potential conductor and joint faults. Jacobs believes that a number of the fire starts which it investigated could have been avoided through effective thermographic inspections.

[23] PTST, page 48.

[24] 2009 Victorian Bushfires Royal Commission, *Volume II Fire Preparation, Response and Recovery*, July 2010, page 159.

[25] Recommendation 28 of the VBRC.

Other DNSPs also use thermographic inspections which the VBRC commended as an effective inspection technique.[26]

SA Power Networks currently undertakes thermographic inspections every two to five years depending on the fire risk area and the asset voltage. However, only the main backbone of a feeder is inspected. The proposal is to expand the existing program to inspect all segments of feeders in HBFRA's and MBFRA's.

8. Forecast expenditure

8.1 Capital expenditure

The following cost estimates for the proposed mitigation strategies described in this chapter have been forecast by independent experts Jacobs. Disaggregated cost information is provided in Jacobs' report provided as Attachment 11.8 to this Proposal.

[26] 2009 Victorian Bushfires Royal Commission, *Volume II Fire Preparation, Response and Recovery*, July 2010, page 159.

Table 1: Power Networks' capital expenditure on bushfire mitigation for the 2015-20 RCP (Real 2015 $ million)

Section	Proposal	2015/16	2016/17	2017/18	2018/19	2019/20	Total
7.1	Replacement of 30 non-SCADA reclosers per annum with SCADA reclosers on 33kV, 19kV and 11kV lines	3.6	3.6	3.6	3.6	3.6	**18.0**
7.1	Installation of SCADA reclosers where back-up protection is deficient	2.9	3.0	3.4	3.6	5.6	**18.5**
7.1	Undergrounding LV, 11kV and 33kV lines	5.7	5.9	3.8	6.3	4.9	**26.6**
7.1	Replacement of RAGs (Rod Air Gaps) and CLAH (Current Limiting Arcing Horns) with surge arrestors	2.4	2.4	2.4	2.4	2.4	**12.0**
7.1	Testing and trialling of Ground Fault Neutralising Technology	0.0	1.0	4.0	5.0	2.0	**12.0**
7.1	Scoping and re-construction of metered mains	4.1	8.2	8.2	8.2	4.1	**32.8**
							Total 119.9

8.2 Operating expenditure

The following cost estimates for the proposed mitigation strategies described in this chapter have been forecast by independent experts Jacobs. Disaggregated cost information is provided in Jacobs' report provided as Attachment 11.8 to this Proposal.

Table 2: Power Networks' operating expenditure on bushfire mitigation for the 2015-20 RCP (Real 2015 $ million)

Section	Proposal	2015/16	2016/17	2017/18	2018/19	2019/20	Total
7.2	Increasing the frequency	2.3	2.6	2.7	2.7	2.7	**13.0**
7.2	Extending and increasing the frequency of thermographic inspections for 11kV lines	0.5	0.5	0.5	0.5	0.5	**2.5**
						Total	**15.5**