

“These fires resulted in significant loss of property and stock, and trauma to the community.”

TRAUMA

A Submission in response to Energy Safe Victoria:

Draft report:

Powercor Wood Pole Management

An assessment of sustainable wood pole safety outcomes

Public Technical Report

December 2019

Jill Porter

The Sisters

Victim

Garvoc/The Sisters Fire

St Patrick's Day 2018

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To Whom it may Concern

Thank you for the opportunity to make a submission into the ESV Draft Report:
Powercor Wood Pole Management.

From the outset the community of Garvoc/The Sisters, and the wider south west community has sought genuine engagement and reform. We have not lamented the occurrence of the St Patrick's Day Fires, but rather chosen to empower ourselves with knowledge and seek positive change to ensure that it does not happen again; that another rural community should not endure our ongoing **trauma**.

This submission will comprise of two sections.

Section 1 will highlight the systemic inaction of Government and Energy Safe Victoria over a period of many years preceding the St Patricks day fires.

And

Section 2 will discuss the ESV Draft Report and its inability to hold network distribution business, Powercor Australia Limited to account.

Our community expects commitment from the Victorian State Government and Energy Safe Victoria to address inaction and implement necessary change to ensure a proactive and technically capable Regulator and a safe electrical distribution network by:

1. acknowledgement of community **trauma**.
2. formal involvement of community in decision making surrounding future bushfire mitigation
3. transparency in the appointment of the new Director of Energy Safety, and including any change to corporate structure and governance of ESV
4. urgent and overdue adoption of ALL Grimes recommendations to ensure an independent and capable Safety Regulator.
5. urgent review of outdated Safety Act (1998) and adoption of a modern Act and Regulations fitting for a privatised and regulated monopoly market.
6. adoption of “trigger events” in State legislation to allow the Australian Energy Regulator to consider the “true” costs of a bushfire to a community when making its regulatory determinations.
7. Stronger civil penalties for breaches to safety act and regulations.
8. Further review of incentive/penalty schemes for safety/fire indices, including monitoring and incentivising asset health.

Our community continues to call for positive change so all Victorians can be safe each bushfire season. As the VBRC said in 2010 “the threat of further catastrophic bushfires makes **swift** action essential.”

Unfortunately, action was not swift and today we suffer the resulting **trauma** of years of inaction.

Please do not let this happen again.

Yours faithfully

Jill Porter

Summary of this Submission

Section 1 demonstrates the missed opportunities and inaction of Energy Safe Victoria (ESV) over many years. ESV, under the tenure of Director of Energy Safety, Mr Paul Fearon has over the last 10 years, failed to recognise and further analyse the wood pole management processes of network distribution businesses, despite many warning signs. This has allowed Powercor to deliver a wood pole management system that is not “fit for purpose” and does not provide “sustainable safety outcomes for the future”, resulting in devastating and **trauma** causing fires.

Section 2 demonstrates an inability of ESV to adequately define a forward plan to ensure community safety from electricity caused fires. The ESV draft report formally recognises a lack of adequate wood pole management by Powercor, yet the recommendations fall short of ensuring future safety for Victorians.

In order for all Victorians to be safe from electricity caused fires, there needs to be an acknowledgement and value placed on the “real costs” of a bushfire to individuals, families, communities and Victoria as a state.

Only when these costs are adopted and absorbed into culture, regulation and economics by all parties will there be sufficient incentive for the necessary changes to be made.

We require a change in mindset across all levels of Government (state and federal) , Energy Safe Victoria, the Australian Energy Regulator, National Electricity Rules (AEMC) and network distribution businesses.

We must all collaboratively value SAFETY as an overarching and critical priority.

“we choose SAFETY over reliability”

“we had to shift our priorities from keeping the lights on to keeping the public safe”

-Caroline Winn (Chief Operations Officer, San Diego Gas & Electric Company).

Section 1.

I would like to express the overwhelming dissatisfaction and disappointment of our rural community,

- that this report has only been developed in response to a long and largely belittled community campaign to highlight the glaring inadequacies of Powercor Australia Ltd (PAL)'s regime of inspection, maintenance and replacement of assets.
- that Garvoc/The Sisters Fire on the evening of 17 March 2018 did "result in significant loss of property and stock, and **trauma** to the community". And yet in stark comparison, Powercor Australia Ltd, and its senior executive team remain cost and **trauma free**.
- that our community continues to be unheard. There is a lack of respect, no genuine engagement or value of local knowledge.

Energy Safe Victoria

It is clearly evident, that Energy Safe Victoria is a weak and captured Regulator.

Figure 1 below demonstrates the lack of action and failure of retired Director of Energy Safety, Mr Paul Fearon, and Energy Safe Victoria to act on early warning indications and regulate necessary critical improvements in network distribution businesses asset inspection, maintenance and inspection practices over a more than 10year period, leading up to St Patrick's Day fires.

In considering Figure 1, it is difficult not to wonder had ESV heeded these warning signs in a proactive and timely manner AND acted as a technically competent and independent Regulator, whether Pole 4 (a 1964 class 3 mountain grey gum pole, reinforced with double staking in 1994 and on a

significant lean) would have been in the ground in service on 17 March 2018, subsequently failing and causing **trauma** and a devastating fire.



Figure 2 Pole 4 (taken December 5 2012)

Source: ESV Technical Report Garvoc/The Sisters Fire (March 2018).

Figure 7: failed Pole 4, 974 Sisters-Garvoc Road




Source: ESV Technical Report Garvoc/The Sisters Fire (March 2018).

Figure 1. Timeline of ESV and State Government Inaction

<u>Date:</u>	
October 2004	<p>Powercor submission to Essential Services Commission's electricity price review for 2006-2010 recognised that "age and condition are closely correlated".</p> <p>"there is a substantial peak in the age of assets, indicated by the example of wood poles....in 2004 there are 37,000 wood poles 50 years and older, however this will increase to approximately 62,000 by 2010 based on average replacement of 1500 wood poles per year."</p>

July 2005	ESV's bushfire mitigation audit of SP Ausnet noted that five of 11 items found defective had been inspected in the previous two years, leading the auditor to conclude there "may be an issue with pole top attachments lasting the full 5year inspection cycle".
2008/09	ESV audit of SP Ausnet's 08/09 Bushfire Mitigation Plan pointed to age affecting electricity poles. In the auditor's opinion, the high number of pole stakings across the network "would sometime in the future create a wave of pole replacement" and the number of existing staked poles that are now being temporarily supported until replacement indicates that this wave has now commenced".
February 2009	Black Saturday fires. 6 of the 11 major fires on this day were caused by old and failing electrical infrastructure.
2009/10	<p>Victorian Bushfire Royal Commission made 8 Recommendations surrounding electricity-caused fire. Recommendations 27-34 inclusive.</p> <p>Recommendation 34 identified ESV as a "weak Regulator" and recommended "the regulatory framework for electricity safety to strengthen ESV's mandate in relation to the prevention and mitigation of electricity-caused bushfires and to require it to fulfil that mandate."</p> <p>The VBRC highlighted that</p> <p>"distribution businesses should take all reasonable opportunities to reduce bushfire risk. In particular, they</p>

	<p>should not trade improvements by shortening the inspection cycle against those arising from improved inspection methods.</p> <p>“even then it could assume that each inspection was only 65% effective”.</p> <p>“the rates of failure of some important network components are climbing as those components age, increasing failure rates warrant increased opportunities for detection”.</p> <p>“those who are charged with the important task of performing cyclical inspections must receive rigorous training and suitable materials and equipment. Additionally, the network owners must carefully monitor the inspectors’ performance and the adequacy of their training.... The Commission considers, there is scope for improvement.”</p> <p>Recommendations 28 (asset inspection interval reduction) and 29 (modification of current practices, standards and procedures for training and auditing of asset inspectors) were to be mandated through Energy Safe Victoria.</p>
<p>2017/18</p>	<p>Minister for Energy, Environment and Climate Change announced an Independent Review of Victoria’s Electricity and Gas Network Safety Framework. (Grimes’ Review).</p> <p>Interim report prepared and released for public comment in October 2017. This Report further showed improvements required by ESV in order to be independent, technically capable and of good governance.</p> <p>Final report tabled in August 2108. 43 Recommendations made, most identifying the need to further strengthen and increase ESV technical capacity and governance structures.</p>
<p>2017</p>	<p>Powercor Regulatory Information Notice (RIN) to the Australian Energy Regulator (AER), reports a total of 1 153 poles replaced (including new augmentation). Number of pole</p>

	<p>replacements continues to decrease from 2014 up to and including 2017, yet the age of poles continues to increase.</p> <p>Pole failure rates also continue to increase.</p>
<p>1 Feb 2018</p>	<p>ESV Bushfire Mitigation Audit of Powercor, specifically focusing on pole inspection. It found</p> <p>“In short, the Powercor Asset Management Strategy and Practice is consistent in approach with past SECV practice and ESV expectations.”</p> <p>“the Powercor pole assessment and re-assessment practices are consistent with ESV expectations”.</p>
<p>11 March 2018</p>	<p>The Age, article published one week prior to St Patrick’s Day fires.</p> <p>Poles and fires: Key Black Saturday recommendation remains unfulfilled</p>  <p>By Adam Carey March 11, 2018</p> <p>Faulty, damaged and aged electricity infrastructure has sparked more than 250 fires in two years, despite a key Black Saturday bushfires royal commission recommendation to minimise the risk.</p> <p>Energy Safe Victoria data shows problems with electrical infrastructure such as power poles and wires caused 252 fires – or about 11 each month – between October 2015 and July 2017.</p> <p>The Black Saturday bushfires of 2009 claimed 173 lives, 159 of them in fires caused by electricity faults.</p> <p>The royal commission recommended giving the state’s energy regulator greater powers to reduce bushfire risk from electricity asset failure.</p> <p>But almost a decade on, that recommendation remains unfulfilled.</p>

In January last year, the Andrews government commissioned a major review into strengthening the regulatory muscle of Energy Safe Victoria. The review is complete but the public release of the findings has been delayed.

An interim report from the review, seen by *The Age*, **found serious deficiencies with the regulator that have compromised its ability to monitor and enforce bushfire mitigation efforts.**

The interim report found the watchdog lacks the required data to confirm the link between fire risk and the condition of assets such as power poles.

The report, overseen by Dr Paul Grimes, Victoria's Public Sector Commissioner, also found there was a risk of a conflict of interest among staff at Energy Safe Victoria, as many move between the regulator and the business they are overseeing.

"As a technical regulator requiring specialist skills, ESV relies on staff, including at senior decision-making levels, who have previously been employed by the network companies that ESV regulates, or staff who may wish to join such companies as part of their future career development," the interim review found.

Lily D'Ambrosio, the Minister for Energy, Environment and Climate Change, said she would publicly release the final report in due course.

"These are complex issues that require careful consideration and we're not going to rush our response," she said.

A series of recent Energy Safe Victoria weekly fire incident reports, seen by *The Age*, detail a host of infrastructure failures that sparked small fires in rural areas, including during summer when the bushfire threat is generally higher.

A small sample of the reports of fault-related fires from that time includes:

A high-voltage overhead conductor fell to the ground and started a shrub fire at Ventnor.

A broken cross-arm infested with termites brought down wires that caused a fire in Echuca.

Trees fell onto power lines and started a grass fire in Longwarry.

A burnt fuse on a power pole caused a grass fire in Tallarook.

Victoria has avoided a major bushfire so far this fire season.

The Electrical Trades Union was highly critical of the regulatory regime, in a submission to the Andrews government's review.

The union argued that the electricity network was in a dangerous state, with technicians prevented by their employer from taking matters into their own hands and repairing poles and wires that present a hazard or fire risk.

"One of the biggest current concerns of the lineworkers maintaining networks is that they have been and are increasingly being prevented from raising, reporting or rectifying identified safety issues that have a high probability of causing harm in the near future," the union said.

It accused Energy Safe Victoria of ignoring its warnings.

“ESV’s primary approach to ensuring safety in the distribution network appears to be to do nothing,” its submission said.

Most fires the watchdog recorded involved electricity assets operated by AusNet, Victoria’s sole electricity transmission service provider.

In January 2016, AusNet approved a new maintenance regime in which it began to reclassify some aged electricity poles due for replacement as serviceable.

The process allows AusNet to defer scheduled maintenance it must do to meet its bushfire mitigation target in some cases, for example if a damaged pole is inaccessible due to poor weather.

The Age has seen numerous photographs of previously condemned poles that have been reclassified as serviceable and left standing, often in bushfire-prone parts of the state.



An example of a power pole that has been reclassified and temporarily left in service. The images have been supplied anonymously from lineworkers in the field who are concerned the reclassified poles may pose a fire risk.

**17 March
2018**

St Patricks Day Fires ravaged.

All six fires on the night involved Powercor Australia Ltd electrical infrastructure.

These fires destroyed prime farmland, homes, farm shedding, equipment and machinery, shelter belts and established trees as well as irreplaceable livestock and livelihoods.

The effects from these fires continue to cause significant **trauma**.

Both the Terang and Garvoc/The Sisters fire resulted from pole failures.

15 May
2018

The “forensic” testing (page 18 Technical Investigation Report) of Pole 4 undertaken for the ESV investigation reduced Pole 4 to “matchsticks” and “garden mulch”.



This testing was done in the presence of Powercor, but despite written notification, victims (or plaintiffs as described in legal jargon) were excluded from the testing.

The remains of the Pole leave little scope for further investigation or evidence collection.

November
2018

The Technical report into the Garvoc/The Sisters Fire (published March 2018), documented ESV next steps

Next steps

As a result of the Garvoc Fire (The Sisters) investigation, ESV will now initiate a more formal investigation of Powercor Australia Limited's current asset inspection practices as well as confirming the current condition of:

other poles in the Terang area by auditing poles **on the same feeder** or in the same area **as Pole 4** reinforced poles generally by auditing the Powercor Australia Limited network.

Energy Safe Victoria **DID NOT** audit any of the poles on the Sparrow Spur feeder (the feeder on which failed Pole 4 was located).

Independent testing of all poles on the Sparrow Spur line was initiated by community. Subsequently Powercor removed a further 8 poles from that line as they were deemed to be either "limited Life" or "unserviceable", despite at most recent previous inspection all being classified as serviceable.

When the results of this testing were known, [REDACTED], Lead Investigator for Garvoc/The Sisters fire from Energy Safe Victoria was phoned.

On three (3) occasions a message was left requesting contact with Energy Safe Victoria. **No response was received**, until the local newspaper accurately highlighted the gross inadequacies of the poles on the Sparrow Spur line some weeks later.

29 July
2019

In July 2019, ESV released its final report into "The Condition of Power Poles in South West Victoria". It clearly acknowledges that the further investigations **only resulted because of community pressure**.

"came about after significant community concern following the St Patricks day fires in March 2018". (Media release 29 July 2019)

April -
October
2019

This Final Report details the need for a further body of work, of which this submission to “Draft Report Powercor Wood Pole Management” addresses.

Section 2 (below) will specifically discuss the finding and recommendations made by ESV.

The Final Report into The Condition of Power Poles in South West Victoria states,

“Powercor’s inspection practices were found to be adequate”. (Media release 29 July 2019).

“Powercor’s power pole inspection and maintenance process is fit for purpose and there is no immediate systemic risk of pole failure in the South West”.

CP/PAL Wooden Power Poles. 2019 RCM Study Report

Withheld by Powercor but uncovered during civil litigation hearings, this Report

“revealed that some poles were not progressing from Serviceable to Unserviceable in a controlled way through the limited life state”

“over time we are expecting the candidate pool of pole failure candidates to increase by perhaps as much as 8X, so it is vital the safety margins be monitored”

“messmate and mountain grey gum show age dependence... these two species are candidates for increased inspection frequency when they become 50years old”

“the inspection process is not adequately detecting or managing a condition-based problem a small but important portion of the time:

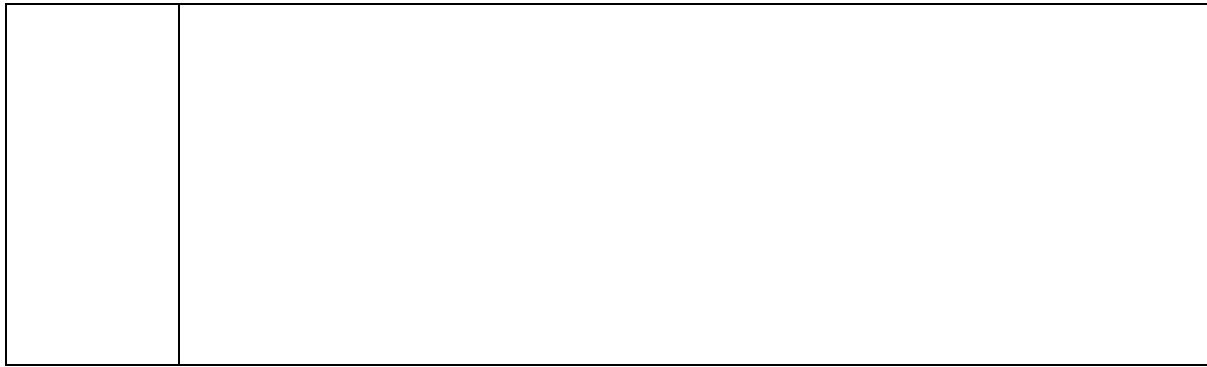


Figure 1 demonstrates a lengthy timeline of warning signs and even a Royal Commissions' Recommendations and mandates.

Yet ESV continued to ignore all of these until the Garvoc/The Sisters fire in March 2018 (St Patrick's Day).

Even then, the ESV Technical Report concluded in mid 2018.

ESV did not act in a proactive, independent or capable manner to investigate the urgent need to improve the inspection, maintenance and replacement procedures of the network distribution businesses. It only responded when a well-informed community mounted a sustained campaign for urgent positive change.

For more than 10 years, there has been opportunity for ESV to hold the network distribution businesses to account and to strengthen the robustness and safety of networks.

Sadly, my community continues to suffer the **TRAUMA** of a devastating Fire, because the warning signs were not heeded by ESV.

Today, we continue to call for the necessary change to ensure rural Victorian communities are safe from electricity-caused fires.

The State Government and Energy Safe Victoria can no longer dismiss all the warning signs and **trauma** from previous fires.

They must **ACT** to ensure the network distribution businesses provide a safe, modern and robust electrical network.

- Why did ESV wait until the Garvoc/The Sisters Fire to assess the unsustainability of network distribution businesses' wood pole safety outcomes?
- Why did it require local community advocacy and testing of poles for further investigations to commence?
- With so many earlier indications and warning signs (from 2004 onwards), why did Energy Safe Victoria not regulate and enforce greater safety outcomes long before the Garvoc/The Sisters Fire?
- What is the State Government doing to address these obvious deficiencies in ESV and its lack of proactive practice?
- Why does my community remain unheard and suffer ongoing **trauma** while Powercor remains cost, liability and **trauma** free?

Section 2

I acknowledge the completion of the Draft Report: Powercor Wood Pole Management and welcome the recommendations which seek to address the obvious and already seen dangerous short-comings in Powercor's asset inspection, maintenance and replacement regime.

We take some confidence in these findings, as it has now been formally recognised that Powercor Australia Ltd did not, and still does not have, a "sustainable" wood pole management system in place. This resulted in a devastating and **trauma** causing bushfire in March 2018.

We very much look forward to seeing the progress of required change to ensure future safety outcomes for all Victorians. It is our hope, that there will be greater public transparency and communities will be more informed.

To date, any acknowledgement from Powercor on their system inadequacies has been publicly lacking in transparency, and they continue to deny and ignore the devastation caused by their failed electrical asset (Pole 4). They are disengaged from the communities they service, and they continue to display indecent corporate behaviour.

It is of great importance to the communities affected by the St Patrick's Day fires, that the necessary changes are now genuinely initiated in an urgent and more timely manner. That the cultural, regulatory and economic changes needed will be swiftly adopted across all levels of Government, regulation and businesses.

The electrical distribution network continues to age, and the risk of failure of assets continues to rise. This must be addressed urgently and with independent and expert solutions.

Draft Report:

Powercor Wood Pole Management

An assessment of sustainable wood pole safety outcomes

December 2019

“ESV acknowledges Powercor’s contribution to this investigation.”

“the findings of this review have been discussed with Powercor. Powercor was provided with a draft copy of the technical review report to comment on errors of fact. ESV has made corrections to the report based upon Powercor’s feedback, as it deemed necessary.”

Sadly, ESV will not acknowledge my community’s efforts in the face of **trauma** and adversity. It is only due to the resilience, tenacity and knowledge of the south west community that the major shortcomings of the Powercor asset management and replacement practices have been discovered.

The community of Garvoc/The Sisters learned the wood pole management system in place in March 2018 would not deliver sustainable safety outcomes, and the power pole inspection and maintenance process were not “fit for purpose”.

We learned when Pole 4 failed and caused a devastating bushfire.

Since 17 March 2018, we have continued to demonstrate the lack of sustainable safety outcomes into the future, and it is somewhat disturbing that it has taken ESV close to 2 years (and a further 2 bushfire seasons) to reach the same conclusions. The lack of proactivity, urgency and

timeliness is frightening, as is the lack of responsiveness to community concerns.

It is also disturbing to read the recommendations made by ESV and see that there are still no clear or finite outcomes which will ensure community safety from electricity caused fires.

The “Detailed Technical report – Powercor Wood Pole Management” is awkward, lacking in rational substance, and unnecessarily complex. There is a lack of necessary supporting technical knowledge provided.

The inspection process of power poles is straight forward and yet the report seems to overly complicate and confuse the process.

The process really still relies on the same principles of the old SECV guidelines from as far back as the 1960s, when the age of poles was considerably younger.

Today ESV continues to function as a “captured regulator”, and Powercor remains cost and **trauma** free.

Until this is rectified, network distribution companies will continue to self-regulate and rural communities will remain at risk.

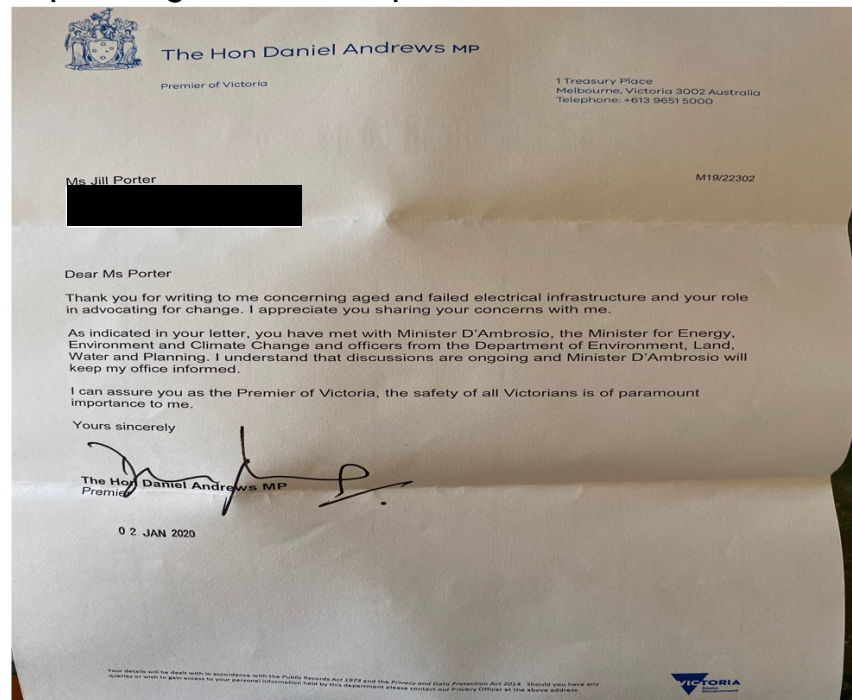
We require a cultural, regulatory and economic change to ensure SAFETY is a priority.

“Efficiency” and “reliability” are not the same as SAFETY.

The electricity distribution network is continuing to age and there is insufficient forward planning to ensure adequate replacement and management.

It is now evident and long overdue for the State Government, through Energy Safe Victoria to mandate and enforce the necessary changes to ensure rural Victorians are safe.

Rural communities require urgent action, not words. Action to ensure adequate forward planning for asset inspection, maintenance and



replacement.

Communities seek transparency and accountability from Government to ensure Energy Safe Victoria acts in a truly independent and technically capable manner.

Section 2 will outline the shortcomings in the ESV recommendations and provide positive solutions to ensure a strong, robust and healthy network into the future.

“ESV provided a commitment that it would do further work over the subsequent six months to assure itself that Powercor’s asset management practices relating to wood pole management will deliver sustainable safety outcomes for the community.”

“ESV concludes that:

1. The wood pole management system in place in March 2018, at the time of The Sisters fire at Garvoc, **would not deliver sustainable safety outcomes for the future.**
2. Since March 2018, Powercor has improved its wood pole management system, which has the effect of increasing the volume of wood pole replacements and reinforcements. However, **these changes alone will not deliver sustainable wood pole safety outcomes for the future.**
3. Powercor is progressing further improvements to its wood pole management system based on a more comprehensive risk assessment and **better inspection practices**, which if **fully implemented**, will as far as practicable, deliver sustainable safety outcomes for the community.”

“ESV has made 10 recommendations to ensure that Powercor diligently implements its proposed improvements to its wood pole management regime.”

“ESV will hold Powercor to account for the delivery of the plan.”

However,

1. Powercor is self-formulating “the plan”. Where is the reassurance that “the plan” is adequate and will deliver true safety outcomes to the community?

2. If ESV holds Powercor to account for delivery of the plan in its usual manner, it will audit only Powercor's delivery against its own specified plan. It does not "audit" the contents of the plan only that Powercor is doing what it specified in the plan. So in effect ESV is auditing the delivery of a self-made plan. This does not provide any "holding to account" of genuine safety outcomes, only that Powercor will deliver what it specified in its Plan.

3. To overcome this, there needs to be independent assessment and research in order that "the Plan" is truly formulated to incorporate the needed changes to ensure sustainable wood pole management and future safety outcomes. There needs to be independent expertise (and possible regulation) mandating requirements, rather than Powercor (with a vested interest to return a profit as a private company) deciding and formulating what they require.

There is a clear conflict of interest as Powercor continues to use "efficiency" as their benchmark. Being the most "efficient" distribution provider in the NEM is not equivalent to the SAFEST.

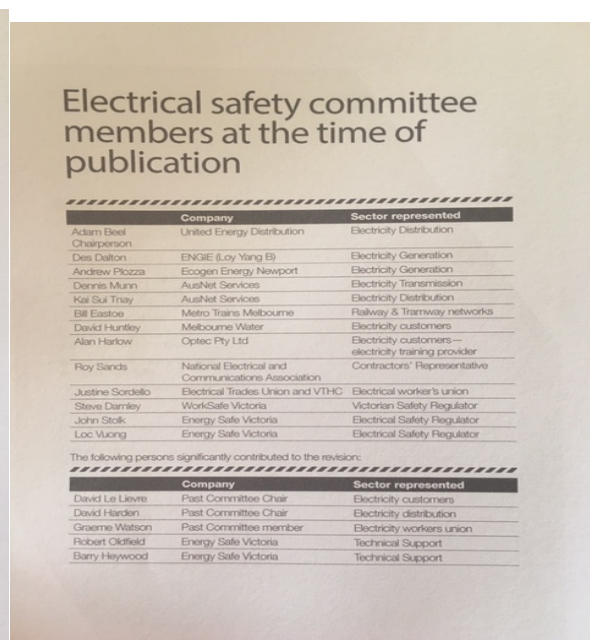
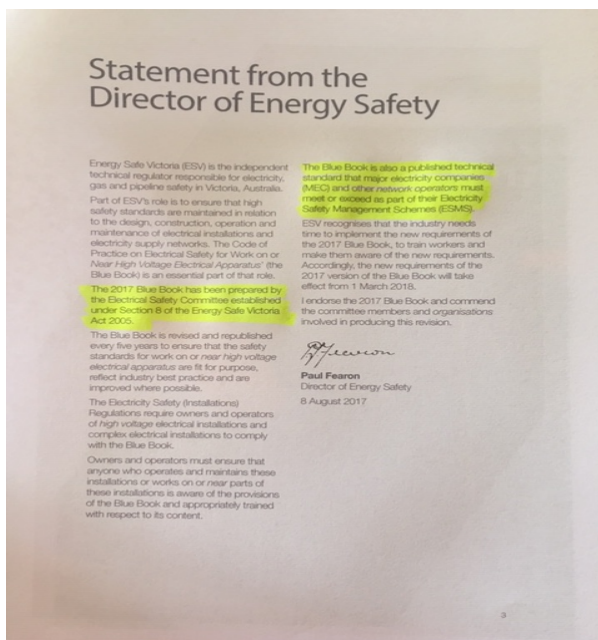
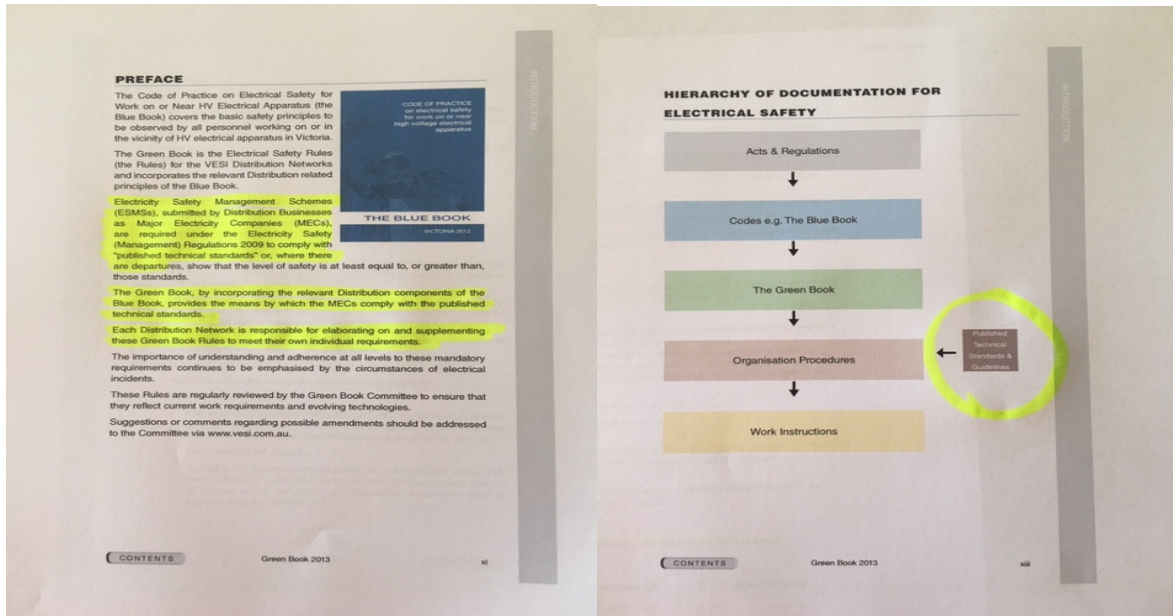
4. As we move towards "Safety based" regulation and away from "prescriptive based" regulation, viewed worldwide as best practice and recommended in Grimes' Review, it is important to note that the premise of successful Safety Based Regulation is by having both the network distribution businesses "doing the right thing" and a strong independent safety regulator. To date, and from historical experience, we have neither. This must be addressed to ensure community safety moving forward. The ESV auditing of network businesses against their own ESMS (and subsequent Bushfire Mitigation plan as part of an ESMS) is not a sufficient safety check.

5. Effectively as seen below network distribution businesses are writing the published standards to which they must comply. This is "self regulation".

ESV (or the Director of Energy Safety) allows this as the Electricity

Safety Committee is convened under the Energy Safe Victoria Act of 2005 (as is the Powerline Bushfire Safety Committee).

These published codes and standards ultimately define the level of safety, or not, for all Victorians.



It is not satisfactory for ESV to simply say it “will hold Powercor to account for the **delivery** of the Plan”.

ESV needs to audit “the Plan” itself and seek expert assessment that the basis and reasons for the Plan will deliver the necessary change required for sustainable safety outcomes into the future. Auditing the “delivery” of the Plan is insufficient and does not address the current issues. It perpetuates the essence of self-regulation.

To address this, the Minister for Energy, through the Director of Energy Safety should ensure a broader representation of expertise and interests on the Electrical Safety Committee.

This representation should include independent industry experts and community stakeholders. This would “level” the playing field and ensure SAFETY was the genuine priority.

The Electrical Safety Committee, should be a reservoir of expertise and should therefore be involved in assessing the suitability of the Powercor devised “plan”.

Once “the plan” is deemed to be adequate for sustainable safety outcomes, then ESV would be able to “hold Powercor to account for the **delivery** of the plan.

The State Government and ESV should improve transparency and accountability practices of the network distribution businesses by requiring the public release of their ESMS and BMP.

In California (USA), the ESMS and BMP of network businesses are submitted and made available for public comment by any interested party. Given that most costs associated with safety improvements and spending would be determined as allowable as “cost pass through” by the AER then public comment should be welcomed. It would also allow for value adding of local knowledge into BMP etc. This would add a further layer of scrutiny and accountability for the network distribution businesses.

ESV needs to further increase its technical capacity and independence to be best positioned to “hold Powercor to account”. The State Government can facilitate these improvements via more urgent implementation of ALL Grimes’ recommendations. Currently the Government agrees only “in principle” to 21 of the 43 recommendations, and many of these 21

recommendations pertain directly to bushfire mitigation strategies. A greater commitment from Government is required.

“Powercor must submit plans to the Australian Energy Regulator (AER) for approval of its expenditure every five years. ESV will participate in the AER’s review, providing input on network safety considerations,..”

This statement provides no confidence on sustainable safety outcomes in the future for the community.

1. Volume II Part One Chapter 4.5 of the 2009 Victorian Bushfires Royal Commission discusses costings to the network distribution businesses and how the AER considers these when making economic determinations. [REDACTED] (from the AER) said “the AER does not take into account costs that are external to the distribution businesses- such as the costs borne by the community when a bushfire is caused by electricity failed assets. The VBRC went on to say “the AER’s failure to factor in the costs to human life and property arising from bushfire as part of its cost-benefit means that real and substantial costs to the community imposed by bushfire are left out of the price determination process. The AER and the Regulations under which it operates, should acknowledge that Victoria is one of the most bushfire-prone places in the world and that major bushfires on the worst days are often caused by the failure of electricity assets. Protection of human life must become the priority when evaluating distribution businesses’ expenditure proposals. The economic regime must include mechanisms for ensuring safety-related matters are properly reviewed so as to minimise the risk of bushfire caused by the failure of electrical assets.”
2. The National Electricity Rules (NER) allow for adjustments to a price determination if specific “trigger events” occur, enabling the network

distribution businesses to seek additional revenue approval from the regulator.

3. A bushfire from failed electrical assets may cause death and massive destruction but is NOT considered a ‘trigger event’ by the AER. Nor is a recommendation from a Royal Commission. A trigger event constitutes “material change, which either reduce or increase the likely costs to be incurred by the distribution business, for example regulatory change.
4. From the Acil Allen Regulatory Impact Statement for Victorian Government in 2015

“Although these measures would reduce the likelihood of a bushfire, the electricity distributors may bear only a small proportion of the costs of major bushfires started by their assets, and so do not face a strong private incentive to change. Even if there were sufficient private incentives, the revenue determined for the electricity distributors under the current regulatory regime may not include the costs associated with actions to reduce the likelihood of powerlines starting bushfires, in the absence of a regulatory obligation. In the absence of a regulatory obligation, the costs would only be included in the electricity distributor’s revenue if it was determined by the economic regulator that there was a net benefit to the electricity distributor (and thereby its customers).

In theory, this could be offset by the threat of legal action if an electricity distributor is liable for damages caused by a fire started by their assets. However, the threat of legal action is weak. For example, when sued following the Black Saturday bushfires, the electricity distributors settled out of court. It is expected that the cost of settlement will either be passed on to customers under the current regulatory framework or that it will be covered by insurance (with any resulting increase in insurance premiums passed on to customers).

Currently, ESV’s relationship with the AER (formalised in a MOU) is not sufficient to ensure the AER will recognise necessary spending for safety improvements. ESV input will not sway economic determinations by the AER. A “trigger event” or regulatory requirement is the only way ESV could ensure expenditure on safety would be allowed.

The State Government, through ESV should be reviewing the outdated Electricity Safety Act 1998 and consider implementing further regulations or “trigger events” which would ensure safety was recognised as an economic indicator by the AER.

Consideration should be given to a necessary cultural and economic change by the NDBs. Like all other businesses who are required to invest in their own infrastructure to ensure ongoing longevity and safety of their business, perhaps some of the NBD profits should be reinvested and spent improving their own assets.

Or consideration of the State Government to share some of the costs of upgrades and replacements required to ensure sustainable safety

outcomes in the future. The cost of a bushfire is to the entire state of Victoria, not just the electricity consumers on the end of the failed asset. The fire at Kilmore East, on Black Saturday 2009 is a good example. That fire killed 119 people and the total cost to Victoria for the Black Saturday fires is between \$4-7 billion. Yet, the SWER line which failed and caused the fire serviced just 19 customers.

Currently, it appears that our system of electricity distribution has very much privatised the profits and societised the losses. This should be addressed in light of the continued ageing and failing electrical infrastructure, associated deaths, **trauma** and destruction of bushfires caused by electricity assets.

Recommendations

ESV has found Powercor does not have practices that produce “sustainable safety outcomes”.

Yet the proposed 13 recommendations fall short of ensuring that Powercor will be mandated to make change to ensure future “sustainable safety outcomes”.

Despite ESV’s earlier finding, the current inspection process is NOT “fit for purpose” and this is demonstrated in Powercor’s own recent RCM Study:

- “revealed that some poles were not progressing from Serviceable to Unserviceable in a controlled way through the limited life state”
- “the inspection process is not adequately detecting or managing a condition-based problem a small but important portion of the time:
- “messmate and mountain grey gum show age dependence... these two species are candidates for increased inspection frequency when they become 50years old”
- “over time we are expecting the candidate pool of pole failure candidates to increase by perhaps as much as 8X, so it is vital the safety margins be monitored”
- “increasing failure rates warrant increased opportunities for detection.”
- “unfortunately these changes do not seem to make a material difference on the 75% of pole failures that occur from the serviceable state”

- “both methods of projection show an increase in pressure on the inspection program and this makes it likely pole failures will increase in the future”
- “active management of the inspection process and possible adjustments to existing safety buffers should allow the increased pressure to be absorbed.”

It is worth remembering the comments of the VBRC back in 2009, where inadequacies in the inspection, maintenance and replacement programs of network distribution businesses were already obvious:

- “improving the efficacy of inspection regimes is crucial to mitigating the bushfire risk created by the failure of the electricity assets. Whether components are repaired or replaced before they fail or at risk of failing is determined in almost all cases on the basis of inspection results, and there is a heavy reliance on cyclical inspections.” (exhibit 558 VBRC)
- “age-based replacement programs are particularly appropriate for network components that are hard to inspect or that have definite ageing characteristics”.
- “Standards for inspection are not specified by legislation.” They form part of the Bushfire Mitigation Plan (BMP) which SV approves and audits the implementation as part of its oversight of BMP and ESMS”.
- “it is not satisfactory that the distribution business can decide that a specific level of bushfire risk is ‘acceptable’ and rely on the benefit of improved processes and technology to maintain that risk level (instead of reducing it) in order to decrease their operating costs or increase their profits.” Distribution businesses should take all reasonable opportunities to reduce bushfire risk.
- “In particular, they should not trade improvements achievable by shortening the inspection cycle against those arising from improved inspection methods.”

Under the Electricity Distribution Code

3. ASSET MANAGEMENT

3.1 Good asset management

A *distributor* must use best endeavours to:

***EXPLANATORY NOTE:** Clause 3.1 defines elements of good asset management which are designed to encourage innovation in the provision of **distribution** services and not prescribe **distributors'** practices in detail. The **Commission** may, however, undertake detailed examination of a **distributor's** practices if there is a substantial decline in the **quality or reliability of supply**, or evidence of a significant risk that such a decline may occur in the future when compared to the licensee's historical performance and its performance targets.*

(a) (b)

assess and record the nature, location, condition and performance of its *distribution system* assets;

develop and implement plans for the acquisition, creation, maintenance, operation, refurbishment, repair and disposal of its *distribution system* assets and plans for the establishment and *augmentation* of *transmission connections*:

to comply with the laws and other performance obligations which apply to the provision of *distribution* services including those contained in this Code;

to minimise the risks associated with the failure or reduced performance of assets; and

If ESV has found Powercor does not have practices that produce sustainable safety outcomes, does this constitute a breach of the Essential Services Commission's "Electricity Distribution Code"?

Recommendations 1-3

“The current version of Powercor’s wood pole strategy document is inadequate”

‘An increasing number of failures should have been an indicator to Powercor that its wood pole strategy was not effective’

“Powercor had experienced a decrease in the number of poles identified to be in poor condition by its inspectors, which subsequently has led to a reduction in the number of pole interventions. This is incongruent with the fact that Powercor’s pole failure numbers have been increasing steadily since about 2015. While the number of pole failures is not excessive, the number of failures per year is above the median of industry peers.¹⁶’

Yet ESV audited Powercor (as part of the BMP audit, specifically focusing on poles) in February 2018 and found no non-compliances or issues.

Given the recent ESV audit, focusing specifically on poles, it is also then reasonable to assume that ESV, our independent safety regulator too did not see an increasing number of failures as an indicator that Powercor’s wood pole strategy was not effective.

Or did they see it but choose to ignore it and not mandate the necessary increase in replacement?

This is deeply concerning to all communities at risk of bushfire from electricity caused fires.

It is difficult to have confidence that the formulation and implementation of these recommendations are sound and if ESV will have the required technical capacity or regulatory strength needed to ensure the greater investment in replacement of aged and failing assets, particularly poles is made.

Recommendations 4-6 “Inspection method and practices”

- A mandate to ensure Powercor audits and monitors the performance of inspectors and inspections is welcomed.
- Revision of the Asset Inspection and Training Manual is a positive change, consideration should be given to further increasing transparency and accountability of network distribution businesses by requiring these documents to be easily accessible in full to all stakeholders, including community.

- Consideration should be given to mandating the independent and external training of asset inspectors, and also external and independent auditing.
- These recommendations fall short as they do not examine the “fit for purpose” (or not) nature of the ‘dig and drill’ inspection method. Further analysis to determine the accuracy, repeatability and destructive nature of this technique needs to be undertaken.
- It should be noted that the ‘dig and drill’ method damages and weakens the pole over time, with extra holes being drilled. This allows for moisture, fungal and insect entry. It also can only assess the pole in the area of the drill hole and is not a repeatable test.
- The testing records for Pole 4 (found in the ESV Technical Report of the Garvoc/The Sisters fire, March 2018 page 28) show inconsistent results. Sound wood measurements varied from 70mm in 2005, to 100mm in 2010, and 50mm in 2015. A pole cannot regenerate wood, so the difference in readings from 70mm in 2005 to 100mm in 2010 show the inconsistency of the dig and drill method.
- ██████████ has been introduced by Powercor, through its contract with ██████████ (now known as ██████████). ██████████ overtly promotes ██████████ as a “cost saving” technology which results in less pole replacements (seen on their website, LinkedIn and other promotional material). This is clearly cause for concern and raises the motive for its use by network distribution companies.
- ██████████ makes an assessment in only one horizontal plane and it relies on the judgment of the inspector to choose the “weakest” part of the pole.

Recommendations 7-9 “Assessment of pole condition and risk”.

- A Serviceability Index is welcomed and should be urgently completed by Powercor. This would be in line with AS/NZS700 (from 2010 onwards). If this is current best industry practice (in line with this standard), why has ESV not previously required the adoption of this Index?
- Public release of current and earlier NDT studies should be available and there should be consideration given to independent expert assessment and research for new NDT. ESV should take a more active role in overseeing the development and assessment of emerging NDT, either directly or through appointment of independent expertise.

- To date, no one has adequately answered how sound wood depth is correlated to both strength and durability, to an appropriate load/safety factor?
- “Powercor has now responded to the declining trend in poles being classified as unserviceable by increasing the safety factor threshold for unserviceable poles and increasing the frequency of inspections of AC serviceable poles. This however does not address the following points identified in their own current (October 2019) RCM report:

During the RCM study, recent strategic changes were noted that include;

- An increase in the frequency of its inspection and testing process from 30 months to 12 months for all limited life poles. This results in a more accurate and timely indication of pole condition, minimizing the risk of unanticipated failure
- An increase to the pole residual strength safety factor from 1.25 to 1.40 for all poles on its network. The 25% safety factor was designed to prevent failure prior to replacement has now been increased to 40%. This factor is applicable when a pole is identified for replacement. The 40% safety factor applied at that time ensures the pole is replaced well before it reaches a safety factor score of 1.00.
- The use of [REDACTED] technology.

The addition of more safety factor applies when a pole is deemed ready for replacement, and with this new safety factor in service this makes it much less likely a pole will fail while in the Priority 2 - P2 – US (Unserviceable) status.

The increased inspection frequency while in Limited Life (LL) status (now called Added Controls – serviceable (ACS)) pulls a different lever for improved performance in that once a pole is declared to be in (LL) limited life status, it is now much less likely it will fail undetected before the next inspection. This is due to the added inspections now performed once the pole enters (LL) limited life status. This recent change makes it more likely the LL poles will be properly rated into an unacceptable condition and managed within the business “critical path”. (See the Critical Path discussion)

Unfortunately, these changes do not seem to make a material difference on the 75% of pole failures that occur from the serviceable state.

Recommendations 10-13 “Wood pole management forecasting and delivery”

The current Powercor RCM Report had input from many industry experts

The RCM Team included;

- [REDACTED] – Principle Reliability Engineer – CRL CMRP -RCM Facilitator - ARMS Reliability
- [REDACTED] – CP/PAL – Asset Management
- [REDACTED] – Australian Timber Expert/Fungi Expert – Biotica
- [REDACTED] – Australian Wooden Timber Structural Integrity Expert – REVO Group
- [REDACTED] – Renewal and Regulatory Expert – CP/PAL
- [REDACTED] – Data Scientist – Asset Lines CP/PAL
- [REDACTED] – Wooden Power Pole Expertise in Victoria – Biotica

- [REDACTED] – Wooden Power Pole Inspection Expertise – Electrix

The October 2019 Powercor RCM report says

““over time we are expecting the candidate pool of pole failure candidates to increase by perhaps as much as **8X**, so it is vital the safety margins be monitored”

The current Powercor Regulatory Reset Proposal, 2021-2026 to the AER highlights the intention to replace just 20,878 poles. Assuming the AER allows this, then this is only a 4fold increase.

There needs to be greater pole replacement, beginning immediately.

Consideration needs to be given to the number of reinforced poles in the Powercor network, their average age and current abilities to withstand required loads, and how long the pole has been reinforced for.

[REDACTED], an accepted industry expert in this field wrote a submission on behalf of Essential Energy in 2015. In it he highlights

“reinforcement only ever delays the pole replacement, pushing the investment back 5-20years in most cases.”

And

“Pole reinforcement is only just starting to really be understood in terms of how it works structurally..... and in reality the reinforcement systems do not perform as well as expected.....in other cases the timber will actually fail at the top of the reinforcement...and definitely fall to the ground”.

“in our experience, reinforcement should only be an option as a risk reduction technique until a more permanent replacement can be arranged”.

“a reinforced pole does not automatically have a lower risk of failure compared with an unreinforced pole because it does not reinforce the entire length of the pole and does not support significant compressive loads.”

ESV must require Powercor to better manage its population of reinforced poles, with the view to replacement to ensure community safety from pole failure.

Per the ESV Draft Report

“the forecasting methodology in place at the time of the Garvoc fire was not consistent with good industry practice”.

“Powercor has proposed a new forecasting methodology, however two of the three components are not yet approved nor implemented”.

Powercor’s wooden pole failure rates are increasing (see Figure 7 page 13 in draft report). Without intervention the failure rate will continue to increase as poles age.

“data provided to ESV as part of this review suggests that the condition of the wooden power pole population is declining, and greater investment will be required to mitigate an increasing safety risk”.

How exactly will ESV mandate, oversee and audit any investment made to increase pole replacement, without relying on pole failure data. Once a pole fails and becomes “data”, the potential for a catastrophic fire has occurred. For rural communities this is too late and leaves them vulnerable to a devastating and costly bushfire.

This investment must be managed to prevent pole failure.

ESV’s ongoing reliance on the network distribution businesses for data is also concerning. An increase in ESV capacity to collect, interpret and analyse data, independent of the network businesses should be supported.

How does this give communities any confidence that the required replacement of poles will be adequately undertaken by Powercor?

ESV must take a more proactive role here or further time will elapse without the required increase in replacements and communities will remain at risk of devastation and **trauma**.

Figure 8: Powercor Asset Management policy



The image shows the cover page of the 'Asset Management Policy' document. It features a red header with the title 'Asset Management Policy' and a sub-header 'CitiPower & Powercor'. The main text states the company's commitment to providing a safe, reliable, and affordable supply of electricity. It lists ten principles for achieving this commitment, such as minimizing safety risks, enhancing reputation, and embracing innovation. The page is signed by Timothy Bourke, Chief Executive Officer, dated March 2018. Logos for CitiPower and Powercor are at the bottom right, and the code 'A-001' is at the bottom left.

Asset Management Policy

CitiPower & Powercor

CitiPower and Powercor are committed to providing our customers with a **safe, reliable and affordable supply of electricity** through the application of an effective asset management framework. Asset management activities must meet business objectives and benefit the current and future needs of all customers, stakeholders and employees.

We will achieve our commitment by adopting the following principles:

- **Minimise safety risks** as far as practicable.
- Enhance our **reputation** as a trusted service provider through active industry leadership and the delivery of safe and **reliable** services that meet the needs and expectations of our customers and communities.
- Focus on maintaining a safe, **affordable (least long term cost)** and reliable network when devising our plans for the development of our network.
- Adopt a **risk based approach** to managing our network.
- Invest in programs that **optimise total lifecycle** management.
- **Comply with** as a minimum all relevant **legislative and regulatory requirements** as well as Australian, international and industry standards and any other requirements to which CitiPower and Powercor subscribes.
- Develop high performance operations by **engaging with our employees** and ensuring that they have the right skills and capabilities.
- **Embrace innovation and technology** to continuously improve our asset management framework and activities consistent with recognised asset management standards for the long term benefit of our employees, shareholders, customers and other stakeholders.
- **Monitor and evaluate** appropriate metrics to effectively manage the network and customer service performance.

We **strive for excellence** in everything we do and are always accountable for our own performance including the management and operation of our network to achieve the objectives outlined in the policy.


Timothy Bourke
Chief Executive Officer
March 2018

A-001



Mr Tim Rourke, CEO, Powercor Australia Limited (and also chairman of Energy Networks Australia) makes a commitment to the customers of Powercor, to US, the rural communities of Victoria.

He is “committed to providing his customers with a SAFE supply of electricity.

On 17 March 2018 at The Sisters he failed to meet his commitment. By failing this commitment, the communities in the south west of Victoria suffered

“significant loss of property and stock, and
TRAUMA”.

It is now overdue, for State Government and Energy Safe Victoria to ensure Powercor fully implements Mr Rourke’s commitment to rural communities.

“A SAFE supply of electricity”.

TRAUMA free.

